

# Level 3 Environmental technologies/Solid fuel/Oil (9189-04/06/07)

## Work log

June 2021 Version 1

# Work Log

<b>Candidate name</b>	
<b>Centre name</b>	
<b>Centre number</b>	
<b>Principal Assessor name</b>	
<b>Expert Witness name</b>	
<b>Expert observer name (If applicable)</b>	
<b>Internal quality assurer (IOA) name</b>	
<b>Qualification and pathway (environmental/solid fuel/oil)</b>	
<b>Programme start date</b>	
<b>City &amp; Guilds registration number</b>	
<b>Date of registration with City &amp; Guilds</b>	

The Candidate's Workplace Evidence Record is his/her personal record of achievement in practical work carried out mostly in the workplace. It may not be possible to replace this document which therefore should be kept in good condition, in a safe place, to be used by the candidate to record progress of practical work.

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## 1 Using the Work Log

The Work Log is used to:

- Provide a method of recording the outcomes of assessment, details of required supporting evidence – on a section by section basis.
- Provide a method of indexing the evidence that has been produced.

You are required to provide evidence of your ability to complete a number of different tasks detailed in the Work Log. The recording sheets necessary for you and your assessor to record detail of the work carried out (evidence produced) are included in this document.

Your assessor will provide a full and thorough briefing of its use, however here's a summary:

Each task contains several summary sheets containing a number of task items (or achievement criteria). These task items are the things that you need to prove that you can do to be awarded the qualification. You will need to provide proof of being able to do all the task items for a particular task to be able to say that you are competent.

There are several methods of providing proof of competence, such as:

**DO** – Direct observation (using reports contained in this Work Log)

**RA** – Reflective account (using documents contained in the Work Log)

For the purpose of this document:

### **Workplace assessment**

This outlines which aspects must always be assessed through performance in the workplace. Workplace evidence is gathered through activities carried out for a customer at the learner's place of work.

### **Realistic Working Environment (RWE)**

The realistic working environment is a simulated environment contained within the centre. Simulated conditions must represent the real work environment with all required equipment and services to carry out the task. Directly observed assessments in a Realistic Working Environment must be different to those that have been used for training purposes.

### **Direct observation (DO)**

This is where your assessor/expert observer visits your workplace to see you doing a particular job. Your assessor/expert observer will complete details of the work you have been observed doing and identify whether the work you have carried out is to an acceptable standard. You may be asked a number of oral questions in support of the assessment process and these will be detailed on the direct observation record.

**Note:** some DOs may take place in centre in accordance with the requirements detailed in the assessment tables throughout this document.

If you make a mistake when completing the sheets then simply draw a line through the mistake, then date and sign alongside the mistake. Duplicate sheets can be included as required.

Please do not use correction fluid in this Work Log.

## Supporting evidence

Supporting evidence is additional evidence that supports the work carried out. You can get guidance from your assessor and/or mentor regarding supporting evidence requirements. Photographic evidence or other documentary evidence from the workplace is recommended to support written accounts.

**Note:** In addition, those on apprenticeships leading to EPA will benefit from enhanced supporting evidence. Speak to your centre regarding EPA grading.

All Supporting evidence must:

- Be clearly identified
- Be dated
- Contain your signature and your expert witness' or assessor's signature

### On-site Observation Report

Your assessor/expert observer will complete the document during your observation of work carried out on site.

You will both sign this as a true record.

## Roles and Responsibilities

### Principal Assessor

To include the following:

- Occupationally competent in the sector/qualification being assessed.
- Assessor qualified and registered with the centre.
- Fully conversant with the assessments and subject to annual review by an IQA.

### Expert Observer

To include the following:

- Occupationally competent, suitably experienced, trained and registered with the centre.
- Training must include the requirements of assessment and the completion of related direct observation documentation.
- Training must be documented and recorded within quality assurance documentation and be subject to annual review by an IQA.
- Subject to the same internal quality assurance process as Assessors

### Direct observations

Must be carried out by a:

- Principal Assessor - **OR**
- Expert Observer

Where direct observation is carried out by the expert observer, the observation documentation must be counter signed by the principal assessor and subject to enhanced quality assurance\*.

### **Expert Witness**

To include the following:

- Expert witnesses are required to sign candidate evidence, such as reflective accounts, witness testimonies and supporting documents to authenticate and ensure validity.
- Expert witnesses must be occupationally competent and have suitable industry experience\*\*

### **Mentor**

To include the following:

- Offer support and guidance to candidates throughout the programme and confirm suitability for assessment (primary responsibilities)
- Occupationally competent and have suitable industry experience.

### **Internal Quality Assurer**

To include the following:

- Qualified in internal quality assurance and either occupationally competent in the sector/qualification being quality assured, or accompanied by an independent occupationally competent person where required.

### **Quality Assurance**

To include the following:

- All evidence must be available for internal and external quality assurance.
- The amount of quality assurance will depend on your centres IQA plan which will identify the amount and frequency of activity.
- When an expert observer carries out assessment this process will be subject to enhanced quality assurance.

