apprenticeship
FRAMEWORK

Plumbing and Heating (England)

IMPORTANT NOTIFICATION FOR ALL APPRENTICESHIP STARTS FROM 22 AUGUST 2017

Modifications to SASE came into effect on 22 August 2017. Accordingly, SASE publication DFE-00167-2017 applies **both** to new Apprenticeship starts from 22 August 2017 **and** all Apprenticeships commenced before and not completed by 22 August 2017.

For more details of the changes please read the following preface page to the framework document.

Latest framework version?

Please use this link to see if this is the latest issued version of this framework:

afo.sscalliance.org/frameworkslibrary/index.cfm?id=FR04002

Issue date: 22 November 2016

Issued by
SummitSkills

apprenticeship
FRAMEWORKS ONLINE
www.afo.sscalliance.org

Document status:
Issued

Apprenticeships

CHANGES TO THE ENGLISH AND MATHS REGULAR MINIMUM REQUIREMENTS FOR APPRENTICESHIP STARTS FROM 22 AUGUST 2017 AND APPRENTICESHIPS REMAINING INCOMPLETE ON 22 AUGUST 2017.

Modifications to SASE came into effect on 22 August 2017. Accordingly, SASE publication DFE-00167-2017 applies both to new Apprenticeship starts from 22 August 2017 and all Apprenticeships commenced before and not completed by 22 August 2017.

The modifications allow for an exemption to the English and Maths regular minimum requirements for people with Special Educational Needs, Learning Difficulties or Disabilities. This means that adjusting the minimum requirements to Entry Level 3 in English and Maths can be considered by the provider, on an individual and case-by-case basis, where **all of the conditions** of the updated SASE section 18 (Intermediate level) or section 37 (Advanced level) for have been satisfied and can be evidenced.

Full details relating to the exceptions eligibility criteria are contained in:

Sections 15-23 of SASE for Intermediate Level Apprenticeships
Sections 34-42 of SASE for Advanced Level Apprenticeships

When applying this exemption, providers must **STILL** consider how to enable the Apprentice to access further literacy and numeracy development – including Level 1 and Level 2 courses – as part of their overall training provision.

The modifications to SASE have also extended the list of qualifications that meet the minimum English requirements to allow for a British Sign Language (BSL) qualification, at the appropriate level, to be accepted as an alternative to a qualification in English, where **BSL is the primary language of the Apprentice**.

Full details relating to BSL acceptance are contained in:

Section 5(f) of SASE for Intermediate Level Apprenticeships
Section 28(f) of SASE for Advanced Level Apprenticeships

Furthermore, the SASE modifications have further extended the list of qualifications that meet the minimum English and Maths requirements to allow for the acceptance of a range of UK-wide qualifications, as an alternative to qualifications gained in England.

Full details relating to the list of acceptable qualifications are contained in:

Sections 5(g-j) and 6(f-i) of SASE for Intermediate Level Apprenticeships
Sections 28(g-j) and 29(f-i) of SASE for Advanced Level Apprenticeships

The modifications include reference to the new numerical grades in the reformed GCSE system and the **minimum** grade requirements. A grade 4 (new grading) will be considered equivalent to a grade C (old grading). A grade 2 (new grading) will be considered equivalent to a Grade E (old grading).

Full details relating to the numerically graded GCSEs are contained in:

Sections 5 and 6 of SASE for Intermediate Level Apprenticeships
Sections 28 and 29 of SASE for Advanced Level Apprenticeships

Please note that some frameworks may have English and Maths grade/level requirements that are **above** the SASE **regular** minimum requirements. The exceptions relating to the use of British Sign Language or Entry Level 3 qualifications, detailed above, **do not apply** to **industry-specific** minimum entry requirements. Please check specific framework documents to ascertain where this is the case and/or check directly with the Issuing Authority responsible for the framework.

The updated version of SASE, and guidance documents, can be accessed here:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/630068/Specification_of_Apprenticeship_Standards_for_England_.pdf

Plumbing and Heating (England)

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Framework summary

Plumbing and Heating

Intermediate Level Apprenticeship in Plumbing

This framework includes information on Personal Learning and Thinking Skills

Pathways for this framework at level 2 include:

Pathway 1: Plumbing

Competence qualifications available to this pathway:

N/A

Knowledge qualifications available to this pathway:

N/A

Combined qualifications available to this pathway:

B1 - Level 2 NVQ Diploma in Plumbing and Heating

This pathway also contains information on:

- Employee rights and responsibilities
- Functional skills

Plumbing and Heating

Advanced Level Apprenticeship in Domestic Plumbing and Heating

This framework includes information on Personal Learning and Thinking Skills

Pathways for this framework at level 3 include:

Pathway 1: Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)

Competence qualifications available to this pathway:

N/A

Knowledge qualifications available to this pathway:

N/A

Combined qualifications available to this pathway:

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating

This pathway also contains information on:

- Employee rights and responsibilities
- Functional skills

Pathway 2: Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

Competence qualifications available to this pathway:

N/A

Knowledge qualifications available to this pathway:

N/A

Combined qualifications available to this pathway:

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

This pathway also contains information on:

- Employee rights and responsibilities
- Functional skills

Pathway 3: Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Competence qualifications available to this pathway:

N/A

Knowledge qualifications available to this pathway:

N/A

Combined qualifications available to this pathway:

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

This pathway also contains information on:

- Employee rights and responsibilities
- Functional skills

Framework information

Information on the Issuing Authority for this framework:

SummitSkills

The Apprenticeship sector for occupations in electrical and electronic servicing, plumbing, heating and building services (summarised as electrotechnical; plumbing, heating and ventilating; refrigeration and air conditioning).

Issue number: 7	**This framework includes:**
Framework ID: FR04002	Level 2 Level 3
Date this framework is to be reviewed by: 01/04/2017	This framework is for use in: **England**

Short description

Apprenticeships for occupations in the Plumbing and Heating Industry are designed to meet the industry's competence requirements. At Intermediate Level you will be involved in the installation or service and maintenance of plumbing systems eg baths, pipework, drains, radiators and heating systems. Then at Advanced Level you may also work with gas/solid fuel boilers and Environmental Technologies eg Solar Thermal; Ground/Air Source Heat Pumps; Water Harvesting etc

This Apprenticeship framework document contains two occupation pathways at different levels:

Intermediate Level Apprenticeship:

- Plumbing

Job roles

- Plumber

Advanced Level Apprenticeship:

- Domestic Plumbing and Heating

Job role

- Advanced Plumber

Contact information

Proposer of this framework

SummitSkills the Standard Setting Organisation for the Plumbing and Heating industry regularly engages with the Mechanical Strategic Advisory Group (MSAG) to ensure that this framework document is fit-for-purpose. (MSAG comprises employers, manufacturers, trade associations and training providers)

Additional engagement activities include direct consultations by email and telephone with stakeholders.

Developer of this framework

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Revising a framework

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Why this framework is being revised

An Awarding Organisation EAL has withdrawn the qualification Level 3 Diploma in Domestic Plumbing and Heating (Gas Fired Warm Air Appliances) 600/1451/9 as part of a review with Ofqual due to no take up so it has now been removed from Pathway 2 for new apprenticeship starts

Summary of changes made to this framework

- Qualification 600/1451/9 has been removed from Pathway 2 at Level 3

Qualifications removed

600/1451/9

Qualifications added

N/A

Qualifications that have been extended

N/A

Purpose of this framework

Summary of the purpose of the framework

These occupation frameworks are designed to provide new entrants and those seeking progression in their career with the opportunity to develop competencies that are needed to carry out job roles and responsibilities associated with the installation, maintenance, commissioning and servicing of domestic plumbing and heating systems. Including relevant:

- Environmental technologies
- Technological requirements and changes
- Statutory and non-statutory regulations and requirements

It will also contribute towards meeting the skills priorities for England - Skills for Sustainable Growth http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/10-1273-skills-for-sustainable-growth-strategy-summary

Your employer's business could include the installation, service, maintenance and repair of a variety of plumbing systems and equipment, including:

- Showers; Baths; Sinks
- Drainage Pipes, Plastic and Copper Water Pipes and Guttering
- Heating Systems fueled by Gas; Solar Thermal; Heat Pumps; Oil and Coal

These products could be installed in domestic, industrial and commercial premises where not only are the technical skills needed but also the skills of customer service and communication.

