ENERGY & ENVIRONMENT AWARDS

EEA Level 3 End-point Assessment for Plumbing and Domestic Heating Technician

Option 1: Domestic Gas Fired Hot Water Heating Appliances Technician

Supporting Documents

QAN 610/6015/X
ST0303/V1.2

Supporting Documents for

EEA Level 3 End-point Assessment for Plumbing and Domestic Heating Technician V1.2 Option 1: Domestic Gas Fired Hot Water Heating Appliances Technician

QAN 610/6015/X

Updates to the supporting documents

Since the first publication of the Energy & Environment Awards (EEA) for Plumbing and Domestic Heating Technician Specification V1.2 (PDHT) – Option 1: Domestic Gas Fired Supporting Documents the following updates have been made.

Version	Date first published	Section updated	Page(s)
v1.1	Annuary 2026	Appendices E and F relabelled	50, 61
v1.0	December 2025	First published	All

Introduction

The supporting documents provided by Energy & Environment Awards (EEA) are designed to help employers and training providers deliver the EEA components of the End-Point Assessment (EPA) for the Plumbing and Domestic Heating Technician standard V1.2.

These documents cover:

- EEA knowledge test
- EEA practical planning test
- EEA practical
- EEA interview based on an EPA portfolio

Important:

The ACS components (ACS knowledge test and ACS practical) are delivered by an ACS approved awarding organisation. Employers and training providers must contact the chosen ACS awarding organisation directly to obtain their supporting documents and arrange these assessments.

By following this guidance, you will understand your responsibilities and ensure all EPA components are completed in the correct order.

Appendix A: Glossary

Amplification – provides more detail on how individual knowledge, skills or behaviours statements should be interpreted. Where the KSB statements, themselves are deemed self-explanatory, no amplification is provided. Assessment may include questions on anything identified in the amplification

Behaviours (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Elements – are the knowledge, skills and behaviours and what is needed to competently undertake the duties required for an occupational standard

Gateway - the stage of the apprenticeship where the apprentice, employer and training provider determine whether the apprentice is ready to undertake end-point assessment

Guidance – is only provided where it is required to support interpretation of the KSB statements

Knowledge (as part of KSBs) – specific information, technical detail, and 'know-how' identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Skills (as part of KSBs) – the practical application of knowledge identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Standard – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation's duties. Occupational standards are developed by employers for occupations that meet the Skills England current occupation criteria

Topic - is a collection of elements grouped into a theme e.g. Health and Safety

Appendix B: Gateway Eligibility Form

(Standard ST0303 version 1.2)

Apprentice's name	Apprentice's job title
Apprentice's ULN	
Name of Employer	Name of Training provider
Employer representatives present	Training provider representatives present
Apprenticeship start date	Apprenticeship on-programme end date
Was the apprentice aged 19 or over start of programme?	Y / N
Employer Decision: We require the apprentice to attempt the Level 2 English and Mathematics before they can achieve the apprenticeship	Y / N
Gateway meeting date:	
Has the apprentice taken any part of the end-point assessment for this apprenticeship standard with any other End-point Assessment Organisation?	Y / N
If "Yes" please give details:	

Apprentice's details

Eligibility requirements:

Where applicable, the apprentice must confirm their achievement of the following Note: If maths and/or English have been attempted but not achieved evidence of the attempt should be submitted.

Eligibility requirement	Achieved by the apprentice? Y / N	Evidence (Scans of certificates or ILR MUST be included)
Achieved an English qualification in line with the apprenticeship funding rules		
Achieved a mathematics qualification in line with the apprenticeship funding rules		

The apprentice must confirm the following:

Eligibility requirement	Achieved by the apprentice? Y / N	Evidence available in ACE360 Y / N
Ready to take the EPA		
Have passed the Level 3 Diploma in plumbing and domestic heating		
Have completed the training, but not the assessments for the CCN1 and CENWAT or equivalent qualifications		
Compiled and submitted an EPA portfolio that meets the specification requirements, for the interview based on an EPA portfolio		

Eligibility requirements:

The apprentice must confirm their achievement of the following:

Gateway Eligibility Declaration

1. The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:
2. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
3. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests.
4. The apprentice will only submit their own work as part of end-point assessment.
5. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
6. The apprentice has been on-programme for a minimum duration required, in line with Skills England rules.
7. The apprentice has achieved English and mathematics qualifications in line with the apprenticeship funding rules.
8. Have passed the Level 3 Diploma in plumbing and domestic heating.
9. Have completed the training, but not the assessments for the CCN1 and CENWAT or equivalent qualifications.
10. The apprentice has compiled and submitted a competent EPA portfolio, on which the interview will be based.
11. The employer or training provider has submitted on behalf of the apprentice any policies and procedures as requested by Energy & Environment Awards.
12. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship. certificate from the DFE who issue the certificate on behalf of the Secretary of State.
13. The apprentice has been directed to the Energy & Environment Awards Appeals Policy and Complaints Policy.
14. The employer/training provider has given the Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
15. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to Energy & Environment Awards, the end-point assessment cannot take place.

Signed on behalf of the employer (print name):	Signature:	Date:
Signed on behalf of the training provider (print name):	Signature:	Date:
Apprentice's name (print):	Signature:	Date:
EEA use only:		
EEA Sign off:		
Comments/actions:		

Appendix C: Practice EEA knowledge test

Level: 3

Plumbing and Domestic Heating Technician V1.2

Supporting Document: Practice EEA knowledge test

This practice EEA knowledge test paper reflects the type of questions in the live knowledge test, which can be taken as an online test or paper-based test.

This examination consists of 60 knowledge test questions.

The Pass mark is 36 correct answers.
The Distinction mark is 50 correct answers.

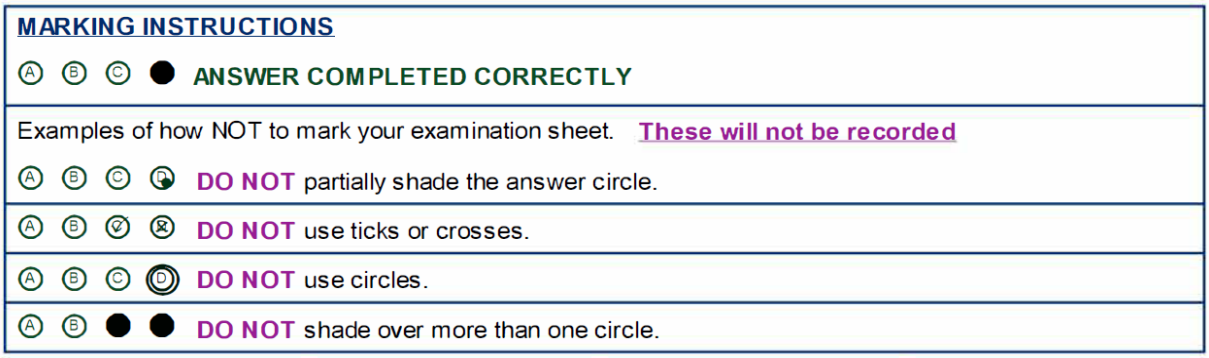
The duration of this examination is 120 minutes (2 hours).
You must use a **pencil** to complete the answer sheet - pens must NOT be used.
When completed, please leave the examination answer sheet and question paper on the desk.

For this paper:

- the use of a scientific calculator (non-programmable) is permitted
- access to the internet or intranet is NOT allowed

For each question, fill in ONE answer ONLY.
If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:



You may use this page for rough work. This page must not be removed.

Question 1	
The requirements of the Health and Safety at Work Act 1974 include:	
Possible answers	
a)	Employers have duties towards employees and their families
b)	Employers have duties towards employees and members of the public
c)	Employers have duties to report all incidents and accidents to the Health and Safety Executive
d)	Employers have duties that are required to meet productivity standards specified by their employer

Question 2	
Which ONE of the following is **NOT** a type of asbestos commonly found in the workplace?	
Possible answers	
a)	Chrysotile
b)	Crocidolite
c)	Amosite
d)	Calcite

Question 3	
Two building regulations that cover the installation of micro-renewable energy systems are:	
Possible answers	
a)	Part A, Part B
b)	Part E, Part F
c)	Part G, Part J
d)	Part L, Part O

Question 4	
The primary shielding gas used to weld mild steel is:	
Possible answers	
a)	75% argon and 25% carbon dioxide
b)	75% acetylene and 25% oxygen
c)	21.9% oxygen and 78% nitrogen
d)	10% hydrogen and 90 helium

Question 5	
When would the use of leaning ladders be considered a suitable option to conduct work at height?	
Possible answers	
a)	Where it is the most cost-effective solution
b)	Where the work activity is low risk and short duration
c)	Where work will take less than one hour to complete
d)	Where the work area cannot be reached from a fixed scaffold

Question 6	
A confined space with a flammable component is considered hazardous when the Lower Explosive Limit (LEL) is:	
Possible answers	
a)	present above 10%
b)	present above 20%
c)	present above 50%
d)	present above 70%