### **Notes:**

\*Enhanced quality assurance could include additional IQA observations, detailed feedback, regular review, increased sampling and detailed action planning

\*\*Suitable experience - personnel will have experience applying their skills and associated competences within industry and it is expected they have a minimum of 2 years post qualification experience

Principle Assessors and Internal Quality Assurer's cannot be involved in the training of Candidates they are assessing or internally quality assuring

Where either Expert Observers, Expert Witnesses and Mentors are the same person the centre must identify, record and mitigate any conflicts of interest and risk to impartiality

## How to use the assessment tables

Assessments are colour coded to assist with requirements.

Color code	Description	Codes for Assessment
Green	Directly observed	<b>DOS</b> – Directly observed real life activity onsite  <b>DOC</b> – Directly observed simulated realistic activity in centre
Orange	Reflective account with supporting evidence and signed by expert witness	<b>RAS</b> – 'Reflective Account Site' from site with supporting evidence  <b>RAC</b> – 'Reflective Account Centre' from simulated centre with supporting evidence

## Exemplar assessment table

<b>EXEMPLAR - Install, service and fault-find appliances.</b>				
Candidates must have been taught on requirements across a range of appliances and applications prior to assessment.				
Candidates must be assessed on the minimum amount of occasions identified below.				
The candidate has covered necessary training required prior to the industry assessment				
Mentor signature:	<i>D. Trainor</i>	Date	25.06.2033	
Candidate signature	<i>A. Candidate</i>	Date	25.06.2033	
<b>Assessment Requirements</b>				
<b>Total – 14 assessments for installation, service and fault finding</b>		<b>Install</b>	<b>Service</b>	<b>Fault Finding</b>
<b>Assessment 1</b>	<b>Directly Observed</b> All three must be DO One must be DO on site The other two may be DO on site or in centre	<b>DOS</b>	<b>DOC</b>	<b>DOS</b>
<b>Assessment 2</b>	<b>Directly Observed</b> All three must be DO One must be DO on site The other two may be DO on site or in centre	<b>DOS</b>	<b>DOC</b>	<b>DOC</b>
<b>Assessment 3</b>	<b>Reflective Account</b> Minimum of 2 accounts must come from site 1 account may be simulated	<b>RAS</b>	<b>RAC</b>	<b>RAS</b>
<b>Assessment 4</b>	<b>Reflective Account</b> Minimum of 2 accounts must come from site 1 account may be simulated	<b>PP2+RA ETC RAS</b>	<b>RAC</b>	<b>RAS</b>
<b>Assessment 5</b>	<b>Reflective Account (2 from either install, service or fault-finding)</b> Minimum of 1 account must come from site 1 account may be simulated	<b>RAS</b>	<b>NA</b>	<b>RAC</b>
<b>Assessment to include</b>				
<ul style="list-style-type: none"> <li>● Installation of appliance</li> <li>● Full service of an appliance</li> <li>● Fault-find on appliance</li> <li>● Completion of associated documentation</li> </ul>				
<b>Environmental technologies</b>	<b>Solid Fuel</b>	<b>Oil</b>		
<b>Range:</b>	<b>Range:</b>	<b>Range:</b>		
<ul style="list-style-type: none"> <li>● Solar thermal hot water system</li> <li>● Rainwater harvesting and greywater reuse system</li> <li>● Air source heat pump system</li> </ul>	<ul style="list-style-type: none"> <li>● Solid mineral fuel system</li> <li>● Biomass fuel system</li> </ul>	<ul style="list-style-type: none"> <li>● Oil fuel system</li> </ul>		





## **Expert witness/Expert observer details**

Please complete the forms below with details of expert witness and/or expert observer. Please refer to Section 1 – Rules and responsibilities for prerequisite details of witness/expert observer requirements.

**Registration Form - Expert Observer**

<b>Learner Details:</b>	Print Name:
	City & Guilds Registration Number:

**Expert Observer Details**

Name:	
Contact Location	
Contact Phone/email	
Expert Observer Signature	
Principal assessor name	

**FOR CENTRE ASSESSOR USE ONLY**

Approved by lead IQA	Lead IQA Name:
	Signature:
Approved From:	Date:
Approval Expires:	Date:
Scheme Number(s):	



**Recording Form- Expert Observer**

Date of assessment training		Date of assessment criteria training			
Details of assessment training (eg. methods, appeals etc.)		Details of assessment criteria training (in reference to the appliances to be observed)			
Planned enhanced IQA details/dates					
Annual review date		On-going training needs			
Lead IQA Name		Lead IQA Signature	<table border="1"> <tr> <td data-bbox="1518 1206 1648 1318">Date</td> <td data-bbox="1648 1206 2089 1318"></td> </tr> </table>	Date	
Date					

## Approval Form – Expert Witness

Learner Details:	Print Name:
	City & Guilds Registration Number:

### Witness Details:

Name:	
Contact Location:	
Contact Phone Number(s):	
E-mail:	
Signature:	

### For Centre Assessor Use Only

Approved by Principal Assessor	Principal Assessor Name:
	Signature:
Approved From:	Date:
Approval Expires:	Date:
Scheme Number(s):	
Units Approved to Witness:	



## 4 Work Log

### Declaration

I confirm that the evidence supplied for the units contained in this worklog is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

<b>Candidate</b>	Signature	<b>Date</b>	DD/MM/YY
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### Assessor

I confirm that this candidate has achieved all the requirements of the above units with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

<b>Assessor</b>	Signature	<b>Date</b>	DD/MM/YY
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**Section name**

**Section reference**

**Section aim**

**Unit reference**

**Evidence requirements**

## Planning and Preparation (relevant to all units)

PP

This performance section provides evidence of job competence in a variety of level 3 performance activities.