Successful completion of the Intermediate Level framework equips an apprentice with the ability to select and use relevant knowledge, ideas, skills and procedures to complete well defined tasks and address straightforward problems. They include taking responsibility for completing tasks and procedures, and exercising autonomy and judgement subject to overall direction or guidance. Successful candidates then have the option to further develop their skills, knowledge and competence by progressing onto the Advanced Level framework.

Successful completion of the Advanced Level framework equips an apprentice with the ability to identify and use relevant understanding, methods and skills to complete tasks and address problems that, while well defined, have a measure of complexity. They include taking responsibility for initiating and completing tasks and procedures as well as exercising autonomy and judgement within parameters. They also reflect awareness of different perspectives or approaches within an area of study or work.

The following job roles will be covered in the Intermediate and Advanced frameworks respectively:

- Plumber
- Advanced Plumber

National Apprenticeship Service (NAS) – Statement on Apprenticeship Quality

Definition

1. An Apprenticeship is a job with an accompanying skills development programme designed by employers in the sector. It allows the apprentice to gain technical knowledge and real practical experience, along with functional and personal skills, required for their immediate job and future career. These are acquired through a mix of learning in the workplace, formal off the job training and the opportunity to practice and embed new skills in a real work context. This broader mix differentiates the Apprenticeship experience from training delivered to meet narrowly focused job needs.

2. On completion of the Apprenticeship the apprentice must be able to undertake the full range of duties, in the range of circumstances appropriate to the job, confidently and competently to the standard set by the industry.

Aims and objectives of this framework (England)

The aim of these occupation frameworks is to ensure that the Intermediate and Advanced Level Apprenticeship programmes deliver:

- The skills and knowledge required by the industry to achieve competence
- Job-related skills that will be used in the working environment
- New entrants to replace those retiring or leaving the sector
- Transferable Skills such as problem solving, communication, team working, literacy, numeracy and ICT skills which are a priority for the sector
- Career progression

Employers have endorsed this programme as it delivers qualified competent employees, and improves productivity and retention.

Further career information can be found at www.summitskills.org.uk

Entry conditions for this framework

Although there are generally no nationally laid-down minimum entry or previous experience requirements to undertake the Intermediate and Advanced Level Apprenticeships in the Domestic Plumbing and Heating Industry, the following selection criteria may be used as guidance.

The programmes are likely to be suitable for individuals who:

- Have an aptitude for technical subjects and/or are practically minded
- Have an interest in technology
- Can demonstrate an ability to solve practical problems
- Have a portfolio of evidence from work experience, non-accredited courses, volunteering, have previously worked or are working in the sector

A career in this industry will not only reward an apprentice's potential, but also offer opportunities to enhance their technical capability. The industry needs new entrants of appropriate ability and offers a varied and rewarding career in a challenging working environment.

Other selection criteria may include:

- Ability to communicate effectively with a range of people
- Being numerate and literate as a significant amount of paperwork will be involved
- Good colour vision to recognise colour coded wires and components
- Willingness to learn to drive if you don't already have a driving licence as much of the work will require you to drive to customers' premises (Insurance requirements may differ per company)
- Willingness to work outside and carry out manual handling tasks as some materials and equipment are heavy
- Willingness to work unsociable hours
- Willingness to undergo a Criminal Records Bureau (CRB) check when required
- Willingness to work safely and respectively in support of government safeguarding policies http: //www.dh.gov.uk/prod_consum_dh/groups/dh_digitalasset/dh_126770.pdf

Examples of formal qualifications that can be used as an indication that an applicant has the potential to progress into and complete either of the Intermediate or Advanced Level apprenticeships can be found in each individual occupation pathways.

No individual should be refused access to an initial assessment on the basis of educational qualifications alone. The ultimate responsiblity for selection will rest with the individual employer.

Level 2

Title for this framework at level 2

Intermediate Level Apprenticeship in Plumbing

Pathways for this framework at level 2

Pathway 1:	Plumbing

Level 2, Pathway 1: Plumbing

Description of this pathway

Plumbing - including water-based systems and products (baths, sinks, showers, water heaters/radiators etc) - 91 credits

- 76 credits for the Combined (Knowledge 14 credits & Competence 62 credits) Qualification
- 15 credits for Functional Skills English, Mathematics & ICT

Where Recognition of Prior Learning (RPL) for competence, knowledge or Functional Skills is applied, the Apprenticeship programme must be tailored to allow the Apprentice to undertake new learning, including learning at a higher level and to develop new skills.

In order to demonstrate the industry recognised level of competence reflected by this Intermediate framework it is expected the minimum duration for its completion will be **no less than 24 months.**

Entry requirements for this pathway in addition to the framework entry requirements

Examples of formal qualifications that can be used as an indication that an applicant has the potential to progress into and complete the Intermediate Level Apprenticeship in Plumbing are:

- Functional Skills, or their equivalent in English, Maths and/or ICT at level 1 or 2 OR
- GCSE grade A-D in each of the following:- a communication subject, maths and either a science or technical-based subject OR
- Level 1 GNVQs in relevant vocational/technical subjects OR
- A 14-19 Diploma in either Construction and The Built Environment, or Engineering OR
- A Level 1 'Access to Building Services Engineering' qualification

Job title(s)	Job role(s)
Plumber	Works under minimal supervision to complete the installation and maintenance of domestic hot water, cold water, sanitation, drainage, rainwater systems, central heating systems and components.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 2 NVQ Diploma in Plumbing and Heating					
No.	**Ref no.**	**Awarding organisation**	**Credit value**	**Guided learning hours**	**UCAS points value**
B1a	501/1752/X	EAL	76	596	N/A
B1b	501/1981/3	City & Guilds	76	596	N/A
B1c	600/5270/3	BPEC	76	596	N/A

Relationship between competence and knowledge qualifications

This framework requires the completion of one of the combined qualifications B1a, B1b or B1c identified in the combined qualifications section B1 above.

Qualification Title - Level 2 NVQ Diploma in Plumbing and Heating, which has the following units:

Knowledge Units

- Understand how to communicate with others in building services engineering J/602/2482 ***Unit Credit Value 3***
- Understand how to apply environmental protection measures in building services engineering D/602/2486 ***Unit Credit Value 4***
- Understand how to apply scientific principles in MES J/602/2496 ***Unit Credit Value 7***

Knowledge Element = 14 credits

Competence Units

- Apply safe working practices in building services engineering working environments T/602/2493 ***Unit Credit Value 2***
- Install and maintain domestic plumbing and heating systems D/602/2939 ***Unit Credit Value 4***
- Understand and carry out site preparation, and pipework fabrication techniques for domestic plumbing and heating systems D/602/2682 ***Unit Credit Value 10***
- Understand and apply domestic cold water system installation and maintenance techniques H/602/2697 ***Unit Credit Value 8***

- Understand and apply domestic hot water system installation and maintenance techniques F/602/2884 ***Unit Credit Value 8***
- Understand and apply domestic central heating system installation and maintenance techniques Y/602/2888 ***Unit Credit Value 10***
- Understand and apply domestic rainwater system installation and maintenance techniques F/602/2917 ***Unit Credit Value 4***
- Understand and apply domestic above ground drainage system installation and maintenance techniques J/602/2921 ***Unit Credit Value 6***
- Understand and carry out safe working practices in building services engineering J/602/2479 ***Unit Credit Value 10***

Competence Element = 62 credits

Total Qualification = 76 credits

For further qualification details refer to: register.ofqual.gov.uk/Qualification and search by the relevant qualification or unit number.