Question 7	
What are the main actions that should be taken when discovering an accident on site?	
Possible answers	
a)	Stop work, make area safe, raise alarm
b)	Report to police, provide first aid, call for help
c)	Call emergency services, provide first aid, complete accident report
d)	Gather witness details, notify insurance company, call emergency services

Question 8	
What are the typical sizes for cold water pipes in a domestic dwelling?	
Possible answers	
a)	8 mm and 35 mm
b)	15 mm and 22 mm
c)	10 mm and 28 mm
d)	20 mm and 40 mm

Question 9 K12 (Understand and use clips and brackets to support plumbing and domestic heating pipework and components) 12.2 Identify types of fixing devices.	
For horizontal pipework, what is the recommended maximum spacing between supports for steel pipes with a diameter of 100 mm?	
Possible answers	
a)	2 meters
b)	2.5 meters
c)	3 meters
d)	3.5 meters

Question 10	
The SI unit for pressure is:	
Possible answers	
a)	Pascal
b)	Newton
c)	Joule
d)	Watt

Question 11	
Which property of gases explains their ability to fill any container regardless of its form?	
Possible answers	
a)	Rigidity
b)	Compressibility
c)	Definite volume
d)	Indefinite Shape

Question 12	
Which ONE of the following is used to convert a temperature from Celsius(C) to Kelvin(K)?	
Possible answers	
a)	K = C + 273
b)	K = C - 273
c)	K = C × 273
d)	K = C ÷ 273

Question 13	
How can a technician convert British thermal units (BTU) to (kilowatts) kW for a heating system?	
Possible answers	
a)	Divide by 3412
b)	Multiple by 3412
c)	Add the heat loss to the Kw total
d)	Multiply the heat loss by 1,500 for heating

Question 14	
If a force of 100 N (Newton) is applied to an area of 20 m^2, what pressure is exerted?	
Possible answers	
a)	5 pa (Pascals)
b)	1000 pa (Pascals)
c)	2000 pa (Pascals)
d)	5000 pa (Pascals)

Question 15	
A fluid exerts a pressure of 3000 Pa (Pascals) on a surface with an area of 2 m^2. What is the force acting on the surface?	
Possible answers	
a)	1500 N (Newton)
b)	2000 N (Newton)
c)	3000 N (Newton)
d)	6000 N (Newton)

Question 16	
The technician is using a screwdriver to insert a screw. The screwdriver is being used as a:	
Possible answers	
a)	pulley
b)	lever
c)	wedge
d)	extractor

Question 17	
Using the formula V=IR where V is voltage, I is current, and R is resistance. What is the voltage across a resistor of 10 ohms when a current of 2 amps flows through it?	
Possible answers	
a)	5 volts
b)	12 volts
c)	20 volts
d)	50 volts

Question 18	
What is the main responsibility of the construction site manager?	
Possible answers	
a)	To provide first aid in the event of an accident
b)	To monitor the budget and schedule of the project
c)	To design the project and obtain planning permission
d)	To consult with the client and report on the progress of the project

Question 19	
What is an example of non-verbal communication?	
Possible answers	
a)	Drafting an email or a letter
b)	Speaking slowly and clearly
c)	Listening actively and attentively
d)	Using gestures during a conversation

Question 20	
A technician has a progress meeting with a client regarding the ongoing installation of 4 bathrooms in a block of flats. What document would the technician take to the meeting to discuss?	
Possible answers	
a)	Contract
b)	Method statement
c)	Work programme
d)	Risk assessment

Question 21	
According to the Construction (Design and Management) (CDM) regulations 2015, HSE must be notified about a construction project when the:	
Possible answers	
a)	site includes two or more trades at any one time
b)	work is being carried out in a non domestic property
c)	work will last more than 30 days and have more than 20 workers onsite at the same time
d)	work will last more than 20 days and have more than 30 workers onsite at the same time

Question 22	
What is the first step in creating a safe system of work (SSOW) for a plumbing job?	
Possible answers	
a)	Communicating with the client
b)	Conducting a risk assessment
c)	Writing a health and safety policy
d)	Providing health and safety training

Question 23	
What is the easiest way to stop the flow of water to a property without searching for stopcocks and check valves?	
Possible answers	
a)	Turning off the water at the main kitchen inside the property
b)	Shutting off the water supply at the individual taps in the property
c)	Locating the main water meter outside the property and turning the handle a ¼ turn
d)	Using a flat head screwdriver to lift the lid of the water meter.

Question 24	
Which sources provide the information that should be recorded during maintenance of cold water systems?	
Possible answers	
a)	Manufacturers' Instructions, statutory regulations and building regulations
b)	Manufacturers' Instructions, statutory regulations and industry standards
c)	Water regulations, statutory regulations and industry standards
d)	Water regulations, water bye-laws and building regulations

Question 25	
Name **TWO** types of backflow prevention devices.	
Possible answers	
a)	Air gap and check valve
b)	Vacuum breaker and double check valve
c)	Pressure reducing valve and expansion vessel
d)	Thermostatic mixing valve and non-return valve

Question 26	
According to commissioning requirements, what is the main purpose of soundness testing a cold water system?	
Possible answers	
a)	check the water quality and purity
b)	check the water pressure and flow rate
c)	check the water tightness and integrity
d)	check the water temperature an expansion

Question 27	
To apply legionella control measures effectively, what is the optimal temperature range for legionella growth in water systems?	
Possible answers	
a)	0 - 20°C
b)	20 - 45°C
c)	45 - 60°C
d)	60 - 80°C

Question 28	
An increase in volume of water as it is heated in a closed system is known as:	
Possible answers	
a)	thermal stress
b)	thermal shock
c)	thermal expansion
d)	thermal contraction

Question 29	
The name of the British standard that provides guidance on the installation and commissioning of hot water systems in the UK.	
Possible answers	
a)	BS EN 12828: Heating systems in buildings. Design for water-based heating systems
b)	BS EN 806: Specifications for installations inside buildings conveying water for human consumption
c)	BS 6700: Design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages
d)	BS 8558: Design, installation, testing and maintenance of services supplying water for domestic use within building and their curtilages

Question 30	
Which of the following correctly describes how bottled gases should be stored and transported?	
Possible answers	
a)	Upright, secured, ventilated area
b)	Horizontal, secured, in direct sunlight
c)	Horizontal, unsecured, ventilated area
d)	Upright, secured, enclosed unventilated area

Question 31	
The main reason for positioning the pump as close as possible to the water source is to:	
Possible answers	
a)	optimise the flow rate and prevent surging
b)	reduce the suction head and prevent cavitation
c)	increase the discharge head and improve efficiency
d)	minimise the friction losses and reduce power consumption

Question 32	
Identify one types of non-renewable energy source.	
Possible answers	
a)	Coal
b)	Wind
c)	Solar
d)	Biomass

Question 33	
According to industry standards, what are the two main methods of soundness testing a hot water system?	
Possible answers	
a)	Air test and water test
b)	Visual inspection and leak detection
c)	Hydrostatic test and pneumatic test
d)	Pressure test and temperature test

Question 34	
What role does a filter play in rainwater recycling systems?	
Possible answers	
a)	To increase water pressure
b)	To regulate water temperature
c)	To make rainwater safe to drink
d)	To remove leaves and dirt from the water

Question 35	
The purpose of a downspout is a rainwater system is:	
Possible answers	
a)	To enhance the aesthetic appeal
b)	To collect rainwater from the roof
c)	To prevent the gutter from clogging
d)	To direct water away from the foundation

Question 36	
The most likely cause of sagging gutters is:	
Possible answers	
a)	support brackets are spaced too far apart
b)	support brackets are spaced too close
c)	guttering seals are perished
d)	downpipe is cracked

Question 37	
The device that controls the flow of water within a toilet is known as:	
Possible answers	
a)	valve
b)	spout
c)	cistern
d)	nozzle

Question 38	
Name **two** types of systems for cold water supply to dwellings.	
Possible answers	
a)	Direct, indirect
b)	Gravity-fed, boosted
c)	Break tank, pressurised
d)	Storage cistern, mains-fed

Question 39	
The document that provides detailed information on the installation, operation, maintenance of a sanitary appliance or a pipework system is known as:	
Possible answers	
a)	NHBC warranty
b)	technical specification
c)	job maintenance schedule
d)	manufacturers instructions

Question 40	
The technology commonly used to collect and store rainwater for later use is known as:	
Possible answers	
a)	rainwater recycling
b)	rainwater diversion
c)	rainwater treatment
d)	rainwater harvesting

Question 41	
Which UK government scheme was introduced to encourage energy-efficient building design by paying households and businesses generating renewable electricity?	
Possible answers	
a)	Feed-in Tariff (FIT)
b)	Smart Export Guarantee (SEG)
c)	Renewable Heat Incentive (RHI)
d)	Renewable Obligation Certificate (ROC)

Question 42	
Which ONE of the following fuels obtained from food waste or animal manure can be used to power boilers, cookers or generators?	
Possible answers	
a)	Biogas
b)	Biomass
c)	Biodiesel
d)	Bioethers