Evidenced across all units within this qualification.

Evidence must be provided on **two** separate occasions in relation to **either**:

- New installation
- Existing installation.

### **Direct observation requirements:**

Due to the nature of the assessment there are no minimum direct observation requirements.

Section Contents

[PP1](#)

Evidenced from the workplace

[PP2](#)

Evidenced from the workplace or centre

Copy sheets and add additional jobs as required to help meet the range.

Ref: PP1	<b>Planning, Preparation and Assessment of Risk</b>	
Job location		
Job description		
Tools and plant required		
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>		
Work Programming		
<ul style="list-style-type: none"> <li>• Staff resources (Team/individual)</li> <li>• Other trades required</li> </ul> <p style="margin-left: 20px;">Appropriate timing including making good</p>		
System or component calculations – these could include purge requirements, pipe sizing, and chimney sizing or ventilation requirements. (Continue on separate page if required, or reference alternative evidence)		



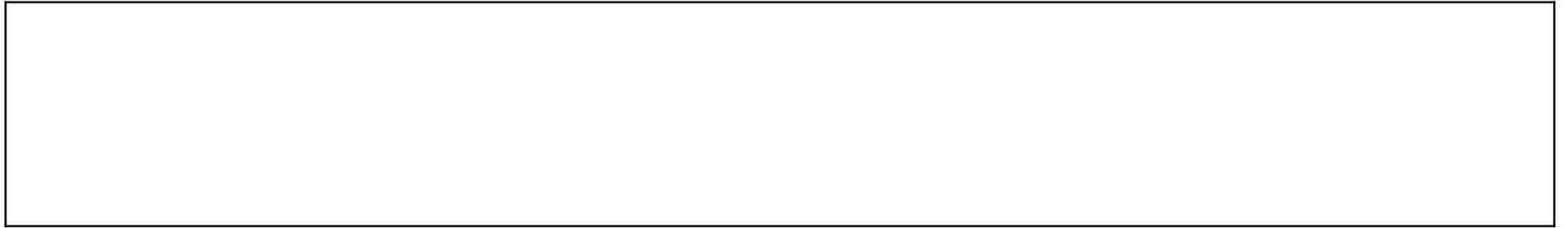




Pre installation checks			
Identify and apply risk assessment/method statement – details of risk assessment/method statement location		Health and safety requirements inclusive of lone working considerations, lifting and handling etc.	
Details of existing system deficiencies or unsafe situations including RIDDOR procedures (if applicable)		Details of property and system protection measures, fire stops, sleeves, protective coating, equipotential bonding requirements (main/supplementary) etc.	
Considerations for alternative green technologies – customer advice		Safe use of access equipment demonstrated – steps and ladders	
Client agreed with proposal	YES / NO Verbal/Written	Client Signature (if available)	
Candidate signature			Date
Expert witness signature			Date
Assessor signature			Date
IQA signature (where sampled)			Date



Ref: PP2	<b>Planning, Preparation and Assessment of Risk</b>	
Job location		
Job description		
Tools and plant required – identify storage requirements		
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>		
Work Programming		
<ul style="list-style-type: none"> <li>• Staff resources (Team/individual)</li> <li>• Other trades required</li> <li>• Appropriate timing including making good</li> </ul>		
System or component calculations – these could include purge requirements, pipe sizing, and chimney sizing or ventilation requirements. (Continue on separate page if required, or reference alternative evidence)		





Pre installation checks – pipe runs and installation meets statutory requirements			
Identify and apply risk assessment/method statement – details of risk assessment/method statement location		Health and safety requirements inclusive of lone working considerations, lifting and handling etc.	
Details of existing system deficiencies or unsafe situations including RIDDOR procedures (if applicable)		Details of property and system protection measures, fire stops, sleeves, protective coating, equipotential bonding requirements (main/supplementary) etc.	
Considerations for alternative green technologies – customer advice		Safe use of access equipment demonstrated – steps and ladders	
Client agreed with design options	Yes / No Verbal/Written	Client Signature (if available)	
Candidate signature			Date
Expert witness signature			Date
Assessor signature			Date
IQA signature (where sampled)			Date

**Brief outline of pipework runs to appliances**

**PP1: Planning, Preparation and Assessment of Risk**

**PP2: Planning, Preparation and Assessment of Risk**

**Section name**

**Section reference**

**Section aim**

**Evidence requirements**

## Pipework - Install

PI

This performance unit provides evidence of job competence in a variety of level 3 performance activities