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

Apprentices must complete or have completed one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications listed below in order to successfully complete their Apprenticeship and this will carry the QCF five credit values. If they do not have these qualifications as part of their evidence an Apprenticeship certificate cannot be awarded.

English	Minimum level or grade	Credit value
Functional Skills qualification in English	2	5
GCSE qualification in English (with enhanced functional content)	C	5
Key Skills qualification in Communication achieved either before September 2013 as part of the Apprenticeship, or...*	2	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English Literature*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	2	5
GCSE qualification (with enhanced functional content) in Mathematics	C	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	2	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

ICT

Apprentices must complete or have completed one of the ICT transferable skills qualifications listed below in order to successfully complete their Apprenticeship and this will carry the QCF five credit values. If they do not have one of these qualifications as part of their evidence an Apprenticeship certificate cannot be awarded.

ICT	Minimum level or grade	Credit value
Functional Skills qualification in Information and Communications Technology (ICT)	1	5
GCSE qualification in ICT (with enhanced functional content)	D	5
Key Skills qualification in ICT achieved either before September 2013 as part of the Apprenticeship, or...*	1	5
GCSE qualification in ICT*	C	N/A
A' Level or AS Level qualification in ICT*	E	N/A
GCSE or O'Level qualification in ICT**	A	N/A
A' Level or AS Level qualification in ICT**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Inclusion of Information and Communications Technology (ICT)

No further details

Progression routes into and from this pathway

Progression routes into this pathway:

Applicants may come from a range of routes including:

- Work or work experience

- Training and/or experience which could include a portfolio showing what they have done
- Academic qualification(s) such as three GCSEs grades A-D in each of the following:- a communication subject, maths and either a science or technical-based subject
- Achievement of Key Skills or Functional Skills
- Level 1 GNVQs in relevant vocational/technical subjects
- A 14-19 Diploma in either Construction and the Built Environment or Engineering
- A Level 1 'Access to Building Services Engineering' qualification

No individual should be refused access to an initial assessment on the basis of educational qualifications alone. The ultimate responsibility for selection will rest with the individual employer

Progression routes out of this pathway:

On successful completion of the Intermediate Level Apprenticeship in Plumbing, an apprentice will have the skills, knowledge and qualifications to:

- Progress to learning and assessment programmes that lead to relevant Level 3 qualifications and/or Advanced Level Apprenticeship in Domestic Plumbing and Heating
- Progress in their career with further training into such job roles as Technician, Designer Estimator, Project Manager, Site/Workshop Supervisor/Manager, Chartered Engineer, Sales Engineer or Commercial Manager

Also whilst this sector doesn't currently have a 'Licence to Practice' our apprenticeships are recognised as fulfilling the competence requirements of the voluntary card schemes and will enable you to register on a relevant industry recognised Certification Scheme which is evidence that an operative is deemed competent to carry out a particular job role effectively and safely.

Further career guidance can be found at: www.summitskills.org.uk/careers

Employee rights and responsibilities

The Employee Rights and Responsibilities (ERR) elements identified below will be achieved through an induction programme, in combination with the Level 2 NVQ Diploma in Plumbing and Heating qualification (501/1752/X EAL, 501/1981/3; City & Guilds or 600/5270/3 BPEC) into which they are integrated and signposted. The ERR elements will be evidenced by the issuing of a certificate for one of these qualifications plus a completed ACE Declaration & Universal Authorisation form with confirmation by the assessor and apprentice that all nine ERR elements have been achieved.

The delivery and assessment of ERR must be designed so that the apprentice:

1. knows and understands the range of employer and employee statutory rights and responsibilities under Employment Law and that employment rights can be affected by other legislation as well. This should cover the apprentices rights and responsibilities under the Disability Discrimination Act, other relevant equalities legislation and Health and Safety, together with the responsibilities and duties of employers;
2. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health and Safety and Equality and Diversity training must be an integral part of the apprentice's learning programme;
3. knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme;
4. understands the role played by their occupation within their organisation and industry;
5. has an informed view of the types of career pathways that are open to them;
6. knows the types of representative bodies and understands their relevance to their industry and organisation, and their main roles and responsibilities;
7. knows where and how to get information and advice on their industry, occupation, training and career;
8. can describe and work within their organisations principles and codes of practice;
9. recognises and can form a view on issues of public concern that affect their organisation and industry

Level 3

Title for this framework at level 3

Advanced Level Apprenticeship in Domestic Plumbing and Heating

Pathways for this framework at level 3

Pathway 1:	Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)
Pathway 2:	Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)
Pathway 3:	Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Level 3, Pathway 1: Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)

Description of this pathway

Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental) - installing, maintaining, servicing and commissioning domestic plumbing and heating systems - 78 to 97 credits subject to option chosen.

- Minimum 68 credits for combined (Knowledge 11 credits & Competence 57 credits) qualification
- 10 credits for Functional Skills in English & Mathematics

Where Recognition of Prior Learning (RPL) is applied in relation to competence, knowledge or Functional Skills, the Apprenticeship programme must be tailored to allow the Apprentice to undertake new learning, including learning at a higher level and developing new skills.

In order to demonstrate the industry recognised level of competence reflected by this Intermediate framework it is expected the minimum duration for its completion will be **no less than 24 months.**

Entry requirements for this pathway in addition to the framework entry requirements

The Plumbing and Heating Industry would normally expect entry into this framework to be for those who have already successfully completed an Intermediate Level Apprenticeship in Plumbing, or for individuals with the experience and knowledge comparable with the requirements of that programme.The structured learning and assessment programme of this framework will enhance the skills and knowledge of the entrant to the benefit of employers and apprentices alike.

Examples of formal qualifications that can be used as an indication that an applicant has the potential to progress into and complete the Advanced Level Apprenticeship in Domestic Plumbing and Heating are:

- Successful completion of the Intermediate Level Apprenticeship in Plumbing
- Functional Skills, or their equivalent in English, Maths and/or ICT at level 1 or 2 OR
- GCSE grade A-C in each of the following:- a communication subject, maths and either a science or technical-based subject OR
- Level 2 GNVQs in relevant vocational/technical subjects OR
- A 14-19 Higher Diploma in either Construction and the Built Environment, or Engineering OR
- A Level 2 'Access to Building Services Engineering' qualification

Job title(s)	Job role(s)
Advanced Plumber (Oil-Fired, Solid Fuel or Environmental)	Completes and oversees work to install, service, maintain and commission domestic hot water, cold water, central heating and sanitation systems using Oil-Fired, Solid Fuel or Renewable Energy

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating					
No.	**Ref no.**	**Awarding organisation**	**Credit value**	**Guided learning hours**	**UCAS points value**
B1a	600/1122/1	City & Guilds	68 - 87	549-659	N/A
B1b	600/1252/3	EAL	68 - 87	549-659	N/A
B1c	600/6863/2	BPEC	68 - 87	549-649	N/A

Relationship between competence and knowledge qualifications

This framework requires the completion of the combined qualifications B1a, B1b or B1c identified in the combined qualifications section B1 above.