Question 43	
Which ONE of the following is used to store large quantities of crude oil or refined petroleum products such as gasoline or diesel in a liquid state?	
Possible answers	
a)	Bin
b)	Silo
c)	Tank
d)	Cabinet

Question 44	
Which ONE of the following combustions produce an orange smoky flame due to small particles of pure carbon glowing red hot?	
Possible answers	
a)	complete combustion
b)	hypergolic combustion
c)	incomplete combustion
d)	spontaneous combustion

Question 45	
What is visible when incomplete combustion has taken place?	
Possible answers	
a)	Soot and poor flame picture
b)	Smoke and blue bright flame
c)	Soot and blue low temperature flame
d)	Smoke and orange high temperature flame

Question 46	
According to its operating principle, what is the function of a flue within a domestic dwelling?	
Possible answers	
a)	To allow the back boiler to have sufficient air as cold air falls
b)	To carry the products of combustion safely away as hot air rises
c)	To carry the products of air around the house to dilute combustion
d)	To carry the products of combustion through the ventilation system

Question 47	
The primary purpose of testing flues and chimney systems serving solid fuel appliances is to:	
Possible answers	
a)	check for bird nests
b)	ensure safety and efficiency
c)	assess the colour of the flue
d)	measure the temperature of the flue

Question 48	
Name **two** types of systems for hot water supply to dwellings.	
Possible answers	
a)	Gravity-fed, unvented cylinder
b)	Combination boiler, thermal store
c)	Direct cylinder, indirect cylinder
d)	Primary storage, secondary storage

Question 49	
Identify the first step that must be taken to conduct safe isolation procedure.	
Possible answers	
a)	Prove dead
b)	Apply safety earths
c)	Secure the point of isolation
d)	Identify suitable point(s) for isolation

Question 50	
Name **two** types of system layout for domestic central heating.	
Possible answers	
a)	S plan, Y plan
b)	W plan, C plan
c)	Zoned layout, single-pipe layout
d)	Two-pipe layout, manifold layout

Question 51	
Identify **two** types of layouts for sanitary pipework systems.	
Possible answers	
a)	Fully ventilated stack, Modified single-stack
b)	Branch ventilated system, One-pipe system
c)	Single-stack system, Partially ventilated stack
d)	Ventilated branch discharge, Secondary ventilated stack

Question 52	
According to the Water Supply (Water Fittings) Regulations, how many fluid categories are defined based on the potential risk of contaminating the water supply to dwellings?	
Possible answers	
a)	2
b)	4
c)	5
d)	7

Question 53	
What regulation covers the legal requirements for the design, installation and maintenance of water storage cisterns?	
Possible answers	
a)	The Water Supply (Water Fittings) Regulations 1999
b)	Water Regulations Advisory Scheme
c)	British Standards BS EN 1254
d)	British Standard BS 7291

Question 54	
The most common cause of backflow in hot water systems is:	
Possible answers	
a)	Low water pressure
b)	Leaks in pipework
c)	Cross-connections
d)	Malfunctioning thermostat

Question 55	
In a modern S-plan sealed heating system, the pump is normally positioned on the:	
Possible answers	
a)	Flow pipe
b)	Return pipe
c)	Near the expansion vessel
d)	Before the motorised valve

Question 56	
Which part of the Building Regulations covers zoning and control requirements for central heating systems?	
Possible answers	
a)	Part A
b)	Part E
c)	Part G
d)	Part L

Question 57	
What is a typical diameter for a round rainwater pipe used in domestic systems?	
Possible answers	
a)	26 mm
b)	68 mm
c)	88 mm
d)	92 mm

Question 58	
According to industry standards, what is the typical horizontal spacing for gutter brackets?	
Possible answers	
a)	1.0 m
b)	1.8 m
c)	2.0 m
d)	2.4 m

Question 59	
Name **TWO** types of information you would expect to find on a maintenance record for a central heating system.	
Possible answers	
a)	System details, date of last service
b)	Ventilation check result, water treatment status
c)	Customer satisfaction score, warranty expiry date
d)	Boiler efficiency rating, installer's Gas Safe registration number

Question 60	
Two heat producing renewable energy technologies commonly found in domestic premises are:	
Possible answers	
a)	Electric boiler, space heater
b)	Wood pellet boiler, LPG heater
c)	Wood burning stove, solar panels
d)	Solar thermal systems, heat pumps

End of questions

PDHT V1.2 Practice EEA knowledge test

Answer scheme

Question	Answer	Question	Answer	Question	Answer
1	A	21	C	41	A
2	D	22	B	42	A
3	D	23	C	43	C
4	B	24	B	44	D
5	B	25	A	45	A
6	A	26	C	46	B
7	A	27	B	47	B
8	B	28	C	48	A
9	C	29	D	49	D
10	A	30	A	50	A
11	A	31	B	51	D
12	A	32	A	52	B
13	A	33	C	53	A
14	C	34	D	54	C
15	D	35	D	55	B
16	B	36	A	56	D
17	C	37	C	57	B
18	D	38	A	58	A
19	D	39	D	59	A
20	C	40	D	60	D

Appendix D: Practice EEA practical planning test

Employers/training providers are recommended to arrange for apprentices to carry out a practice EEA practical planning test prior to end-point assessment. The grading table below is for the use of the employer/training provider setting up the practice EEA practical planning test. A practice test is available for Energy & Environment Awards registered customers, please contact the Service Delivery Team via: enquiries@energyenvironmentawards.co.uk

EEA practical planning test

The EEA practical planning test evaluates the apprentice's ability to interpret technical documentation and produce a fully compliant design plan for a domestic hot and cold water system that meets a specified job requirement. Apprentices are provided with building plans, a job specification, manufacturer's technical data, and relevant British Standards and Regulations. Using this information, they must create a detailed plan that demonstrates technical accuracy, regulatory compliance, and readiness for implementation.

The design plan must incorporate the following key elements:

- Accurate hot and cold water pipework sizing based on system requirements
- Final layout plans showing clear routing and integration
- A comprehensive materials list and merchant order
- A logical work programme with sequencing of tasks
- A robust risk assessment and method statement addressing health and safety considerations
- All calculations and supporting information presented in a format suitable for quotation and tender

This assessment is open book, allowing apprentices to consult reference materials during the test. The following normative documents must be available for use:

- Domestic Building Services Compliance Guide
- WRAS Water Regulations Guide
- Building Regulations Parts G and L
- BS 8558
- BS 806 Parts 1–5
- BS 12056 Parts 1–3
- Manufacturer's technical documents

In addition, the apprentice must have access to a calculator to support accurate calculations. The test is conducted under controlled, invigilated conditions and marked against published criteria. Successful completion demonstrates the apprentice's ability to plan installations that are safe, efficient, and compliant with industry standards.

Task planning and risk: S4 and S5		
Learning outcome	Assessment criteria	To pass the apprentice must be able to:
Understand information sources in the building services industry.	Interpret workplace information. Comply with company policies and procedures.	Comply with company policies and procedures.
Understand and produce work programme for tasks in the plumbing and domestic heating systems industry.	Identify factors to consider when planning activities to job specifications. Produce a simple work programme including: a) Planning work with other trades b) Material deliveries c) Simple work programmes d) Simple bar (progress) charts.	Produce a simple work programme including: a) planning work with other trades b) material deliveries c) simple work programmes d) simple bar (progress) charts in line with the task requirements
Produce risk assessments and method statements for the plumbing and domestic heating systems industry.	Identify different hazards. Identify levels of risk. Produce a risk assessment for a task. Produce a method statement for a task.	Produce a risk assessment and method statement for the work to be carried out, in accordance with: a) the plumbing and domestic heating system's design b) the conditions of the working environment c) organisational procedures

Technical Planning: S12 underpinned by K6; K8; K9 and K17		
Learning outcome	Assessment criteria	To pass the apprentice must be able to:
Understand and install cold water systems.	Identify types and typical pipe sizes used in cold water systems within dwellings.	Plan a cold water system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards.
	Identify sources of information required when undertaking work on cold water systems.	
	Plan cold water systems	
Understand and install hot water systems.	Identify location and function of unvented system components.	Plans a hot water system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards.
	Identify sources of information required when undertaking work on hot water systems.	
	Plan hot water systems.	
Size and select cold water systems and components for dwellings.	Apply factors that affect the selection of cold water systems for dwellings.	Plans a cold water system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards
	Use information sources required to size and select cold water systems and components.	
	Consider recommended design temperatures within cold water systems.	
	Calculate cold water system requirements used in dwellings.	
	Select cold water components in accordance with calculations from predetermined data.	
	Present calculations and information in a suitable format for quotation and tender.	
	Interpret information to complete a detailed materials list.	Produces a simple work programme including: a) planning work with other trades

Technical Planning: S12 underpinned by K6; K8; K9 and K17		
Learning outcome	Assessment criteria	To pass the apprentice must be able to:
		b) material deliveries c) simple work programmes d) simple bar (progress) charts in line with the task requirements
Size and select hot water systems and components for dwellings.	Consider factors that affect the selection of hot water systems for dwellings.	Plans a hot water system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards.
	Use information sources required to size and select hot water systems and components.	
	Consider recommended design temperatures within hot water systems.	
	Calculate hot water system requirements used in dwellings.	
	Select hot water components in accordance with calculations from predetermined data.	
	Present calculations and information in a suitable format for quotation and tender.	
	Interpret information to complete a detailed materials list.	Produces a simple work programme including: a) planning work with other trades b) material deliveries c) simple work programmes d) simple bar (progress) charts in line with the task requirements
Understand and perform preinstallation	Produce a risk assessment and method statement for the work to be carried out, in accordance with: a) the plumbing and domestic heating system's design	Produce a risk assessment and method statement for the work to be carried out, in accordance with:

Technical Planning: S12 underpinned by K6; K8; K9 and K17		
Learning outcome	Assessment criteria	To pass the apprentice must be able to:
activity prior to undertaking electrical work on plumbing and domestic heating systems	b) the conditions of the working environment c) organisational procedures.	a) the plumbing and domestic heating system's design b) the conditions of the working environment c) organisational procedures.