### **Assessment requirements:**

As below table

<b>Installation of pipework (<math>\leq 35</math> mm) and Test</b>			
Candidates must have been taught on requirements across a range pipework and fittings prior to assessment			
Candidates must be assessed on the minimum amount of occasions and range as identified below			
The candidate has covered necessary training required prior to the industry assessment			
Mentor signature:		Date	
Candidate signature		Date	
<b>Assessment Requirements</b>			
<p><b>Total</b> - 5 assessments install pipework; these may be related directly to the installation requirements of an appliance</p> <p><b>Note: at least 2 assessments must come from site</b></p>			
Assessment number	Type of permitted assessment	Insert assessment code when complete	
<b>Assessment 1</b>	<b>Directly Observed</b> May be DO on site or in centre		
<b>Assessment 2</b>	<b>Directly Observed</b> May be DO on site or in centre		
<b>Assessment 3</b>	<b>Reflective Account</b> May be from site or simulated in centre		
<b>Assessment 4</b>	<b>Reflective Account</b> May be from site or simulated in centre		
<b>Assessment 5</b>	<b>Reflective Account</b> May be from site or simulated in centre		
<b>Installation to include</b>			
<ul style="list-style-type: none"> <li>• New or replacement pipework</li> <li>• Associated pipework fixings and joints</li> </ul>			
<p><b>Range</b> – at least two different pipe material types must be covered from the following list. <i>Include ref when complete</i></p> <ul style="list-style-type: none"> <li>• Copper Tube</li> <li>• Steel Tube</li> <li>• Corrugated Stainless Steel Tube (CSST)</li> <li>• Polyethylene Tube (pe)</li> </ul>		<p><b>Secondary Range</b> – at least two of the following. <i>Include ref when complete</i></p> <ul style="list-style-type: none"> <li>• Capillary Joints</li> <li>• Compression Joints</li> <li>• CSST Joints</li> <li>• Screwed Joints</li> <li>• Fabricated bending using mechanical tools</li> </ul>	

Ref: Pl1	Pipework/Test – Install and test 1 Direct Observation	
Job location	Relevant PPE used: Yes / No Health and safety observed: Yes / No Candidate prepared for assessment: Yes / No Candidate specific requirements discussed: Yes / No Candidate briefed on appeals procedure: Yes / No	
Outline of task		
Observation report	<p><b>To include:</b> Pre installation and installation as per manufacturer’s instructions and legislation, testing and purging procedures used.</p>	



<b>Pre installation checks</b>		<b>Post installation checks</b>	
Control accessible:	Yes / No	Soundness test satisfactory:	Yes / No / NA
Soundness test satisfactory:	Yes / No / NA	Purge satisfactory:	Yes / No
Identify any deficiencies or unsafe situations:	Yes / No / NA	Commissioning checks:	Yes / No
Description of unsafe or RIDDOR reportable situations:		Identify safe disposal of decommissioned pipework and materials:	
Record of pipework installed inclusive of types, materials, sizes and jointing methods and associated works:			
Record of appliance type pipework is connected to:			
<b>Oral Q&amp;A Record/ Video/ Dictaphone references</b>		<b>Feedback and forward planning</b>	
Candidate signature		Date	
Assessor or Expert Observer		Date	
IQA signature (where sampled)		Date	



Ref: Pl2	<b>Pipework/Test – Install and test 2 Direct Observation</b>	
<b>Job location</b>	Relevant PPE used: Yes / No Health and safety observed: Yes / No Candidate prepared for assessment: Yes / No Candidate specific requirements discussed: Yes / No Candidate briefed on appeals procedure: Yes / No	
<b>Outline of task</b>		
<b>Observation report</b>	<b>To include:</b> Pre installation and installation as per manufacturer's instructions and legislation, testing and purging procedures used.	



<b>Pre installation checks</b>		<b>Post installation checks</b>	
Control accessible:	Yes / No	Soundness test satisfactory:	Yes / No / NA
Soundness test satisfactory:	Yes / No / NA	Purge satisfactory:	Yes / No
Identify any deficiencies or unsafe situations:	Yes / No / NA	Commissioning checks:	Yes / No
Description of unsafe or RIDDOR reportable situations:		Identify safe disposal of decommissioned pipework and materials:	
Record of pipework installed inclusive of types, materials, sizes and jointing methods and associated works:			
Record of appliance type pipework is connected to:			
<b>Oral Q&amp;A Record/ Video/ Dictaphone references</b>		<b>Feedback and forward planning</b>	
Candidate signature		Date	
Assessor or Expert Observer		Date	
IQA signature (where sampled)		Date	

Ref: PI3		Pipework/Test - Install and test 3 RA	
Job location		Outline of task/related tasks (cross reference to other tasks within this Work Log)	
Control accessible:	Yes / No	Soundness test satisfactory:	Yes / No / NA
Soundness test satisfactory:	Yes / No / NA	Purge satisfactory:	Yes / No
Identify any deficiencies or unsafe situations:	Yes / No / NA	Commissioning checks:	Yes / No
Description of unsafe or RIDDOR reportable situations:		Identify safe disposal of decommissioned pipework and materials:	
Record of pipework installed inclusive of types, materials, sizes and jointing methods and associated works:			

Record of appliance type pipework is connected to:

**Description of work carried out** (candidate write up)

Learner signature (confirm own work)

Date

Expert witness signature (confirm learners work to industry standards)

Date

Assessor signature

Date

IQA Signature (where sampled)