Qualification Title - Level 3 NVQ Diploma in Domestic Plumbing and Heating, which has a variety of unit combinations to enable achievement. You must complete a common mandatory group of units worth 56 credits plus one of the three optional groups PG1, PG2 or PG3 (which may also include both mandatory and optional routes)

Common Mandatory group

Knowledge Unit

- Understand how to organise resources in building services engineering R/602/2498 ***Unit Credit Value 3***

Knowledge Element = 3 credits

Competence Units

- Understand and carry out electrical work on domestic plumbing and heating systems and components T/502/9157 ***Unit Credit Value 12***
- Install, commission, service and maintain domestic plumbing and heating K/502/9298 ***Unit Credit Value 3***
- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques K/502/8930 ***Unit Credit Value 9***
- Understand and apply domestic hot water system installation, commissioning, service and

maintenance techniques K/502/9155 ***Unit Credit Value 9***

- Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques M/502/9156 ***Unit Credit Value 12***
- Understand and apply domestic sanitation system installation, commissioning, service and maintenance techniques D/502/9296 ***Unit Credit Value 8***

Competence Element = 53 credits

Knowledge + Competence = 56 credits

Optional Groups

GROUP PG1 - Oil Firing Pathway (Knowledge 22 credits/Competence 63 credits = 85 credits in total. Comprising 56 credits from the common mandatory group, 16 credits from the pathway mandatory group plus 13 credits from the optional unit routes below)

Pathway Mandatory group

Knowledge Units

- Understand core oil firing safety principles in domestic building services engineering H/502/9557 ***Unit Credit Value 12***

Knowledge Element = 12 credits

Competence Units

- Apply core oil firing safety in domestic building services engineering L/502/9391 ***Unit Credit Value 4***

Competence Element = 4 credits

Plus:

Optional Units Route 1

Knowledge Units

- Understand the principles of domestic oil firing pressure jet appliances D/502/9394 ***Unit Credit Value 7***

Knowledge Element = 7 credits

Competence Units

- Install, test and commission domestic oil firing pressure jet appliances Y/502/9393 ***Unit Credit Value 3***
- Service and maintain domestic oil firing pressure jet appliances M/502/9402 ***Unit Credit***

Value 3

Competence Element = 6 Credits

Or:

Optional Units Route 2

Knowledge Units

- Understand the principles of domestic oil firing vaporising appliances T/502/9403 ***Unit Credit Value 7***

Knowledge Element = 7 credits

Competence Units

- Service and maintain domestic oil firing vaporising appliances F/502/9405 ***Unit Credit Value 3***
- Install, test and commission domestic oil firing vaporising appliances A/502/9404 ***Unit Credit Value 3***

Competence Element = 6 Credits

GROUP PG2 - Solid Fuel Pathway (Knowledge 22 or 25 credits/Competence 63 or 62 credits = 85 or 87 credits in total depending on option taken. Comprising 56 credits from the common mandatory group, 16 credits from the pathway mandatory group plus 13 credits from the optional unit routes 1 or 15 credits from the optional unit 2 below)

Common Mandatory group

Knowledge Units

- Understand core solid fuel safety principles in domestic building services engineering J/502/9406 ***Unit Credit Value 12***

Knowledge Element = 12 credits

Competence Units

- Apply core solid fuel safety in domestic building services engineering L/502/9407 ***Unit Credit Value 4***

Competence Element = 4 credits

Plus:

Optional Units Route 1

Knowledge Unit

- Understand the principles of domestic solid mineral fuel burning appliances R/502/9408 ***Unit Credit Value 7***

Knowledge Element = 7 credits

Competence Units

- Service and maintain domestic solid mineral fuel burning appliances L/502/9410 ***Unit Credit Value 3***
- Install, test and commission domestic solid mineral fuel burning appliances Y/502/9409 ***Unit Credit Value 3***

Competence Element = 6 credits

Optional Units Route 2

Knowledge Units

- Understand the installation and commissioning principles of biomass fuel burning appliances R/502/9411 ***Unit Credit Value 7***
- Understand the service and maintenance principles of biomass fuel burning appliances Y/502/9412 ***Unit Credit Value 3***

Knowledge Element = 10 credits

Competence Units

- Service and maintain domestic biomass fuel burning appliances H/502/9414 ***Unit Credit Value 2***
- Install, test and commission domestic biomass fuel burning appliances K/502/9415 ***Unit Credit Value 3***

Competence Element = 5 credits

GROUP PG3 - Environmental Technologies Pathway (Knowledge 11 credits/Competence 57 credits = 68 credits in total. Comprising 56 credits from the common mandatory group, 2 credits from the pathway mandatory unit plus 10 credits from one of the optional units below)

Pathway Mandatory Knowledge Unit

- Understand the fundamental principles and requirements of environmental technology systems K/602/3138 ***Unit Credit Value 2***

Plus:

Optional Units Route 1

Knowledge Units

- Know the requirements to install, commission and handover solar thermal hot water systems F/602/3100 ***Unit Credit Value 4***
- Know the requirements to inspect, service and maintain 'active' solar thermal hot water systems Y/602/3104 ***Unit Credit Value 2***

Knowledge Element = 6 credits

Competence Units

- Install, commission and handover 'active' solar thermal hot water systems L/602/3102 ***Unit Credit Value 2***
- Inspect, service and maintain 'active' solar thermal hot water systems K/602/3107 ***Unit Credit Value 2***

Competence Element = 4 credits

Or:

Optional Units Route 2

Knowledge Units

- Know the requirements to install, commission and handover heat pump systems - non-refrigerant circuits Y/602/3054 ***Unit Credit Value 4***
- Know the requirements to inspect, service and maintain heat pump system installations - non-refrigerant circuits F/602/3078 ***Unit Credit Value 2***

Knowledge Element = 6 credits

Competence Units

- Install, commission and handover heat pumps - non-refrigerant circuits D/602/3072 ***Unit Credit Value 2***
- Inspect, service and maintain heat pump installations - non-refrigerant circuits L/602/3083 ***Unit Credit Value 2***

Competence Element = 4 credits

Or:

Optional Units Route 3

Knowledge Units

- Know the requirements to inspect, service and maintain rainwater harvesting and

greywater reuse systems M/602/3111 ***Unit Credit Value 2***

- Know the requirements to install, commission and handover rainwater harvesting and greywater reuse systems T/602/3109 ***Unit Credit Value 4***

Knowledge Element = 6 credits

Competence Units

- Install, commission and handover rainwater harvesting and greywater reuse systems K/602/3110 ***Unit Credit Value 2***
- Inspect, service and maintain rainwater harvesting and greywater reuse systems A/602/3130 ***Unit Credit Value 2***

Competence Element = 4 credits

For further qualification details refer to: register.ofqual.gov.uk/Qualification and search by the relevant qualification or unit number.

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

Apprentices must complete or have completed one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications listed below in order to successfully complete their Apprenticeship and this will carry the QCF five credit values. If they do not have these qualifications as part of their evidence an Apprenticeship certificate cannot be awarded.

English	Minimum level or grade	Credit value
Functional Skills qualification in English	2	5
GCSE qualification in English (with enhanced functional content)	C	5
Key Skills qualification in Communication achieved either before September 2013 as part of the Apprenticeship, or...*	2	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English Literature*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	2	5
GCSE qualification (with enhanced functional content) in Mathematics	C	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	2	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Inclusion of Information and Communications Technology (ICT)

This pathway has no requirement for Level 2 ICT as the industry has determined it is not relevant for effective performance in this occupation. Applicants will be required to have completed the relevant Intermediate Level Apprenticeship which includes Level 1 ICT, or have knowledge and experience at a comparable level.

Progression routes into and from this pathway

Progression routes into this pathway:

Applicants may come from a range of routes including:

- Successful completion of an Intermediate Level Apprenticeship in Plumbing
- Work or work experience
- Training and/or experience which could include a portfolio showing what they have done
- Academic qualification(s) such as three GCSEs grades A-C in each of the following:- a communication subject, maths and either a science or technical-based subject
- Achievement of Key Skills or Functional Skills
- Level 2 GNVQs in relevant vocational/technical subjects
- A 14-19 Higher Diploma in either Construction and the Built Environment or Engineering
- A Level 2 'Access to Building Services Engineering' qualification

No individual should be refused access to an initial assessment on the basis of educational qualifications alone. The ultimate responsibility for selection will rest with the individual employer

Progression routes out of this pathway:

On successful completion of the Advanced Level Apprenticeship in Domestic Plumbing and Heating, an apprentice will have the skills, knowledge and qualifications to:

- Progress to relevant Level 4/5 qualifications e.g. Building Services Engineering Technology & Project Management or Foundation Degree in Engineering
- Progress in their career with further training into such job roles as Technician, Designer, Estimator, Project Manager, Site/Workshop Supervisor/ Manager, Chartered Engineer, Sales Engineer or Commercial Manager

Also whilst this sector doesn't currently have a 'Licence to Practice', our apprenticeships are recognised as fulfilling the competence requirements of the voluntary card schemes and will enable you to register on a relevant industry recognised Certification Scheme. Completion of this framework will provide the evidence required that you are deemed competent to carry out this job role effectively and safely.