Appendix E - Level 3 Plumbing and domestic heating technician V1.2 EEA practical planning and approval form

Instructions

This form has two purposes:

1. To confirm that Independent Assessment Centre facilities and resources allow delivery of the EEA practical in line with the assessment plan and enable coverage of the mapped KSBs.
2. To inform Energy & Environment Awards of the Independent Assessment Centre details.

All equipment and resources required for the assessment must be in good and safe working condition.

The EEA practical test is set by Energy & Environment Awards and includes activities that allow apprentices to demonstrate the KSBs linked to this assessment. These activities are designed to cover a broad range of KSBs throughout the apprenticeship. At a minimum, the test will include the activities and KSBs listed in the planning and approval form below.

Assessment Tasks:

- EEA practical core tasks 1, 2 and 3 must be completed in one day around 7 hours in total
- ACS practical: Achievement of CCN1 and CENWAT (or equivalent qualifications). This is an integrated component for Option1 and meets Gas Safety requirements equivalent

Important information

- The assessment takes place in a simulated environment at an approved assessment centre. The simulated must closely match the apprentice's normal working environment
- The employer or training provider must supply and set up all equipment and resources. Everything provided must be in good condition and safe to use
- The total time allowed for the EEA practical is 7 hours, with up to 10% extra time (42 minutes) if needed to finish a task or answer a question
- The EEA practical may be split into sections but must be completed on the same working day
- The assessment is carried out by an Energy & Environment Awards-approved independent assessor

- The assessor must ask at least 3 open-ended questions, one for each core task
- The assessor to apprentice ratio is 1:4, subject to approval by Energy & Environment Awards
- An employer or training provider representative must be present or immediately contactable throughout the assessment.
- The independent assessor will ask questions as part of the assessment process.

Assessment Tasks Overview

The apprentice must complete the following tasks as set out in the Assessment Plan.

EEA Practical Core Task 1

The apprentice will be required to complete the part installation and testing of a domestic plumbing system, incorporating:

- fabricating a domestic pipework layout
- a branch connection from a water closet (WC) and a waste pipe branch from a wash basin to a soil stack
- a hot and cold water tap connections to a wash basin
- the installation of a double panel radiator, this is also intended to demonstrate manual handling techniques
- utilising different pipework materials, including copper, plastic pressure and plastic soil and waste pipe
- utilising simple jointing techniques, e.g. push fit, solvent welded
- utilising complex jointing techniques including soldered, compression and press fit
- pipe bending (Offset and Passover) techniques
- utilising brackets and fixings • dimensional tolerances of ±2mm on the lengths and ±2° on the angles
- soundness testing
- testing the system, pressure pipework to withstand a pressure test of 3 bar for 5 minutes, soil and waste pipework must maintain an air test of 38mm water gauge for 3 minutes. Soundness testing of the soil and waste pipework to require the use of a stepladder or hop up work platform

EEA practical core task 2

The apprentice will be required to complete the installation, testing and commissioning of
electrical components and electrical controls of a domestic heating and hot water system, incorporating:

- installing and wiring either a room thermostat or cylinder thermostat (one of which may be pre-installed)
- safe isolation
- testing the system
- commissioning the system.

The apprentice will be asked a minimum of one question by the Independent Assessor.

EEA practical core task 3

The apprentice will be required to complete servicing and maintenance including fault finding, diagnosis, repair and testing procedures, of the electrical components of a domestic hot water system, incorporating:

- finding 2 electrical faults in the system
- diagnosing the 2 faults
- repairing the 2 faults
- testing the system.

The apprentice will be asked a minimum of one question by the Independent assessor.

Complete the 'Level 3 Plumbing and domestic heating technician V1.2 EEA practical planning and approval form' and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review at least 1 month before the start** of the end-point assessment. Further details can be found in the PDHT V1.2 EPA Specification.

Level 3 Plumbing and domestic heating technician V1.2 EEA practical planning and approval form

Section A: Centre and Bay Details

Employer name and site address		
Training provider (if applicable)		
Option 1 delivered at this Independent Assessment Centre (check box)	Yes ☐	No ☐
Contact details of employer/training provider representative overseeing the setup of the EEA practical (documents, site and resources).		
Assessment Bay ID (s) / location (s)		
Start times		
Finish times		

Section B: Assessment Environment and Layout

Please confirm the location of the independent assessment centre and provide the Name, full address opening and closing times:

Please confirm that the Independent Assessment Centre is set up for the apprentice to complete their EEA practical by checking each box and providing additional details where needed in this form. This checklist allows employers and training providers to plan the assessment bays and ensures all required elements are covered.

Section C: Assessment Environment and Layout Continued

Dedicated, clearly marked PCT bays with sufficient footprint for safe working and assessor observation.	☐
Bays configured to enable all required PCT tasks (fabrication, jointing, installation to tolerances).	☐
Each bay has a location for a radiator (valves already fitted) Additional details:	☐
The bays are free of any fixings and markings from any previous work Additional details:	☐
A sack barrow is supplied to assist the apprentice in moving the radiator and positioning it on a shelf, which is at least 1 metre from the ground. Additional details:	☐
Each bay includes an existing basin fitted to Doc M standard (height above floor 720mm – 740mm Additional details:	☐
Secure bay(s) Please confirm each bay is independent prohibiting an apprentice from seeing any other apprentice carrying out their work.	☐
Secure bay(s) Please include any other details: Photographs of each secure bay submitted with this document.	☐
Safe, controllable supplies (water, air, electrical power) and isolation arrangements.	☐
Adequate lighting, ventilation, and secure environment with controlled access.	☐
Practical Competence Test Secure Bay: Please confirm that the apprentice will not have had access to the secure bay before the PCT.	☐

Section D: Tools, Equipment and Materials

Complete set of calibrated tools and equipment (pipe benders, threading, soldering, press tools).	☐
Measuring and test instruments (pressure test kit, air test equipment, electrical test tools).	☐
Required pipework materials and fittings (copper, stainless steel, plastics, soil and waste).	☐
Fixtures/components and manufacturer instructions available.	☐
Confirm the following materials will be available for the practical installation test for each apprentice by checking the boxes below:	
PPE – Safety googles, Nitrile gloves, hard hat etc. Apprentices should have their own safety boots and suitable work wear.	☐
Pipe cutters with guides, pipe bender Adjustable spanners, pump pliers, set of screwdrivers, tape measure/ruler, spirit level, small battery drill and a pencil. Plastic pipe cutters, hackshaw; files and chamfering tool	☐
Silicone grease, gas torch, heat mat, lead-free solder and flux. Cleaning strips, jointing pastes/Polytetrafluoroethylene (PTFE) etc. Step ladders/platform, dust sheet, trolly jack, hydraulic test pump, draining hose and hose clips. Water pressure gauge, weir cup, flat tray and a bucket to catch water.	☐
Guttering system (min. 2m long) installed at height greater than 2.5m. Facia brackets 5 inch 45 degree and 67.5 degree push-fit elbows Gutter end-stop end and gutter end-stop with outlet 3 m of drain pipe and pipe clips.	☐
1 m of 50 mm waste pipe, 50 mm P trap, one 50 mm push fit socket, one 50 mm push-fit cap end, two x 50 mm pipe brackets. Dip stick to check the trap seal depth.	☐
2 m of 15 mm plastic pipe, 15 mm plastic socket, 15 mm plastic elbow, 15 mm push-fit to 15 mm male adapter.	☐
2 m of 10 mm plastic pipe, with sockets, elbows; push fit.	☐
2 m of 15 mm copper pipe, 15 mm copper end-feed tee, 15 mm drain off valve, 15 mm isolation valve and six 15 mm pipe clips.	☐

Section E: Health, Safety and Risk Control

Centre risk assessment and task-specific Risk Assessment and Method Statement (RAMS) completed and displayed.	☐
Safe isolation procedures and lock-off controls in place.	☐
PPE available and enforced; COSHH and hot-work controls applied.	☐
First aid and incident reporting arrangements in place.	☐
Special requirements (for example: access arrangements/PPE):	☐