Date

Ref: PI4	Pipework/Test - Install and test 4 RA			
Job location		Outline of task/related tasks (cross reference to other tasks within this Work Log)		
Control accessible:	Yes / No	Soundness test satisfactory:	Yes / No / NA	
Soundness test satisfactory:	Yes / No / NA	Purge satisfactory:	Yes / No	
Identify any deficiencies or unsafe situations:	Yes / No / NA	Commissioning checks:	Yes / No	
Description of unsafe or RIDDOR reportable situations:		Identify safe disposal of decommissioned pipework and materials:		
Record of pipework installed inclusive of types, materials, sizes and jointing methods and associated works:				

Record of appliance type pipework is connected to:

**Description of work carried out** (candidate write up)

Learner signature (confirm own work)

Date

Expert witness signature (confirm learners work to industry standards)

Date

Assessor signature

Date

IQA Signature (where sampled)

Date

Ref: PI5	Pipework/Test - Install and test 5 RA			
Job location		Outline of task/related tasks (cross reference to other tasks within this Work Log)		
Control accessible:	Yes / No	Soundness test satisfactory:	Yes / No / NA	
Soundness test satisfactory:	Yes / No / NA	Purge satisfactory:	Yes / No	
Identify any deficiencies or unsafe situations:	Yes / No / NA	Commissioning checks:	Yes / No	
Description of unsafe or RIDDOR reportable situations:		Identify safe disposal of decommissioned pipework and materials:		
Record of pipework installed inclusive of types, materials, sizes and jointing methods and associated works:				

Record of appliance type pipework is connected to:

<b>Description of work carried out</b> (candidate write up)		
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Learner signature (confirm own work)		Date
Expert witness signature (confirm learners work to industry standards)		Date
Assessor signature		Date
IQA Signature (where sampled)		Date



Required supporting photographic evidence from each on site installation x2	
Evidence Ref – on site Job 1 A	Evidence Ref - on site Job 1 B
Description	Description



Required Supporting Evidence Ref - on site Job 2 A	Required Supporting Evidence Ref - on site Job 2 B
Description	Description

**Section name**

**Section reference**

**Section aim**

**Evidence requirements**

## Install, service and fault-find on appliances

AI / AS / AF

This performance section provides evidence of job competence in the installation, service and repair of water heating and wet central heating appliances.

### **Assessment requirements:**

As shown in table on following page.

### **Section Contents**

Install appliances

[AI](#)

Service appliances

[AS](#)

Fault-find on appliances

[AF](#)

<b>Install, service and fault find on appliances.</b>			
Candidates must have been taught on requirements across a range of appliances and applications prior to assessment Candidates must be assessed on the minimum amount of occasions and range as identified below			
The candidate has covered necessary training required prior to the industry assessment			
Mentor signature:		Date	
Candidate signature		Date	
Assessment Requirements	Insert assessment code when complete		
Total – 14 assessments for installation, service and fault finding	<i>Install</i>	<i>Service</i>	<i>Fault-finding</i>
Assessment 1	<b>Directly Observed</b> All <b>three</b> must be DO One must be DO on site The other two may be DO on site or in centre.		
Assessment 2	<b>Directly Observed</b> All <b>three</b> must be DO One must be DO on site The other two may be DO on site or in centre.		
Assessment 3	<b>Reflective Account</b> Minimum of <b>two</b> accounts must come from site <b>one</b> account may be simulated.		
Assessment 4	<b>Reflective Account</b> Minimum of <b>two</b> accounts must come from site <b>one</b> account may be simulated.		
Assessment 5	<b>Reflective Account (two from either install, service or fault-finding)</b> Minimum of one account must come from site, one account may be simulated.		
<b>Assessment to include</b> New or replacement appliance Associated pipework connections Associated flueing (where applicable) Commission, handover and completion of relevant documentation			
Range – at least two different types of appliance must be covered.	Insert assessment code when complete		

<b>Section name</b>	Install appliances
<b>Section reference</b>	AI
<b>Section aim</b>	This performance section provides evidence of job competence in the installation of water heating and wet central heating appliances.

Ref: AI1		<b>Appliance – Install 1 Direct Observation</b>	
Job location		Relevant PPE used:	Yes / No
		Health and Safety observed:	Yes / No
		Candidate prepared for assessment:	Yes / No
		Candidate specific requirements discussed:	Yes / No
		Candidate briefed on appeals procedure:	Yes / No
Appliance location		Appliance type (cross reference to range tracker)	
		Model/serial number	
<b>Preliminary checks</b>			
Visual inspection of area	Pass / Fail	Adequate ventilation	Yes / No / NA
Record test pressure:			
<b>Installation record – complete as required</b>			
Record of tests/checks/measurements carried out:			
Safe operation	Pass / Fail	Handover procedure with customer	Pass / Fail

**Direct Observation Report - description of work carried out**

**Consider:** Pre installation and installation as per manufacturer's instructions and legislation, marking out, installing and connecting pipework, heat source, flue and electrical supply. Post checks, flue, functional tests and notification.

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Feedback and forward planning	Record of any Oral questions/Dictaphone references etc

Learner signature		Date
Assessor or Expert Observer		Date
IQA Signature (where sampled)		Date

Ref: Al2	<b>Appliance – Install 2 Direct Observation</b>		
Job location		Appliance type (cross reference to range tracker)	
Model/serial number		Appliance location	
<b>Preliminary checks</b>			
Visual inspection of area	Pass / Fail	Adequate ventilation	Yes / No
Record test pressure:			
<b>Installation record – complete as required</b>			
Record of tests/checks/measurements carried out:			
Safe operation	Pass / Fail	Handover procedure with customer	Pass / Fail



**Direct Observation Report - description of work carried out**

**To consider:** Pre installation and installation as per manufacturer's instructions and legislation, marking out, installing and connecting pipework, heat source, flue and electrical supply. Post checks, flue, functional tests and notification.