Further career guidance can be found at: www.summitskills.org.uk/careers

UCAS points for this pathway: N/A

Employee rights and responsibilities

The normal entry into this framework would be through the previous completion of the Intermediate Level Apprenticeship in Plumbing and Heating into which the Employee Rights and Responsibilities (ERR) elements identified below are integrated and signposted. The ERR elements will be evidenced by the issuing of a qualification achievement certificate. Recognition of Prior Learning (RPL) may therefore be applied if ERR is gained in this way or from another programme.

Alternatively the ERR elements identified below must be achieved through an induction programme in combination with the Level 3 NVQ Diploma in Domestic Plumbing and Heating qualifications (EAL 600/1252/3; City & Guilds 600/1122/1 or BPEC 600/6863/2) into which they are integrated and signposted. The ERR elements will be evidenced by the issuing of a certificate for one of these qualifications plus a completed ACE Declaration & Universal Authorisation form with confirmation by the assessor and apprentice that all nine ERR elements have been achieved.

The delivery and assessment of ERR must be designed so that the apprentice:

1. knows and understands the range of employer and employee statutory rights and responsibilities under Employment Law and that employment rights can be affected by other legislation as well. This should cover the apprentice's rights and responsibilities under the Disability Discrimination Act, other relevant equalities legislation and Health and Safety, together with the responsibilities and duties of employers.
2. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health and Safety and Equality and Diversity training must be an integral part of the apprentice's learning programme;
3. knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme
4. understands the role played by their occupation within their organisation and industry;
5. has an informed view of the types of career pathways that are open to them;
6. knows the types of representative bodies and understands their relevance to their industry and organisation, and their main roles and responsibilities
7. knows where and how to get information and advice on their industry, occupation, training and career;
8. can describe and work within their organisations principles and codes of practice;
9. recognises and can form a view on issues of public concern that affect their organisation and industry

Level 3, Pathway 2: Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

Description of this pathway

Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances) - installing, maintaining, servicing and commissioning domestic plumbing and heating systems with gas fired warm air appliances - 145 credits in total.

- 135 credits for either combined (Knowledge 37 credits & Competence 98 credits) qualification
- 10 credits for Functional Skills in English & Mathematics

Where Recognition of Prior Learning (RPL) is applied in relation to competence, knowledge or Functional Skills, the Apprenticeship programme must be tailored to allow the Apprentice to undertake new learning, including learning at a higher level and developing new skills.

In order to demonstrate the industry recognised level of competence reflected by this Advanced framework it is expected the minimum duration for its completion will be **no less than 24 months.**

Entry requirements for this pathway in addition to the framework entry requirements

The Plumbing and Heating Industry would normally expect entry onto this Advanced Apprenticeship Framework pathway to be for those who have already completed an Intermediate Level Apprenticeship in Plumbing, or for individuals with experience and knowledge comparable with the requirements of that framework.The structured learning and assessment programme of this framework will enhance the skills and knowledge of the entrant to the benefit of employers and apprentices alike.

Examples of formal qualifications that can be used as an indication that an applicant has the potential to progress into and complete the Advanced Level Apprenticeship in Domestic Plumbing and Heating are:

- Successful completion of the Intermediate Level Apprenticeship in Plumbing
- Functional Skills, or their equivalent in English, Maths and/or ICT at level 1 or 2 OR
- GCSE grade A-C in each of the following:- a communication subject, maths and either a science or technical-based subject OR
- Level 2 GNVQs in relevant vocational/technical subjects OR
- A 14-19 Higher Diploma in either Construction and the Built Environment, or Engineering OR
- A Level 2 'Access to Building Services Engineering' qualification

Job title(s)	Job role(s)
Advanced Plumber (Gas-Fired Warm Air)	Completes, oversees and organises work to install, service, maintain and commission domestic plumbing and heating systems, components and gas-fired warm air appliances

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	600/1124/5	City & Guilds	135	933	N/A
B1b	600/6285/X	BPEC	135	933	N/A

Relationship between competence and knowledge qualifications

This framework requires the completion of either of the combined qualifications B1a, B1b or B1c identified in the combined qualifications section B1 above.

Qualification Title - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances), which has the following units:

Knowledge Units

- Understand how to organise resources in building services engineering R/602/2498 ***Unit Credit Value 3***
- Specific core installation and maintenance H/502/8487 ***Unit Credit Value 21***
- Understand core gas safety principles for natural gas in domestic building services engineering J/502/9390 ***Unit Credit Value 13***

Knowledge Element = 37 Credits

Competence Units

- Understand and carry out electrical work on domestic plumbing and heating systems and components T/502/9157 ***Unit Credit Value 12***
- Install, commission, service and maintain domestic plumbing and heating systems K/502/9298 ***Unit Credit Value 3***
- Tightness test, purge, commission and de-commission gas pipework up to 35mm 1¼ diameter in small natural gas installations K/502/8376 ***Unit Credit Value 3***
- Install, commission and de-commission gas pipework up to 35mm 1¼ diameter in domestic and small commercial premises T/502/8381 ***Unit Credit Value 19***
- Maintain gas warm air central heating systems and appliances T/502/8302 ***Unit Credit***

Value 11

- Install domestic gas warm air central heating appliances F/502/8299 ***Unit Credit Value 12***
- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques K/502/8930 ***Unit Credit Value 9***
- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques K/502/9155 ***Unit Credit Value 9***
- Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques M/502/9156 ***Unit Credit Value 12***
- Understand and apply domestic sanitation system installation, commissioning, service and maintenance techniques D/502/9296 ***Unit Credit Value 8***

Competence Element = 98 Credits

Total Qualification = 135 Credits

For further qualification details refer to: register.ofqual.gov.uk/Qualification and search by the relevant qualification or unit number.

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

Apprentices must complete or have completed one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications listed below in order to successfully complete their Apprenticeship and this will carry the QCF five credit values. If they do not have these qualifications as part of their evidence an Apprenticeship certificate cannot be awarded.

English	Minimum level or grade	Credit value
Functional Skills qualification in English	2	5
GCSE qualification in English (with enhanced functional content)	C	5
Key Skills qualification in Communication achieved either before September 2013 as part of the Apprenticeship, or...*	2	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English Literature*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	2	5
GCSE qualification (with enhanced functional content) in Mathematics	C	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	2	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Inclusion of Information and Communications Technology (ICT)

This pathway has no requirement for Level 2 ICT as the industry has determined it is not relevant for effective performance in this occupation. Applicants will be required to have completed the relevant Intermediate Level Apprenticeship which includes Level 1 ICT or have knowledge and experience at a comparable level.

Progression routes into and from this pathway

Progression routes into this pathway:

Applicants may come from a range of routes including:

- Successful completion of an Intermediate Level Apprenticeship in Plumbing
- Work or work experience
- Training and/or experience which could include a portfolio showing what they have done
- Academic qualification(s) such as three GCSEs grades A-C in each of the following:- a communication subject, maths and either a science or technical-based subject
- Achievement of Key Skills or Functional Skills
- Level 2 GNVQs in relevant vocational/technical subjects
- A 14-19 Higher Diploma in either Construction and the Built Environment or Engineering
- A Level 2 'Access to Building Services Engineering' qualification

No individual should be refused access to an initial assessment on the basis of educational qualifications alone. The ultimate responsibility for selection will rest with the individual employer

Progression routes out of this pathway:

On successful completion of the Advanced Level Apprenticeship in Domestic Plumbing and Heating, an apprentice will have the skills, knowledge and qualifications to:

- Progress to relevant Level 4/5 qualifications e.g. Building Services Engineering Technology & Project Management or Foundation Degree in Engineering
- Progress in their career with further training into such job roles as Technician, Designer, Estimator, Project Manager, Site/Workshop Supervisor/ Manager, Chartered Engineer, Sales Engineer or Commercial Manager

Also whilst this sector doesn't currently have a 'Licence to Practice', our apprenticeships are recognised as fulfilling the competence requirements of the voluntary card schemes and will enable you to register on a relevant industry recognised Certification Scheme. Completion of this framework will provide the evidence required that you are deemed competent to carry out this job role effectively and safely.