Section F: Assessment Delivery, Independence and Integrity

Please confirm the number of apprentices you have arranged for the assessment, noting that the maximum ratio for assessor to apprentice is 1:4? **Number of apprentices for 1 assessor**:	☐
Invigilation and observation positions allow continuous line of sight without interference.	☐
Apprentice identity checks can be conducted and recorded.	☐
Documented arrangements with centres in place (roles, responsibilities, record keeping).	☐
A member of Centre staff must be available at all times during practical tasks.	☐

Section G: ACS Practical

Enter the name of the ACS Approved Awarding Body:	☐

Section H: Accessibility and Reasonable Adjustments

Centre can implement agreed reasonable adjustments without altering competence standards.	☐
Energy and Environment Awards notified of all reasonable adjustments.	☐
Accessible routes and workstation height options available.	☐

Section I: Documentation, Records and Briefing

Latest EPA schedule, task briefs, drawings/specs, tolerances and marking criteria available.	☐
Equipment checks documented; incident/appeal routes displayed.	☐
Assessment Format & Timing Compliance: • EEA practical core tasks 1–3 scheduled for completion in one working day (7 hours + up to 10% additional time) ☐ • ACS (knowledge) test and practical scheduled after all EEA assessment components ☐ • Independent assessor given enough time to brief: format and timescales before the assessment (does not count towards assessment time) ☐	☐

Section J: KSB Coverage Confirmation

EEA practical core tasks listed above in this document the facilities will enable demonstration of tasks 1, 2 and 3.	☐
Arranged ACS practical integrated task arranged with ACS Approved Awarding Body	☐
The assessment environment and task sequencing allow the apprentice to demonstrate B2: Takes ownership of work within limits of own competence, knowing when to seek advice or assistance.	☐

The independent assessment centre must be set up to allow the apprentice(s) to carry out all of the following core activities, please check the boxes below to confirm:	
Core theme: Installation and test (mechanical)	
S2: Carry out and apply the common processes and techniques used in the installation and test of plumbing and domestic heating systems (cold water, hot water, central heating and sanitary appliances and pipework).	☐
K2: The common processes and techniques used in the installation and test of plumbing and domestic heating systems (cold water systems, hot water systems, domestic wet central heating systems, sanitation systems).	☐
Core theme: Installation, fault finding, repair , test and commissioning (electrical) KSBs	

The independent assessment centre must be set up to allow the apprentice(s) to carry out all of the following core activities, please check the boxes below to confirm:	
S7: Install, test, and commission, electrical and electrical control systems applicable to plumbing and domestic heating systems.	☐
S9: Perform routine service, maintenance, fault diagnosis and rectification procedures and techniques on electrical and electrical control systems applicable to plumbing and domestic heating systems including industry safe isolation procedures.	☐
K13: The testing and commissioning requirements applicable to electrical control systems and components.	☐
K18: The legislative requirements, processes and procedures of electrical supply and control systems applicable to plumbing and domestic heating systems and work including limits to operative competence.	☐
B2: Takes ownership of work within limits of own competence, knowing when to seek advice or assistance.	☐

Summary Checklist
Resource Availability Confirmation: Please provide information to confirm that there are sufficient equipment tools, manuals, and other necessary resources for the apprentice to use during the assessment ☐
Safety Measures Confirmation: Please confirm that all necessary safety measures are in place to protect the apprentice during the assessment ☐
Equipment Functionality Confirmation: Please provide evidence that all vehicles, equipment and tools are in good working condition and regularly maintained ☐
Space Adequacy Confirmation: Please confirm that there is adequate space for the apprentice to work comfortably without interference from others ☐
Emergency Procedures Confirmation:

Summary Checklist
Please confirm that emergency procedures are in place and the apprentice is aware of them ☐ **Accessibility Confirmation:** Please confirm that the assessment area is accessible to the apprentice, including those with disabilities ☐

IMPORTANT INFORMATION TO REMEMBER: The specific detail of the task(s) to be undertaken should be **kept confidential from the apprentices.**

PCT Area: Include relevant photographs to illustrate.

Energy & Environment Awards Office use only

Date received	
Date signed off	

Appendix F: Practice EEA practical template

Employers/training providers are recommended to arrange for apprentices to carry out a practice competence test prior to end-point assessment. The form below is for use by the person playing the part of the independent assessor.

Instructions

This should be read in conjunction with the Level 3 PDHT V1.2 Specification.

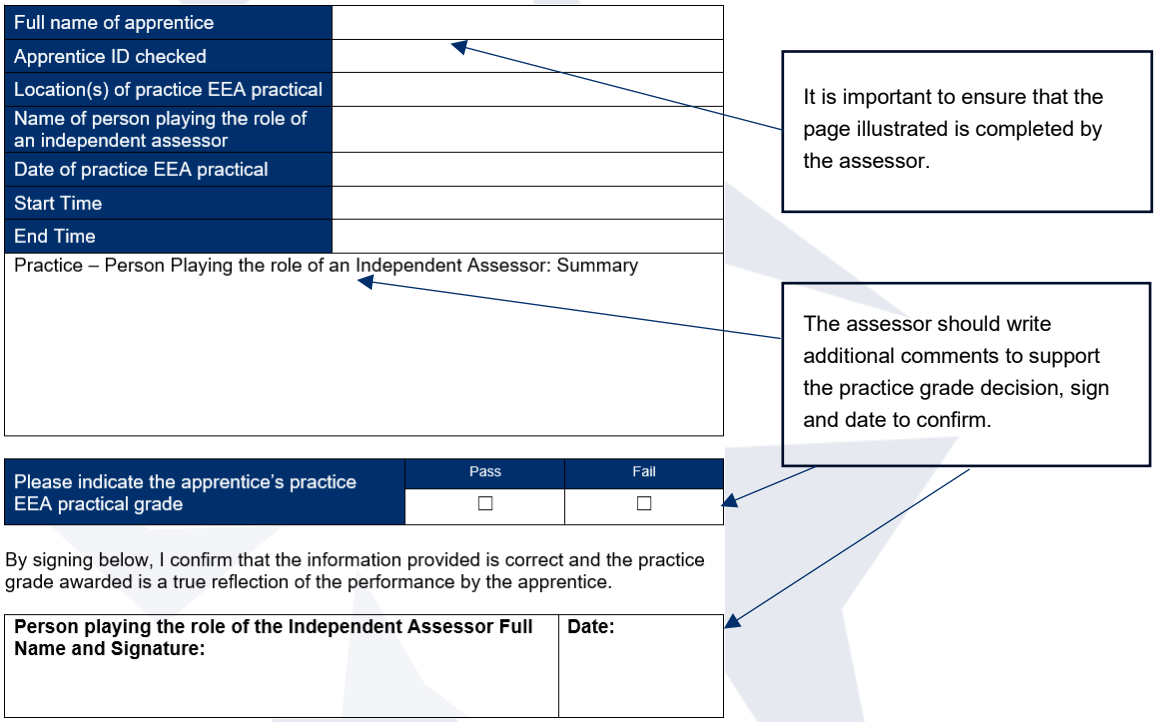
This template has been designed to help the suitable person playing part of the independent assessor and has three purposes:

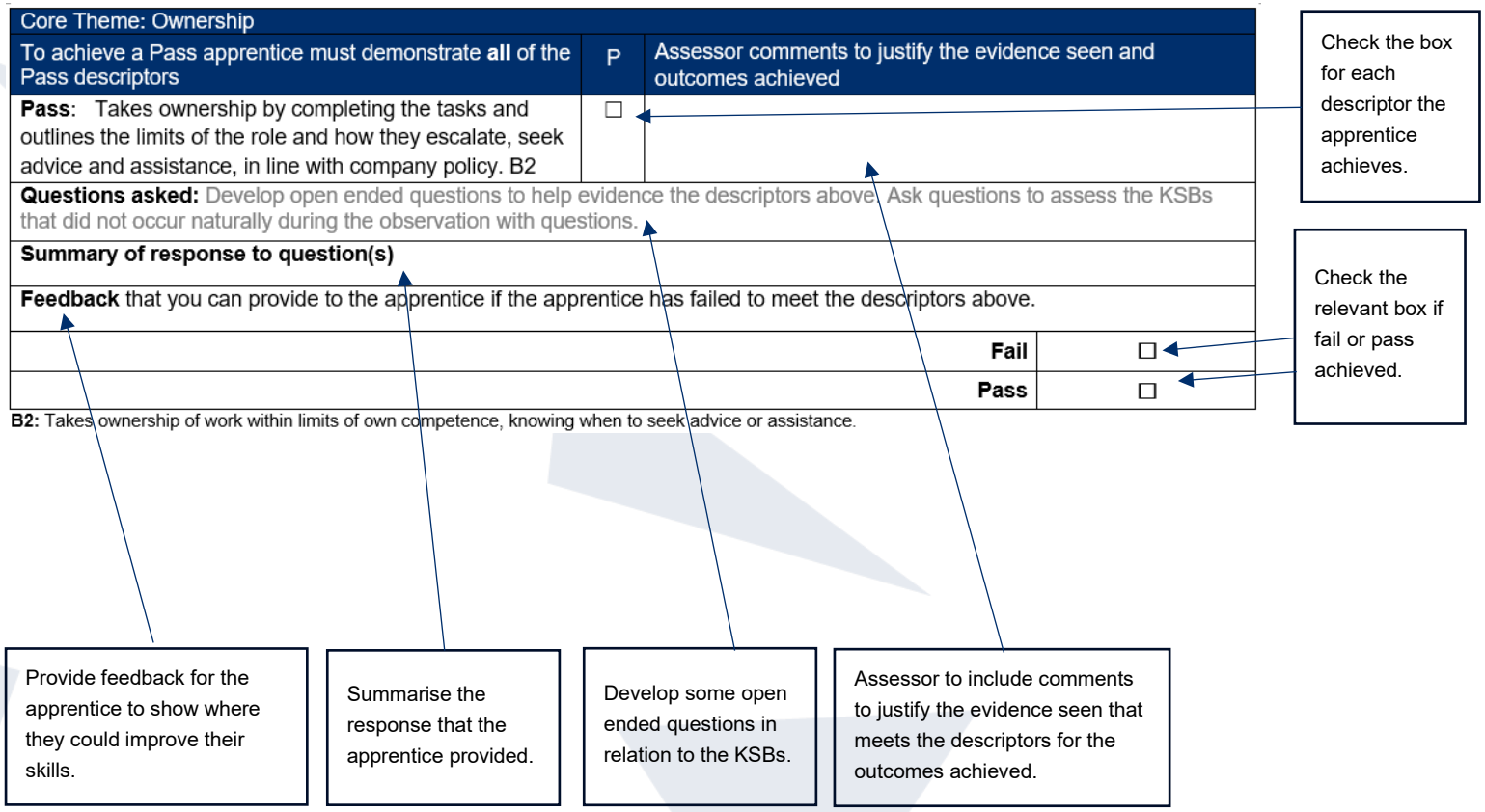
1. To prepare for a practice EEA practical
2. Designed to holistically assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship by the apprentice
3. To provide feedback to the apprentice in preparation for the live assessment

The assessor should:

- complete the form below which has two parts to assess the apprentice's practice EEA practical

Quick Tip – How to complete the form below:





Core Theme: Ownership		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Takes ownership by completing the tasks and outlines the limits of the role and how they escalate, seek advice and assistance, in line with company policy. B2	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the observation with questions.		
Summary of response to question(s)		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

B2: Takes ownership of work within limits of own competence, knowing when to seek advice or assistance.

Full name of apprentice	
Apprentice ID checked	
Location(s) of practice EEA practical	
Name of person playing the role of an independent assessor	
Date of practice EEA practical	
Start Time	
End Time	
Practice – Person Playing the role of an Independent Assessor: Summary	

Please indicate the apprentice's practice EEA practical grade	Pass	Fail
	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Person playing the role of the Independent Assessor Full Name and Signature:	**Date:**

Please Note:

Fail: the apprentice does not demonstrate the pass descriptors.

To achieve a Pass, the Apprentice must achieve **all** the Pass descriptors.

Assessor questions: during the live assessment, the assessor must ask 1 question per task.

Introduction

At the start of the EEA practical the assessor will:

- Introduce themselves
- Confirm their role
- State the date of the EEA practical
- Provide apprentice with information on the format of the EEA practical, including the timescales they will be working to

The apprentice will:

- Give their full name
- Give their date of birth
- Give their employer's name
- Confirm they are prepared for the EEA practical; and confirm they can continue with the observation

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the observation.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- Ensure that your mobile is turned off or placed somewhere where you will not be interrupted during the observation

Assessor Guidance

Delivery

- The EEA practical:
  - must take 7 hours. The assessor may increase the time by up to 42 minutes (10%) to allow the apprentice to complete a task or respond to a question if necessary
  - May be split into discrete sections held on the same working day.

- You must:
  - observe apprentices on a 1:4 ratio
  - be as unobtrusive as possible
  - explain to the apprentice the format and timescales of the EEA practical before they start
  - ask at least 1 question as part of each task. Questioning can occur both during and after the EEA practical
  - use open-ended questions to suit individual circumstances. Follow-up questions may be asked to clarify answers given by the apprentice
  - ask questions about KSBs that were not observed to gather assessment evidence. These questions are in addition to the set number of questions for the EEA practical and should be kept to a minimum
  - write down the question to be asked

- The following EEA practical core activities should be observed:
  - **Task 1**: Install and test a domestic plumbing system, including pipe fabrication, jointing techniques, radiator installation, and soundness testing.
  - **Task 2**: Install, wire, and commission electrical components for a domestic heating and hot water system.
  - **Task 3**: Service and maintain electrical components, including fault finding, diagnosis, repair, and system testing.

Important Note for Independent Assessors – ACS Practical

The ACS practical (achievement of CCN1 and CENWAT or equivalent qualifications) is not part of your responsibility as the independent assessor during the practical.

The ACS practical will be delivered and assessed by an approved ACS awarding body in accordance with the Accredited Certification Scheme (ACS) and Gas Safe Register requirements.

Your role is limited to observing and assessing the **three core tasks** only for EEA practical. Please do not attempt to deliver or grade any aspect of the integrated task, as this forms part of the qualification assessment managed by the approved awarding organisation.

At the end of the EEA practical - Thank the apprentice for their time.

Core Theme: Installation and test (mechanical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Uses and maintains hand and power tools in line with manufacturers' instructions. GD1	☐	
Pass: Applies the methods of safe storing of tools and equipment in line with organisational procedures. GD2	☐	
Pass: Applies work methods for preparing and protecting the building for installation work in line with industry guidance. GD3		
Pass: Uses clips and brackets appropriate to the system pipework and the industry recommended spacing. GD4		
Pass: Joins pipework to specification. GD5		
Pass: Applies the installation processes and techniques used in the installation of: a) a cold water system b) a hot water system c) a central heating system d) a sanitary appliances and pipework system in line with task requirements. GD6		
Pass: Applies the processes and techniques used in the soundness testing of: a) a cold water system b) a hot water system c) a central heating system d) a sanitary appliances and pipework system		

Core Theme: Installation and test (mechanical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
in line with company procedures. GD7		
Questions asked: Develop **one** open ended question for this theme to help evidence the grading descriptors above. Use this question to explore any aspects that were not demonstrated during the PCT.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

S2 Carry out and apply the common processes and techniques used in the installation and test of plumbing and domestic heating systems (cold water, hot water, central heating and sanitary appliances and pipework).
K2 The common processes and techniques used in the installation and test of plumbing and domestic heating systems (cold water systems, hot water systems, domestic wet central heating systems, sanitation systems).
K10 The installation and testing requirements applicable to plumbing and domestic heating systems and components (cold water, hot water, central heating, sanitary appliances and pipework).

Core Theme: Installation, faults finding, repair, test and commissioning (electrical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Prioritises electrical safety of tools and equipment in line with company procedures and industry practice. GD8	☐	
Pass: Carries out the safe isolation of electrical equipment and components associated with the electrical supply of the plumbing and domestic heating system in line with company procedures and industry practice. GD9	☐	
Pass: Selects, as required, electrical equipment, cables, wiring and components and confirm that they are: a. of the right type and size b. fit for purpose in accordance with the plumbing and domestic heating system's design. GD10	☐	
Pass: Carries out work on electrical equipment, cables, wiring and components associated with the electrical supply and control of the plumbing and domestic heating system in accordance with the requirements of: a) industry recognised methods and procedures b) manufacturers' instructions. GD11	☐	
Pass: Checks that the electrical equipment, cables, wiring and components are in accordance with the requirements of the plumbing and domestic heating system. GD12	☐	

Core Theme: Installation, faults finding, repair, test and commissioning (electrical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Checks that the electrical equipment, cables, wiring and components are of proper construction in accordance with the requirements of the plumbing and domestic heating system**.** GD13	☐	
Pass: Undertakes functional testing of the electrical equipment and components associated with the electrical supply and control of the plumbing and domestic heating system in accordance with: a) industry recognised methods and procedures b) manufacturers' instructions. GD14		
Pass: Commissions electrical control systems components in accordance with: a) industry recognised methods and procedures b) manufacturers' instructions c) legislative requirements. GD15	☐	
Pass: Identifies and rectifies electrical faults and deficiencies on plumbing and domestic heating systems in accordance with: a) industry recognised methods and procedures b) manufacturers' instructions. GD16	☐	
Questions asked: Develop **one** open ended question for this theme to help evidence the grading descriptors above. Use this question to explore any aspects that were not demonstrated during the PCT.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	

Core Theme: Installation, faults finding, repair, test and commissioning (electrical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
	Pass	☐

S7: Install, test, and commission, electrical and electrical control systems applicable to plumbing and domestic heating systems.

S9: Perform routine service, maintenance, fault diagnosis and rectification procedures and techniques on electrical and electrical control systems applicable to plumbing and domestic heating systems including industry safe isolation procedures.