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Learner signature (confirm own work)		Date
Assessor or Expert Observer		Date
IQA Signature (where sampled)		Date

Ref: A13		<b>Appliance – Install 3 RA</b>	
Job location		Appliance type (cross reference to range tracker)	
Model/serial number		Appliance location	
<b>Preliminary checks</b>			
Visual inspection of area	Pass / Fail	Adequate ventilation	Yes / No
Record test pressure			
<b>Installation record – complete as required</b>			
Record of tests/checks/measurements carried out:			
Safe operation	Pass / Fail	Handover procedure with customer	Yes / No

**Description of work carried out** (candidate write up)

**To include:** Pre installation and installation as per manufacturer's instructions and legislation, marking out, installing and connecting pipework, heat source, flue and electrical supply. Post checks, flue, functional tests and notification.

Learner signature (confirm own work)

Competent witness signature (confirm learners work to industry standards)

Assessor signature

IQA Signature (where sampled)

Date

Date

Date

Ref: Al4	<b>Appliance – Install 4</b>		
Job location		Appliance type (cross reference to range tracker)	
Model/serial number		Appliance location	
<b>Preliminary checks</b>			
Visual inspection of area	Pass / Fail	Adequate ventilation	Yes / No
Record test pressure			
<b>Installation record – complete as required</b>			
Record of tests/checks/measurements carried out:			

Safe operation	Pass / Fail	Handover procedure with customer	Yes / No
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**Description of work carried out** (candidate write up)

**To include:** Pre installation and installation as per manufacturer's instructions and legislation, marking out, installing and connecting pipework, heat source, flue and electrical supply. Post checks, flue, functional tests and notification.

Learner signature (confirm own work)

Date

Competent witness signature (confirm learners work to industry standards)

Date

Assessor signature

Date

IOA Signature (where sampled)

Date

Ref: AI5 Appliance – Install 5			
Job location		Appliance type (cross reference to range tracker)	
Model/serial number		Appliance location	
<b>Preliminary checks</b>			
Visual inspection of area	Pass / Fail	Adequate ventilation	Yes / No
Record test pressure			
<b>Installation record - complete as required</b>			
Record of tests/checks/measurements carried out:			
Safe operation	Pass / Fail	Handover procedure with customer	Yes / No

**Description of work carried out** (candidate write up)

**To include:** Pre installation and installation as per manufacturer's instructions and legislation, marking out, installing and connecting pipework, heat source, flue and electrical supply. Post checks, flue, functional tests and notification.

Learner signature (confirm own work)

Date

Assessor signature

Date

IQA Signature (where sampled)

Date

Required supporting photographic evidence – from onsite activities 2X2	
Evidence Ref – Job 1 A	Evidence Ref – Job 1 B
Description	Description

Evidence Ref – Job 2A	Evidence Ref – Job 2 B
Description	Description

<b>Section name</b>	Service appliances
<b>Section reference</b>	AS
<b>Section aim</b>	This performance section provides evidence of job competence in the servicing of water heating and wet central heating appliances.

Ref: AS1	<b>Service Record 1 Direct Observation</b>		Date	5.5.26
Job location	Bolton College Bay	Manufacturer	Eco Forest	
		Model/Type	7 pro	
Employer details	NA	Location	upstairs mezzanine	
		Flue type (if applicable)	Na ASHP	
<b>Identify service procedure / checks completed</b>				
<b>Comments to be provided as required below</b>				
<p>Joe was instructed which appliance/system he would be servicing. He read through the common servicing guidelines for ASHP's and then printed off the check list for the service procedure (see attached sheet). In the first instance Joe asked me (client) if there have been any issues, to which he was told there was not. He then turned on the system and checked functionality and checked the fault code log on the display. After he was satisfied with this he safely isolated the OU at the rotary isolation switch adjacent to the OU and checked if the circuits were dead with an AVI and proving unit. He then began to strip the casing off the OU after a visual inspection of the OU, including the evaporator coils, condensate pipe and the internal of the unit looking for any visible signs of refrigeration leakage or any other issues. He then proceeded to carry out a wet and dry clean on the OU and cleaned the fan and replaced all of the cover to the OU. He checked and cleaned the line strainer externally and took a sample of the heat transfer fluid and used the refractometer to record if the pipework had water or a water/glycol mix. He did this to correctly ascertain the flow rate using the mass flow rate triangle with SHC of 4.2 water and 3.6 for glycol. He then reinstated the fuel supply and selected the call for heat while he checked the pressures of the system, the expansion vessels and the discharge pipework and valves on the cylinder. Checking that the flow temperatures were adequate and the system met the demands set out on the system design. He checked all safety devices on the unvented cylinder and the flow rates of the hot water outlets.</p>				
Identify any deficiencies or unsafe situations including safety devices	No unsafe situations found on the visual checks externally or internally.			
<b>Identify tests completed and record results as required below</b>				
<p>Flow rate from unit - 20 l/m  Temperature of flow - 38.5  Temperature of return - 31.4  Refrigeration temperature - 49  Delta t - 6  Hot water flow rate - 11 l/m  Hot water temperature - 23  Hot water pre-set temperature - 55  Heating pre-set temperature - 65</p>				
Outline service requirements	See above comments and detailed recordings from the service procedure in the list above titled tests completed and results.			
Candidate signature	<i>Joe Foster</i>		Date	1.5.26
Assessor or expert observer	<i>Ian Hall</i>		Date	1.5.26