Further career guidance can be found at: www.summitskills.org.uk/careers

UCAS points for this pathway: N/A

Employee rights and responsibilities

The normal entry into this framework would be through the previous completion of the Intermediate Level Apprenticeship in Plumbing into which the Employee Rights and Responsibilities (ERR) elements identified below are integrated and signposted. The ERR elements will be evidenced by the issuing of a qualification achievement certificate. Recognition of Prior Learning (RPL) may therefore be applied if ERR is gained in this way or from another programme.

Alternatively the ERR elements identified below must be achieved through an induction programme in combination with the Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas Fired Warm Air Appliances) qualifications (either EAL 600/1451/9; City & Guilds 600/1124/5 or BPEC 600/6285/X) into which they are integrated and signposted. The ERR elements will be evidenced by the issuing of a certificate for one of these qualifications plus a completed ACE Declaration & Universal Authorisation form with confirmation by the assessor and apprentice that all nine ERR elements have been achieved.

The delivery and assessment of ERR must be designed so that the apprentice:

1. knows and understands the range of employer and employee statutory rights and responsibilities under Employment Law and that employment rights can be affected by other legislation as well. This should cover the apprentice's rights and responsibilities under the Disability Discrimination Act, other relevant equalities legislation and Health and Safety, together with the responsibilities and duties of employers.
2. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health and Safety and Equality and Diversity training must be an integral part of the apprentice's learning programme;
3. knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme
4. understands the role played by their occupation within their organisation and industry;
5. has an informed view of the types of career pathways that are open to them;
6. knows the types of representative bodies and understands their relevance to their industry and organisation, and their main roles and responsibilities
7. knows where and how to get information and advice on their industry, occupation, training and career;
8. can describe and work within their organisations principles and codes of practice;
9. recognises and can form a view on issues of public concern that affect their organisation and industry

Level 3, Pathway 3: Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Description of this pathway

Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances) - installing, maintaining, servicing and commissioning domestic plumbing and heating systems with gas-fired water and central heating appliances - 156 credits in total.

- 146 credits for either combined (Knowledge 37 credits & Competence 109 credits) qualification
- 10 credits for Functional Skills in English & Mathematics

Where Recognition of Prior Learning (RPL) is applied in relation to competence, knowledge or Functional Skills, the Apprenticeship programme must be tailored to allow the Apprentice to undertake new learning, including learning at a higher level and developing new skills.

In order to demonstrate the industry recognised level of competence reflected by this Advanced framework it is expected the minimum duration for its completion will be **no less than 24 months.**

Entry requirements for this pathway in addition to the framework entry requirements

The Plumbing and Heating Industry would normally expect entry into this framework to be for those who have already completed an Intermediate Level Apprenticeship in Plumbing, or for individuals with the experience and knowledge comparable with the requirements of that programme. The structured learning and assessment programme of this framework will enhance the skills and knowledge of the entrant to the benefit of employers and apprentices alike.

Examples of formal qualifications that can be used as an indication that an applicant has the potential to progress into and complete the Advanced Level Apprenticeship in Domestic Plumbing and Heating are:

- Successful completion of the Intermediate Level Apprenticeship in Plumbing
- Functional Skills, or their equivalent in English, Maths and/or ICT at level 1 or 2 OR
- GCSE grade A-C in each of the following:- a communication subject, maths and either a science or technical-based subject OR
- Level 2 GNVQs in relevant vocational/technical subjects OR
- A 14-19 Higher Diploma in either Construction and the Built Environment, or Engineering OR
- A Level 2 'Access to Building Services Engineering' qualification

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Job title(s)	Job role(s)
Advanced Plumber (Gas-Fired Water & Central Heating)	Completes, oversees and organises work to install, service, maintain and commission domestic plumbing and heating systems, components and gas-fired water and central heating appliances

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)					
No.	**Ref no.**	**Awarding organisation**	**Credit value**	**Guided learning hours**	**UCAS points value**
B1a	600/1134/8	City & Guilds	146	1034	N/A
B1b	600/1657/7	EAL	146	1034	N/A
B1c	600/6284/8	BPEC	146	1034	N/A

Relationship between competence and knowledge qualifications

This framework requires the completion of either of the combined qualifications B1a, B1b or B1c identified in the combined qualifications section B1 above.

Qualification Title - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances) which has the following units:

Knowledge Units

- Understand how to organise resources in building services engineering R/602/2498 ***Unit Credit Value 3***
- Specific core installation and maintenance H/502/8487 ***Unit Credit Value 21***
- Understand core gas safety principles for natural gas in domestic building services engineering J/502/9390 ***Unit Credit Value 13***

Knowledge Element = 37 credits

Competence units

- Understand and carry out electrical work on domestic plumbing and heating systems and components T/502/9157 ***Unit Credit Value 12***
- Install, commission, service and maintain domestic plumbing and heating systems K/502/9298 ***Unit Credit Value 3***
- Tightness test, purge, commission and de-commission gas pipework up to 35mm 1¼ diameter in small natural gas installations K/502/8376 ***Unit Credit Value 3***
- Install, commission and de-commission gas pipework up to 35mm 1¼ diameter in

domestic and small commercial premises T/502/8381 ***Unit Credit Value 19***

- Maintain gas water heating and wet central heating appliances T/502/8459 ***Unit Credit Value 16***
- Install domestic gas water heaters and wet central heating appliances Y/502/8454 ***Unit Credit Value 18***
- Understand and apply domestic sanitation system installation, commissioning, service and maintenance techniques D/502/9296 ***Unit Credit Value 8***
- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques K/502/8930 ***Unit Credit Value 9***
- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques K/502/9155 ***Unit Credit Value 9***
- Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques M/502/9156 ***Unit Credit Value 12***

Competence Element = 109 credits

Total Qualification = 146 credits

For further qualification details refer to: register.ofqual.gov.uk/Qualification and search by the relevant qualification or unit number.

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

Apprentices must complete or have completed one of the English transferable skills qualifications and one of the Mathematical transferable skills qualifications listed below in order to successfully complete their Apprenticeship and this will carry the QCF five credit values. If they do not have these qualifications as part of their evidence an Apprenticeship certificate cannot be awarded.

English	Minimum level or grade	Credit value
Functional Skills qualification in English	2	5
GCSE qualification in English (with enhanced functional content)	C	5
Key Skills qualification in Communication achieved either before September 2013 as part of the Apprenticeship, or...*	2	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English Literature*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	2	5
GCSE qualification (with enhanced functional content) in Mathematics	C	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	2	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Inclusion of Information and Communications Technology (ICT)

This pathway has no requirement for Level 2 ICT as the industry has determined it is not relevant for effective performance in this occupation. Applicants will be required to have completed the relevant Intermediate Level Apprenticeship which includes Level 1 ICT or have knowledge and experience at a comparable level.

Progression routes into and from this pathway

Progression routes into this pathway:

Applicants may come from a range of routes including:

- Successful completion of an Intermediate Level Apprenticeship in Plumbing
- Work or work experience
- Training and/or experience which could include a portfolio showing what they have done
- Academic qualification(s) such as three GCSEs grades A-C in each of the following:- a communication subject, maths and either a science or technical-based subject
- Achievement of Key Skills or Functional Skills
- Level 2 GNVQs in relevant vocational/technical subjects
- A 14-19 Higher Diploma in either Construction and the Built Environment or Engineering
- A Level 2 'Access to Building Services Engineering' qualification

No individual should be refused access to an initial assessment on the basis of educational qualifications alone. The ultimate responsibility for selection will rest with the individual employer

Progression routes out of this pathway:

On successful completion of the Advanced Level Apprenticeship in Domestic Plumbing and Heating, an apprentice will have the skills, knowledge and qualifications to:

- Progress to relevant Level 4/5 qualifications e.g. Building Services Engineering Technology & Project Management or Foundation Degree in Engineering
- Progress in their career with further training into such job roles as Technician, Designer, Estimator, Project Manager, Site/Workshop Supervisor/ Manager, Chartered Engineer, Sales Engineer or Commercial Manager

Also whilst this sector doesn't currently have a 'Licence to Practice', our apprenticeships are recognised as fulfilling the competence requirements of the voluntary card schemes and will enable you to register on a relevant industry recognised Certification Scheme. Completion of this framework will provide the evidence required that you are deemed competent to carry out this job role effectively and safely.