K13: The testing and commissioning requirements applicable to electrical control systems and components.

K18: The legislative requirements, processes and procedures of electrical supply and control systems applicable to plumbing and domestic heating systems and work including limits to operative competence.

Core Theme: Ownership		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Takes ownership by completing the tasks and outlines the limits of the role and how they escalate, seek advice and assistance, in line with company policy. B2	☐	
Questions asked: Develop **one** open ended question for this theme to help evidence the grading descriptors above. Use this question to explore any aspects that were not demonstrated during the PCT.		
Summary of response to question(s)		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

B2: Takes ownership of work within limits of own competence, knowing when to seek advice or assistance.

Appendix G: Practice EEA interview based on an EPA portfolio template

Employers/training providers are recommended to arrange for apprentices to carry out a practice Interview based on an EPA portfolio of evidence prior to end-point assessment.

Instructions

This should be read in conjunction with the Level 3 PDHT V1.2 Specification.

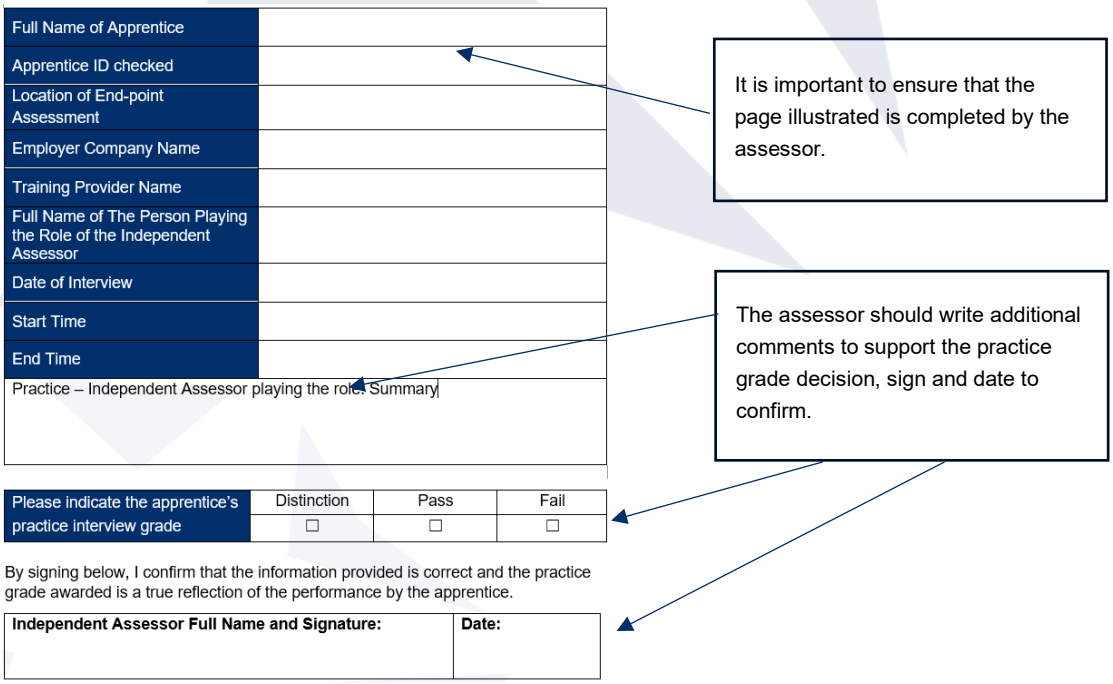
This template has been designed to help the suitable person playing part of the independent assessor and has three purposes:

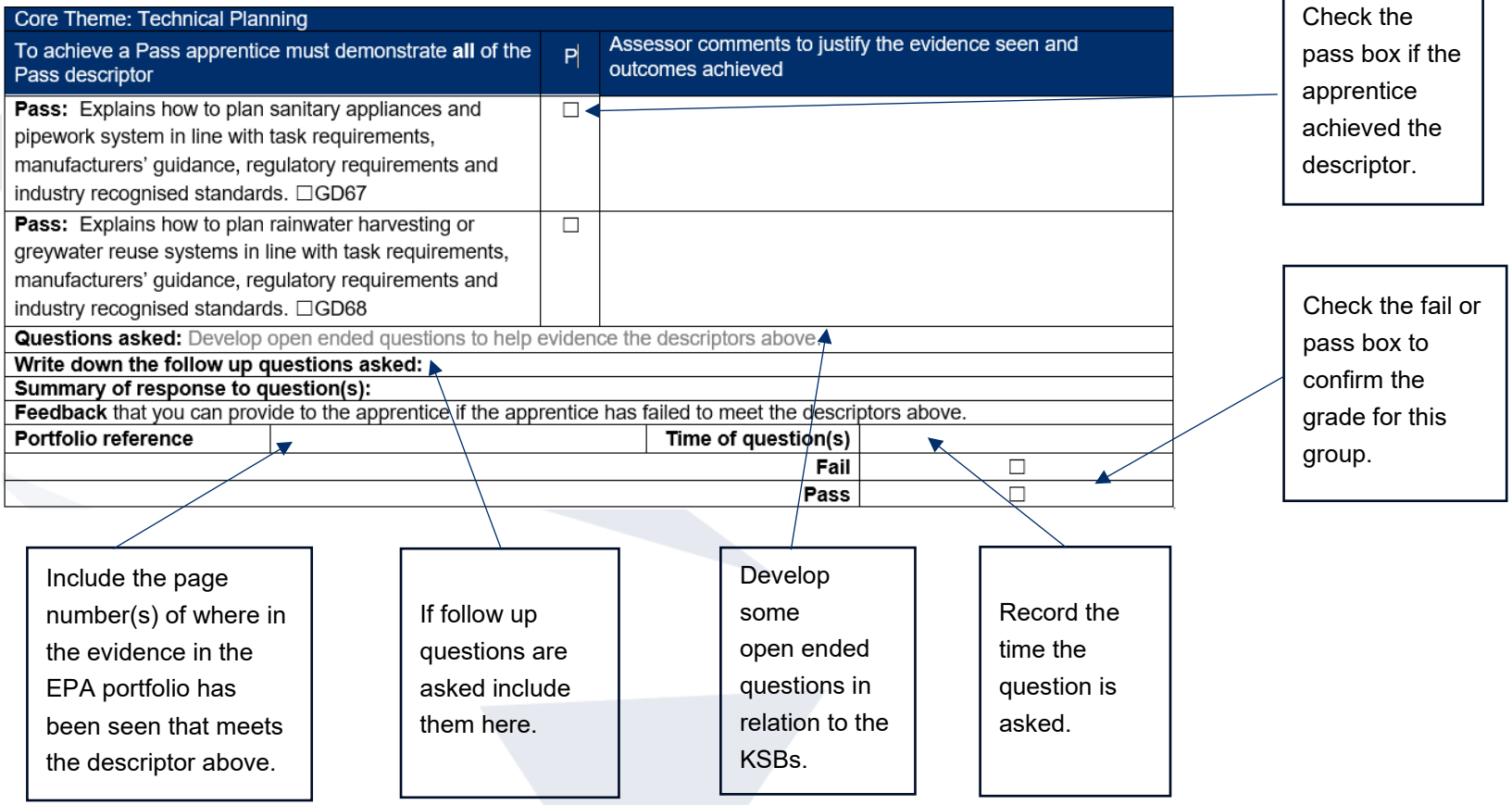
1. To prepare for a practice assessment
2. Designed to holistically assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship by the apprentice
3. To provide feedback to the apprentice in preparation for the live assessment

The assessor should:

- complete the form below which has two parts to assess the apprentice's Interview.
- review the apprentice's portfolio of evidence before the practice assessment

Quick Tip – How to complete the form below:




Core Theme: Technical Planning
To achieve a Pass apprentice must demonstrate all of the Pass descriptor
P
Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explains how to plan sanitary appliances and pipework system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards. ☐GD67
Pass: Explains how to plan rainwater harvesting or greywater reuse systems in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards. ☐GD68
Questions asked: Develop open ended questions to help evidence the descriptors above.
Write down the follow up questions asked:
Summary of response to question(s):
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.
Portfolio reference
Time of question(s)
Fail
Pass
Check the pass box if the apprentice achieved the descriptor.
Check the fail or pass box to confirm the grade for this group.
Include the page number(s) of where in the evidence in the EPA portfolio has been seen that meets the descriptor above.
If follow up questions are asked include them here.
Develop some open ended questions in relation to the KSBs.
Record the time the question is asked.

EEA interview based on an EPA portfolio

Full Name of Apprentice	
Apprentice ID checked	
Location of End-point Assessment	
Employer Company Name	
Training Provider Name	
Full Name of The Person Playing the Role of the Independent Assessor	
Date of Interview	
Start Time	
End Time	
Practice – Independent Assessor playing the role: Summary	

Please indicate the apprentice's practice interview grade	Distinction	Pass	Fail
	☐	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Independent Assessor Full Name and Signature:	**Date:**

Please Note:

To achieve a Pass, the Apprentice must achieve **all** of the pass descriptors.