IQA (if required)		Date	
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Ref: AS2	<b>Service Record 2 Direct Observation</b>		Date	
Job location		Manufacturer		
		Model/Type		
Employer details		Location		
		Flue type (if applicable)		
<b>Identify service procedure / checks completed</b>				
<b>Comments to be provided as required below</b>				
Identify any deficiencies or unsafe situations including safety devices				
<b>Identify tests completed and record results as required below</b>				
Outline service requirements				
Candidate signature		Date		

Assessor or expert observer		Date	
IQA (if required)		Date	

Ref: AS3	<b>Service Record 3 RA</b>		Date	
Job location		Manufacturer		
		Model/Type		
Employer details		Location		
		Flue type (if applicable)		
<b>Identify service procedure / checks completed</b>				
<b>Comments to be provided as required below</b>				
Identify and deficiencies or unsafe situations including safety devices				
<b>Identify tests completed and record results as required below</b>				
Outline service requirements				

Candidate signature		Date	
Expert Witness signature		Date	
Assessor signature		Date	
IQA (if required)		Date	

Ref: AS <sub>4</sub>	<b>Service Record 4 RA</b>		Date	
Job location		Manufacturer		
		Model/Type		
Employer details		Location		
		Flue type (if applicable)		
<b>Identify service procedure / checks completed</b>				
<b>Comments to be provided as required below</b>				
Identify and deficiencies or unsafe situations including safety devices				
<b>Identify tests completed and record results as required below</b>				

Outline service requirements			
Candidate signature		Date	
Expert Witness signature		Date	
Assessor signature		Date	
IQA (if required)		Date	

Ref: AS5	<b>Service Record 5 RA</b>		Date	
Job location		Manufacturer		
		Model/Type		
Employer details		Location		
		Flue type (if applicable)		
<b>Identify service procedure / checks completed</b>				
<b>Comments to be provided as required below</b>				
Identify and deficiencies or unsafe situations including safety devices				
<b>Identify tests completed and record results as required below</b>				

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Outline service requirements	
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Candidate signature		Date	
Expert Witness signature		Date	
Assessor signature		Date	
IQA (if required)		Date	

<b>Section name</b>	Fault-find on appliances
<b>Section reference</b>	AF
<b>Section aim</b>	This performance section provides evidence of job competence in fault-finding and repair of water heating and wet central heating appliances.

Ref: AF1	<b>Identify and Repair Fault 1 Direct Observation</b>		Date 27.1.26
Job location/location	Daikin bay	Make and type of appliance	Daikin Altherma 3 ASHP
Fault description	Fault code H1-00 External sensor	Specific tools required for testing electrical and fuel supplies (if required)	General handtools AVI Proving unit Multi meter
Record diagnostic checks and any unsafe situations	MMI checked fault code against MIs, Diagnosed faulty sensor. Check resistance of sensor, sensor read OL needed replacing.		
Type of flue (if applicable)	N/A ASHP	Identify control defect	Electrical
Any pre-existing damage	Client notified of works	Safely isolated fuel supply	Does the appliance have mains electrical supply?
Yes / No	Yes / No	Yes / No / NA	Yes / No
Identify safe electrical isolation point and locked off – <i>record isolation point</i>	Method used to prove electrical test equipment	Carry out approved test to ensure equipment/appliance is dead	Retest electrical test equipment
Rotary isolation switch	AVI Proving unit	Yes / No	Pass / Fail



Reinstated fuel supply and checked	Yes / No / NA	Reinstated electrical supply and checked	Yes / No	Operating pressure tests	Yes / No / NA Air purge and alarm log
Effectiveness of flue test	Pass / Fail / NA ASHP	Supply of combustion air	Pass / Fail / NA ASHP	Component operation checks successful	Pass / Fail
Identify procedure followed to correct fault	<p>He checked the sensor using a multi meter and got OL from readings so isolated the unit using safe isolation, once isolated removed the ASHP cover and removed the old sensor by unplugging it from the PCB and threading it through the unit and out. Once the sensor was removed he installed a new sensor. He then put the casing back and turn on the rotary switch, went inside and called for heat and checked to see if the MMI fault code had gone. Code was cleared and ASHP was left in good working order.</p>			Carried out handover Identify notified persons	Yes / No
Learner signature (confirm own work)	<i>Elijah Cooke</i>			Date 27.1.26	
Assessor or Expert Observer	<i>Jan Hall</i>			Date 27.1.26	
IOA Signature (where sampled)				Date	