Further career guidance can be found at: www.summitskills.org.uk/careers

UCAS points for this pathway: N/A

Employee rights and responsibilities

The normal entry into this framework would be through the previous completion of the Intermediate Level Apprenticeship in Plumbing into which the Employee Rights and Responsibilities (ERR) elements identified below are integrated and signposted. The ERR elements will be evidenced by the issuing of a qualification achievement certificate. Recognition of Prior Learning (RPL) may therefore be applied if ERR is gained in this way or from another programme.

Alternatively the ERR elements identified below must be achieved through an induction programme in combination with the 3 NVQ Diploma in Domestic Plumbing and Heating (Gas Fired Water and Central Heating Appliances) qualification either (City & Guilds (600/1134/8; EAL 600/1657/7 or BPEC 600/6284/8) into which they are integrated and signposted. The ERR elements will be evidenced by the issuing of a certificate for one of these qualifications plus a completed ACE Declaration & Universal Authorisation form with confirmation by the assessor and apprentice that all nine ERR elements have been achieved.

The delivery and assessment of ERR must be designed so that the apprentice:

1. knows and understands the range of employer and employee statutory rights and responsibilities under Employment Law and that employment rights can be affected by other legislation as well. This should cover the apprentice's rights and responsibilities under the Disability Discrimination Act, other relevant equalities legislation and Health and Safety, together with the responsibilities and duties of employers.
2. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health and Safety and Equality and Diversity training must be an integral part of the apprentice's learning programme;
3. knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. Details of Access to Work and Additional Learning Support must be included in the programme
4. understands the role played by their occupation within their organisation and industry;
5. has an informed view of the types of career pathways that are open to them;
6. knows the types of representative bodies and understands their relevance to their industry and organisation, and their main roles and responsibilities
7. knows where and how to get information and advice on their industry, occupation, training and career;
8. can describe and work within their organisations principles and codes of practice;
9. recognises and can form a view on issues of public concern that affect their organisation and industry

The remaining sections apply to all levels and pathways within this framework.

How equality and diversity will be met

The nature of the work means that the Plumbing Industry is not a traditional career choice for women, but women do qualify and work successfully in the industry and this is encouraged. We are continuing to work with the UK Resource Centre for Women in Science, Engineering and Technology, and Platform 51 (formerly YWCA) to promote the opportunities for women working within the building services engineering sector.

SummitSkills will have overall responsibility for the development and review of the framework and for monitoring equality of opportunity, primarily by the analysis of the National Apprenticeship Service data.

There should be open recruitment of apprentices who meet the selection criteria, regardless of gender, ethnic origin, religion/belief, sexual orientation or disability.

All partners involved in the delivery of the apprenticeship and employers must be committed to a policy of equal opportunities and must have a fomal equal opportunities policy and procedure in place. Employers/providers must be able to demonstrate that there are no overt or covert discriminatory practices in selection and employment. All promotional, selection and training activities must comply with relevant legislation such as the Equality Act 2010. http://www.equalityhumanrights.com/advice-and-guidance/new-equality-act-guidance/

Providers will monitor equality of opportunity practice and procedures within their own organisation and take positive action when necessary. It is also recommended that employers/providers conduct an exit interview if the apprentice leaves the programme before completion.

On and off the job guided learning (England)

Total GLH for each pathway

Overview of Plumbing Intermediate Level

Qualification Total - 596 hrs (Knowledge elements 132hrs + Competence elements 464hrs)

Functional Skills (FS) - 135 hrs (notional value of 45hrs per FS x 3, which can be offset if previously completed)

Mentoring - 92 hrs (based on 46 wks x 2hrs)

Minimum total Guided Learning Hours (GLH) for this framework = 823

Overview of Domsestic Plumbing & Heating Advanced Level

There are three pathways an apprentice can choose from, each of which may or may not have options for study within them:

1. Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)

2. Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

3. Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

1. Domestic Plumbing and Heating

a) Domestic Oil Fired Systems

Qualification total - 638 GLH (Knowledge elements 196hrs + Competence elements 442hrs)

Functional Skills (FS) - 90 GLH (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 GLH (based on 92 wks x 2hrs)

Minimum total GLH for this pathway is 912 hrs

b) Solid Fuel Systems

(i) Domestic Solid Mineral Fuel Appliances

Qualification total - 638 GLH (Knowledge elements 196hrs + Competence elements 442hrs)

Functional Skills (FS) - 90 GLH (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 GLH (based on 92 wks x 2hrs)

Minimum total GLH for this pathway is 912 hrs

(ii) Domestic Biomass Fuel Burning Appliances

Qualification total - 659 GLH (Knowledge elements 218hrs + Competence elements 441hrs)

Functional Skills (FS) - 90 GLH (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 GLH (based on 92 wks x 2hrs)

Minimum total GLH for this pathway is 933 hrs

c) Environmental Technology Systems

Qualification total - 549 GLH (Knowledge elements 91hrs + Competence elements 458hrs)

Functional Skills (ES) - 90 Training hours (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 GLH (based on 92 wks x 2hrs)

Minimum total GLH for this pathway is 823 hrs

2. Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

Qualification Total - 933 hrs (Knowledge elements 266hrs + Competence elements 667hrs)

Functional Skills (FS) - 90 hrs (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 hrs (based on 92 wks x 2hrs)

Minimum total GLH for this pathway - 1207

3. Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Qualification Total - 1034 hrs (Knowledge elements 266hrs + Competence elements 768hrs)

Functional Skills (FS) - 90 hrs (notional value of 45hrs per FS x 2, which can be offset if previously completed)

Mentoring - 184 hrs (based on 92 wks x 2hrs)

Minimum total GLH for this pathway - 1308

In addition to these hours we would encourage further practice take place in the work place as apprenticeships should normally require employment of at least 30 hrs per week as part of their Apprenticeship Agreement.

These Apprenticeships meet the National Apprenticeship Services requirement that apprenticeships for those aged:

- between 16 – 18, then the Apprenticeship must last at least 12 months
- 19 and over, then the Apprenticeship must be at least 12 months, unless relevant prior learning is recorded. Where this is the case, Apprenticeships will not be less than six months and must include new skills and new learning.

GLH:

- must be planned, reviewed and evaluated jointly between the apprentice and tutor, teacher, mentor or manager
- must allow access as and when required by the apprentice either to a tutor, teacher, mentor or manager
- must be delivered through one or more of the following methods: individual and group teaching, e-learning, distance learning, coaching, mentoring; feedback and assessment; collaborative/networked learning with peers; guided study

Apprenticeship delivery:

- must be planned to make full and effective use of the duration, including the opportunity for apprentices to embed and extend their learning through repeated workplace practice
- some of the GLH may be offset through Recognition of Prior Learning (RPL) of suitable qualifications and demonstrable experience
- a completed ACE Declaration & Universal Authorisation form signed by the assessor and apprentice will evidence that on and off-the-job hour requirements have been met and is available on SummitSkills website at: http://www.summitskills.org.uk/Apprenticeships/Certification-and-Registration/219

Minimum off-the-job guided learning hours

Intermediate Level Apprenticeship

Plumbing - minimum total off-the-job GLH is 639 hrs over 24 months

- Yr 1 - 320
- Yr 2 - 319

Advanced Level Apprenticeship

1. Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)

a. Domestic Oil-Fired Systems

Minimum total off-the-job GLH is 728 hrs over 24 months

- Yr 1 - 364
- Yr 2 - 364

b. Solid Fuel Systems

(i) Domestic Solid Mineral Fuel Appliances

Minimum total off-the-job GLH is 728 hrs over 24 months

- Yr 1 - 364
- Yr 2 - 364

(ii) Domestic Biomass Fuel Burning Appliances

Minimum total off-the-job GLH is 749 hrs over 24 months

- Yr 1 - 375
- Yr 2 - 374

c. Environmental Technology Systems

Minimum total off-the-job GLH is 639 hrs over 24 months

- Yr 1 - 320
- Yr 2 - 319

2. Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

Minimum off-the-job GLH is 1023 hrs over 24 months

- Yr 1 - 512
- Yr 2 - 511

3. Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Minimum off-the-job GLH is 1124 hrs over 24 months

- Yr 1 - 562
- Yr 2 - 562

How this requirement will be met

Guided Learning Hours (GLH) will be achieved through clear and specific outcomes which contribute directly to the successful completion of a framework, and these may include accredited and non-accredited elements of a framework.