To achieve a Distinction the Apprentice must achieve **all** of the pass and distinction descriptors.

Fail: The apprentice does not demonstrate the pass descriptors.

Assessor questions: during the live assessment, the assessor must ask at least 10 open questions.

Introduction

At the start of the interview the assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice prior to beginning the assessment
- Provide apprentice with information on the format of the with questions, including the timescales they will be working to

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Give their employer's name
- Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360
- Confirm they are prepared for the question and answer session; and confirm they can continue with the interview
- Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview

Important points to inform the apprentice

- Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts
- Please do not consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed
- Ensure the apprentice has a drink of water to hand
- Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview
- Confirm that a sign is placed on the door of the assessment room. Assessment in progress 'Do not disturb'
- The live interview will be fully recorded for the purpose of audit and quality assurance

Independent Assessor Guidance

Delivery
• The interview will last 60 minutes (1 hour). An additional 6 minutes is allowed for the apprentice to complete their last answer
• You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
• You must ask a minimum of ten open questions
• The purpose of the questions is to cover the following core and one of the specialist option topics:
  ○ **Core:** Health and Safety
  ○ **Core:** Installation and test of domestic rainwater systems
  ○ **Core:** Commissioning and handover
  ○ **Core:** Servicing, maintenance, fault diagnosis and rectification (mechanical parts)
  ○ **Core:** Decommissioning
  ○ **Core:** Technical Planning
  ○ **Core:** Professionalism
• Please work through the sections in the order they appear within this document
• Answers to questions must be recorded. Timeline each question to the recording. Only log the time for the start of each question asked
• Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
• The text of additional questions must be recorded on this document
• Adapt the questions to the apprentice's circumstances following your review of their EPA portfolio evidence
• Write down each question
• Supply brief written notes where each criterion has been met
• If the apprentice does not achieve a descriptor, provide written notes that EEA can feed back to the apprentice to help the apprentice prepare for a resit
• Both the recording and the written notes will be subject to IQA.
 	
At the end of the interview - Thank the apprentice for their time and wish them good luck

Core Theme: Health and Safety		
To achieve a Pass, the apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction, the apprentice must demonstrate **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explain how they apply and use personal protective equipment (PPE) in line with regulatory requirements and company procedures. GD47	☐	
Pass: Explain how they carry out correct manual handling in line with industry standards. GD48	☐	
Pass: Explains how they use mechanical lifting aids in line with manufacturers' instructions. GD49	☐	
Pass: Explain how they use access equipment in line with manufacturers' instructions. GD50	☐	
Pass: Explains how to operate in a safe working manner by adhering to health and safety legislation, approved codes of practice and guidance and applying safe working practices.GD69	☐	
Distinction: Explain the importance of using PPE correctly and the consequences of not doing so.	☐	
Distinction: Explain the importance of safe manual handling techniques to the individual and the business.	☐	
Distinction: Explain the importance of using manufacturers' instructions when using mechanical lifting aids or access equipment.	☐	

Core Theme: Health and Safety		
To achieve a Pass, the apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction, the apprentice must demonstrate **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Distinction: Explains the importance to individuals and the business of operating safely and adhering to health and safety legislation, approved codes of practice and guidance.	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	

S1: Operate in a safe working manner by adhering to health and safety legislation, approved codes of practice and guidance and applying safe working practices.

Underpinned by:

- **K1**: The health and safety legislation, approved Codes of Practice and guidance and safe working practices applicable to work in the building services and wider construction industry

Core Theme: Installation and test of domestic rainwater systems		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction, the apprentice must demonstrate **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explains how to install rainwater systems in-line with manufacturer's guidance and customer requirements. GD51	☐	
Pass: Explains how to carry out a soundness test in-line with company procedures. GD52	☐	
Distinction: Explains how they accommodate changes to customer requirements during installation.	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	

S3: Carry out and apply the common processes and techniques used in the installation and test of rainwater systems.
Underpinned by:

- **K3**: The common processes and techniques used in the installation and test of rainwater systems
- **K11**: The installation and testing requirements applicable to rainwater systems and components

Core Theme: Commissioning and handovers		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Describes how they carry out commissioning procedure for: a) cold water systems and components b) hot water systems and components c) central heating systems and components d) sanitary appliances, pipework systems and components e) rainwater systems and components in line with company procedures. GD53	☐	
Pass: GD54 Describes the procedure for handing over to the end user: a) cold water systems and components b) hot water systems and components c) central heating systems and components d) sanitary appliances, pipework systems and components. e) rainwater systems and components f) electrical control systems and components in line with company procedures. GD54	☐	
Distinction: Justifies their decisions when their commissioning has found defects.	☐	

Core Theme: Commissioning and handovers		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Questions asked: Develop open ended questions that enable the apprentice to demonstrate the grading descriptors above. Use these questions to explore any areas that were not fully evidenced during the interview.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

S6: Carry out commission and handover procedures and techniques on plumbing and domestic heating systems (cold water, hot water, central heating, sanitary appliances and rainwater).

Underpinned by:

- **K12**: The commissioning requirements applicable to plumbing and domestic heating systems and components

Core Theme: Servicing, maintenance, fault diagnosis and rectification (mechanical parts)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explain how to carry out identification and rectification procedures and techniques to deal with a range of faults on: a) cold water systems and components b) hot water systems and components c) central heating systems and components d) sanitary appliances, pipework systems and components rainwater systems and components in line with company procedures. GD55	☐	
Pass: GD56 Explain how to carry out: a) service or maintenance of cold water systems b) service or maintenance of hot water systems c) service or maintenance of central heating systems d) routine checks of sanitary appliances and pipework systems in line with company procedures. GD56	☐	
Distinction: Justifies their fault finding approach.	☐	
Questions asked: Develop open ended questions that enable the apprentice to demonstrate the grading descriptors above. Use these questions to explore any areas that were not fully evidenced during the interview.		

Write down the follow up questions asked:			
Summary of response to question(s):			
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.			
Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

S8: Perform routine service, maintenance, fault diagnosis and rectification procedures and techniques on the non-electrical components of plumbing and domestic heating systems.

Underpinned by:

- **K15**: The routine service and maintenance procedures applicable to plumbing and domestic heating systems.
- **K16**: The fault finding, diagnosis and rectification procedures applicable to plumbing and domestic heating systems.

Core Theme: Decommissioning		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explains how they carry out decommissioning of: a) cold water systems b) hot water systems c) central heating systems d) sanitary appliances and pipework systems e) rainwater systems f) electrical systems in accordance with company procedures. GD57	☐	
Distinction: Explains the impact of not decommissioning correctly, on the customer and on the business.		
Questions asked: Develop open ended questions that enable the apprentice to demonstrate the grading descriptors above. Use these questions to explore any areas that were not fully evidenced during the interview.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

S10: Decommission plumbing and domestic heating systems.
S11: Decommission electrical and electrical control systems applicable to plumbing and domestic heating systems.
underpinned by:

- **K14**:The decommissioning procedures applicable to plumbing and domestic heating systems

Core Theme: Technical Planning		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explains how to plan central heating systems in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards. (GD66)		
Pass: Explains how to plan sanitary appliances and pipework system in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards. GD67	☐	
Pass: Explains how to plan rainwater harvesting or greywater reuse systems in line with task requirements, manufacturers' guidance, regulatory requirements and industry recognised standards. GD68	☐	
Questions asked: Develop open ended questions that enable the apprentice to demonstrate the grading descriptors above. Use these questions to explore any areas that were not fully evidenced during the interview.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Portfolio reference		**Time of question(s)**
		Fail ☐
		Pass ☐

S13: Plan, size and select domestic heating and rainwater systems to meet customers' needs in accordance with manufacturers' guidance, regulatory requirements and industry recognised standards and procedures.
underpinned by:

- **K6**: The legislative requirements and sources of information applicable to plumbing and domestic heating systems system installation, service and repair
- **K8**:The layout features, working principles and legislative requirements of plumbing and domestic heating systems
- **K9**: The basic factors which influence system choice for particular applications with regard to the installation of plumbing and domestic heating systems
- **K17**: The procedures for sizing and selecting plumbing and domestic heating systems and components to meet customers' needs

Core Theme: Professionalism		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptor	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Explains how their collaboration and communication with customers and colleagues is achieved by acting professionally and upholding ethical principles.	☐	
Pass: Outlines the planned and unplanned learning and development activities they have carried out and shows a commitment to future continued professional development to maintain and enhance competence.	☐	
Pass: Describes how they keep up to date with industry best practice.	☐	
Questions asked: Develop open ended questions that enable the apprentice to demonstrate the grading descriptors above. Use these questions to explore any areas that were not fully evidenced during the interview.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

B1: Acts professionally and ethically to collaborate with colleagues and customers.

B3: Committed to continuous professional development.

B4: Committed to keeping up to date with industry best practice.

Underpinned by:

- **K7**: How to communicate with customers, suppliers, co-workers and members of the public who may come into contact with the work area