Ref: AF2	Identify and Repair Fault 2 Direct Observation		Date 1.5.26
Job location/location		Make and type of appliance	
Fault description		Specific tools required for testing electrical and fuel supplies (if required)	
Record diagnostic checks and any unsafe situations			
Type of flue (if applicable)	NA ASHP	Identify control defect	
Any pre-existing damage	Client notified of works	Safely isolated fuel supply	Does the appliance have mains electrical supply?
Yes / No	Yes / No	Yes / No / NA	Yes / No
Identify safe electrical isolation point and locked off – <i>record isolation point</i>	Method used to prove electrical test equipment	Carry out approved test to ensure equipment/appliance is dead	Retest electrical test equipment
Rotary isolation adjacent to OU	Proving unit with AVI	Yes / No	Pass / Fail



Reinstated fuel supply and checked	Yes / No / NA	Reinstated electrical supply and checked	Yes / No	Operating pressure tests	Yes / No / NA-flow rates established
Effectiveness of flue test	Pass / Fail / NA ASHP spaces checked	Supply of combustion air	Pass / Fail / NA	Component operation checks successful	Pass / Fail
Identify procedure followed to correct fault				Carried out handover Identify notified persons	Yes / No
Learner signature (confirm own work)				Date 1.5.26	
Assessor or Expert Observer				Date 1.5.26	
IOA Signature (where sampled)				Date	

Ref: AF3	<b>Identify and Repair Fault 3 RA</b>		Date
Job location/location		Make and type of appliance	
Fault description		Specific tools required for testing electrical and fuel supplies (if required)	
Record diagnostic checks and any unsafe situations			
Type of flue (if applicable)		Identify control defect	
Any pre-existing damage	Client notified of works	Safely isolated fuel supply	Does the appliance have mains electrical supply?
Yes / No	Yes / No	Yes / No / NA	Yes / No
Identify safe electrical isolation point and locked off – <i>record isolation point</i>	Method used to prove electrical test equipment	Carry out approved test to ensure equipment/appliance is dead	Retest electrical test equipment
		Yes / No	Pass / Fail



Reinstated fuel supply and checked	Yes / No / NA	Reinstated electrical supply and checked	Yes / No	Operating pressure tests	Yes / No / NA
Effectiveness of flue test	Pass / Fail / NA	Supply of combustion air	Pass / Fail / NA	Component operation checks successful	Pass / Fail
Identify procedure followed to correct fault				Carried out handover Identify notified persons	Yes / No
Learner signature (confirm own work)				Date	
Assessor or expert observer				Date	
IQA Signature (where sampled)				Date	

Ref: AF <sub>4</sub>	<b>Identify and Repair Fault 4 RA</b>		Date
Job location/location		Make and type of appliance	
Fault description		Specific tools required for testing electrical and fuel supplies (if required)	
Record diagnostic checks and any unsafe situations			
Type of flue (if applicable)		Identify control defect	
Any pre-existing damage	Client notified of works	Safely isolated fuel supply	Does the appliance have mains electrical supply?
Yes / No	Yes / No	Yes / No / NA	Yes / No
Identify safe electrical isolation point and locked off – <i>record isolation point</i>	Method used to prove electrical test equipment	Carry out approved test to ensure equipment/appliance is dead	Retest electrical test equipment
		Yes / No	Pass / Fail



Reinstated fuel supply and checked	Yes / No / NA	Reinstated electrical supply and checked	Yes / No	Operating pressure tests	Yes / No / NA
Effectiveness of flue test	Pass / Fail / NA	Supply of combustion air	Pass / Fail / NA	Component operation checks successful	Pass / Fail
Identify procedure followed to correct fault				Carried out handover Identify notified persons	Yes / No
Learner signature (confirm own work)				Date	
Assessor or expert observer				Date	
IQA Signature (where sampled)				Date	

Faults - Required supporting photographic evidence – from any assessment 1-4	
Evidence Ref – Job 1A	Evidence Ref – Job 1B
Description	Description

**Appliances - Review and Completion**

**Professional discussion between the principal assessor and the candidate.**

Agenda:

Confirmation of evidence

Q&A to confirm knowledge and understanding

Review of activities

Feedback on the assessments

Principal Assessor unit completion sign off

Date

IQA confirmation

Date

## Appendix 1

### Fault finding

Ref: AF5	Fault 5 - RA		Date
Job location/location		Make of appliance	
Fault description		Specific tools required for testing electrical and fuel supplies (if required)	
Record diagnostic checks			
Type of flue (if applicable)		Identify control defect	
Any pre-existing damage	Client notified of works	Safely isolated fuel supply	Does the appliance have mains electrical supply?
Yes / No	Yes / No	Yes / No / NA	Yes / No

Identify safe electrical isolation point and locked off – <i>record isolation point</i>	Method used to prove electrical test equipment	Carry out approved test to ensure equipment/appliance is dead	Retest electrical test equipment		
		Yes / No	Pass / Fail		
Reinstated fuel supply and checked	Yes / No / NA	Reinstated electrical supply and checked	Yes / No	Operating pressure tests	Yes / No / NA
Effectiveness of flue test	Pass / Fail / NA	Supply of combustion air	Pass / Fail / NA	Component operation checks successful	Pass / Fail
Identify procedure followed to correct fault				Carried out handover	Yes / No
				Identify notified persons	
Learner signature (confirm own work)				Date	
Expert witness signature (confirm learners work to industry standards)				Date	
Assessor signature				Date	
IQA Signature (where sampled)				Date	