GLH will be delivered through one or more of the following methods: individual and group teaching; e-learning; distance learning; feedback and assessment; guided study. All GLH delivery to take place during contracted working hours & whilst working under an Apprenticeship Agreement.

This will be evidenced by training provider attendance statistics and assessment reports.

Minimum on-the-job guided learning hours

Intermediate Apprenticeship Framework

Plumbing - minimum total on-the-job GLH is 184 hrs over 24 months

- Yr 1 - 92 hrs
- Yr 2 - 92 hrs

Advanced Apprenticeship Framework

1. Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)

Minimum total on-the-job GLH is 184 hrs over 24 months

- Yr 1 - 92 Hrs
- Yr 2 - 92 Hrs

2. Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)

Minimum total on-the-job GLH is 184 hrs over 24 months

- Yr 1 - 92 Hrs
- Yr 2 - 92 Hrs

3. Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

Minimum total on-the-job GLH is 184 hrs over 24 months

- Yr 1 - 92 Hrs
- Yr 2 - 92 Hrs

This is the minimum number of Guided Learning Hours that should be allocated for the apprentice to gather evidence in accordance with the requirements of the integrated

qualification and mentoring.

How this requirement will be met

Guided Learning Hours (GLH) will be achieved through clear and specific outcomes which contribute directly to the successful completion of the framework, and these may include accredited and non-accredited elements of the framework.

GLH will be delivered through one or more of the following methods: coaching; mentoring; feedback and assessment; collaborative/ networked learning with peers. All GLH delivery to take place during contracted working hours & whilst working under an Apprenticeship Agreement.

This will be evidenced by apprentices portfolio, employer dialogue, qualification assessment records and reports.

Personal learning and thinking skills assessment and recognition (England)

Summary of Personal Learning and Thinking Skills

There are four pathways in this framework, each with a different qualification. These qualifications are:

Intermediate Apprenticeship framework

- Level 2 NVQ Diploma in Plumbing and Heating

Advanced Apprenticeship framework

- Pathway 1 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Oil-Fired, Solid Fuel or Environmental)
- Pathway 2 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Warm Air Appliances)
- Pathway 3 - Level 3 NVQ Diploma in Domestic Plumbing and Heating (Gas-Fired Water and Central Heating Appliances)

There are seven common units in these Level 3 qualifications, and how they apply to each Personal Learning and Thinking skills is described below.

The normal entry route into the Advanced Level Apprenticeships is through progression from the Intemediate Level Apprenticeship. However, those entering the Advanced Level Apprenticeship directly need to produce auditable evidence to demonstrate their previous knowledge and experience is compatible with the relevant Level 2 qualification. This can be achieved through a process of Recognition of Prior Learning (RPL).

Formal recognition of PLTS achievement will be provided in the form of a certificate upon framework completion.

Creative thinking

Intermediate Level Apprenticeship

Creative thinking will be demonstrated and delivered at a minimum level in the units of the competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand how to apply scientific principles within MES (J/602/2496)
- Understand and carry out site preparation, and pipework fabrication techniques for domestic plumbing and heating systems (D/602/2682)
- Install and maintain domestic plumbing and heating systems (D/602/2939)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Creative thinking will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand how to organise resources in building services engineering (R/602/2498)
- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques (K/502/8930)
- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques (K/502/9155)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Independent enquiry

Intermediate Level Apprenticeship

Independent enquiry will be demonstrated and delivered at a minimum level in the units of the competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand and carry out safe working practices in building services engineering (J/602/2479)
- Understand how to apply scientific principles in MES (J/602/2496)
- Apply safe working practices in building services engineering working environments (T/602/2493)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Independent enquiry will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques (K/502/9155)

- Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques (M/502/9156)
- Understand and apply domestic sanitation system installation, commissioning, service and maintenance techniques (D/502/9296)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Reflective learning

Intermediate Level Apprenticeship

Reflective learning will be demonstrated and delivered at a minimum level in the units of the competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand and carry out safe working practices in building services engineering (J/602/2479)
- Understand how to communicate with others within building services engineering (J/602/2482)
- Understand how to apply scientific principles in MES (J/602/2496)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Reflective learning will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand and carry out electrical work on domestic plumbing and heating systems and components (T/502/9157)
- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques (K/502/8930)
- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques (K/502/9155)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Team working

Intermediate Level Apprenticeship

Team working will be demonstrated and delivered at a minimum level in the units of the

competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand how to communicate with others in BSE (J/602/2482)
- Apply safe working practices in building services engineering working environments (T/602/2493)
- Install and maintain domestic plumbing and heating systems (D/602/2939)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Team working will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand how to organise resources in building services engineering (R/602/2498)
- Understand and carry out electrical work on domestic plumbing and heating systems and components (T/502/9157)
- Install, commission, service and maintain domestic plumbing and heating systems (K/502/9298)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Self management

Intermediate Level Apprenticeship

Self management will be demonstrated and delivered at a minimum level in the units of the competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand and apply domestic cold water system installation and maintenance techniques (H/602/2697)
- Understand and apply domestic hot water system installation and maintenance techniques (F/602/2884)
- Install and maintain domestic plumbing and heating systems (D/602/2939)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Self management will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques (K/502/8930)
- Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques (K/502/9155)
- Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques (M/502/9156)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Effective participation

Intermediate Level Apprenticeship

Effective participation will be demonstrated and delivered at a minimum level in the units of the competence-based qualification Level 2 NVQ Diploma in Plumbing and Heating as referenced below:

- Understand how to communicate with others in BSE (J/602/2482)
- Understand how to apply environmental protection measures in BSE (D/602/2486)
- Understand how to apply scientific principles in MES (J/602/2496)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Advanced Level Apprenticeship

Effective participation will be demonstrated and delivered at a minimum level in the common units referenced below:

- Understand how to organise resources in building services engineering (R/602/2498)
- Understand and apply domestic sanitation system installation, commissioning, service and maintenance techniques (D/502/9296)
- Install, commission, service and maintain domestic plumbing and heating systems (K/502/9298)

Assessment and recognition will take place during the delivery and be evidenced at certification by the achievement of the qualification.

Additional employer requirements

Although not a requirement for issuing an 'Apprenticeship Completion Certificate', employers in the building services engineering sector **encourage** organisations that are delivering a learning and assessment programme for the Advanced Level Apprenticeship Frameworks to integrate the **Level 3 Award in the Fundamental Principles and Requirements of Environmental Technology Systems** (BPEC 600/6377/4, City & Guilds 600/4282/5, EAL 600/0665/1, LCL 600/5715/4 or ProQual 600/6253/8; credit value 2, GLH 15) into their delivery models.

Matching qualifications from other Awarding Organisations may intermittently become available on the OFQUAL Register and this framework document will be updated bi-annually to reflect suitable qualifications at that time.

It should be noted that the delivery of this qualification ***will*** not attract funding.

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