

## Employer confirmation guide

### EAL Building Services Engineering (Level 3) – Heating and Ventilating Craftsperson

Form A and Form B to be completed by the learner's employer.

Version	Date	Reason for change
1.0	Aug 2021	
1.1	Aug 2022	Generic minor updates, portfolio replaced with documented evidence

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## Introduction

Employers have an enhanced role in the delivery of the new apprenticeship suite of qualifications in the construction and building service engineering sector.

The employer confirmation provides guidance to employers and training providers on how the site based performance requirements have been met. By providing evidence through the completion of the following documents and completing all methods of assessments within the qualification and the required framework components, will allow the learner to apply and attain the relevant industry card at the appropriate grade.

The purpose of the employer confirmation is to provide centres and trade bodies with the assurance that the learner has covered the range of the relevant standards. The collection of evidence allows the training provider to check that 'Form A Employer Confirmation' and 'Form B Employer Checklist' are both valid. Upon completion there will be an audit trail to support the decision which will then allow the learner to proceed to the Professional Discussion.

## Employer role

- They will work with and support learners throughout their apprenticeship.
- Attend an initial meeting with the training provider to identify the range of tasks required to meet the performance requirements, work-based project and completion of 'Form A Employer Confirmation' and 'Form B Employer Checklist'.
- Provide opportunities for the learner to carry out the activities outlined within the performance requirements.
- Meet with training providers to review and record learner's progress throughout their apprenticeship.
- Support the learner in gathering evidence to confirm proficiency in the activities that they carried out.
- Support the learner in documenting their evidence, eg through a journal or diary.
- Confirm when the learner has met the required standard for the trade, and is ready to progress to their final qualification assessment (the Professional Discussion), confirmed by completing 'Form A Employer Confirmation' and 'Form B Employer Checklist'.

## Training provider role

- The training provider will work with employers to guide and support the learner throughout their journey.
- They will attend an initial meeting with the employer to identify the range of activities required to meet the site based performance requirements and work-based project.
- Ensure the quality of 'Form A Employer Confirmation' and 'Form B Employer Checklist' which will allow the learner to progress onto their final qualification assessment, the Professional Discussion.
- Ensure evidence gathered by all of their learners is appropriate and complete by carrying out and recording internal quality assurance sampling (confirmed by signing/dating section 3 of 'Form A Employer Confirmation').
- Support the employer and learner in documenting the journal or diary.

- Will provide training and support to training providers and employers through webinars and information on the Skills for Wales website.
- Ensure training providers have suitable and robust quality and assessment processes in place through our quality assurance department.
- Certificate learners upon successful completion of all assessment components.

### Requirements of evidence

Compiling the learner's evidence should only start once the employer is satisfied the learner is consistently working at or above the criteria set out in the performance statements. That is to say they are deemed to have achieved occupational proficiency. In making this decision, the employer may take advice from the learner's training provider. The overall decision must ultimately be made by the employer(s).

- Learners must document their evidence during the on-programme period of the apprenticeship.
- It must contain sufficient evidence, gathered within the workplace, to demonstrate the site based performance statements.
- It will typically contain 15 pieces of evidence, and could take the format of a journal or diary.
- Evidence must be mapped against the site based performance statements.
- Evidence sources might include (this is not a definitive list):
  - workplace documentation, for example job cards/job sheets, commissioning documentation, maintenance records
  - annotated specifications, for example drawings, work instructions
  - annotated photographs
  - video clips (maximum duration 10 mins) supported by clear timestamps detailing when key pieces of evidence occur.
- Evidence should not include any methods of self-reflection or self-assessment.
- Any employer contributions should focus on direct observation (for example witness statements) of proficiency rather than opinions.
- The evidence must be authenticated by an employer and have been recently gathered. There should be enough evidence documented to show the site based performance statements have been met.
- The evidence provided must be valid and attributable to the learner; the documented evidence must be complete - the employer's signature on the confirmation document confirms this is the case.

## Form A Employer confirmation

This form is split into three sections and has been contextualised for each trade within the construction and building services engineering sectors. It is the responsibility of the employer to complete this form in collaboration with the training provider and learner.

### Section 1

- Completed at the start on the learner journey following an initial meeting with the training provider.
- Identifies the range of activities required to meet the site based performance requirements and work-based project.

### Section 2

- Identifies the unit headings of the site based performance requirements that the learner will have to complete.
- The employer will tick and initial the unit an learner achieves while under their guidance.
- Provision has been made to allow for more than one employer to complete this section. This is to allow provision when an learner is employed through the shared apprenticeship scheme and more than one employer becomes involved.
- When more than one employer is involved with the same learner, this section will be completed by the employer who confirms the final activity in Form B has been carried out.

### Section 3

- This section is to be completed where a change of employer has occurred.
- This section is completed by each of the employers involved in supporting and guiding the learner, as well as the training provider, internal quality assurer and learner.
- Upon completion the learner can be entered for their final qualification assessment (the Professional Discussion).

## Form B Employer checklist

This form has been contextualised for each trade within the construction and building service engineering sectors. The log highlights the units that a learner will have to complete for their trade. It is the responsibility of the employer(s) to complete Form B in collaboration with the training provider and learner.

- Each unit consists of a title, activity and provision for the employer(s) to confirm the learner is proficient by placing a tick within the corresponding employer box.
- Each performance unit has provision for up to four employers to provide confirmation that the learner is proficient within each criteria.
- When an learner has more than one employer, the employer who signs as employer one will continue as employer one when completing documentation. Additional employers will complete the corresponding sections for additional employers.
- Employers are making judgements that in their view the learner can complete the activity to a satisfactory industry standard and in a timely and safe manner.
- Different employers may confirm the learner is proficient on the same activity which is acceptable.
- The learner will gather and retain evidence to demonstrate how they have achieved the activity criteria inline with the site based performance requirements.

## Employer and Provider 8 Step Delivery Guide

This 8 step guide gives employers and providers an overview of the learner support that will be required for the delivery of the Level 3 apprenticeship suite of Construction and Building Services Engineering qualifications in Wales.



### Step 1

Learner secures employment and starts their learning journey.



### Step 2

Provider meets with employer to identify the range of tasks required to meet the performance requirements and work based project.



### Step 3

Develop and agree quality assurance checks for employer confirmation process.



### Step 4

Periodic reviews of learner's progress and quality checks of evidence from industry.



### Step 5

Observation of practical industry project.



### Step 6

Final review meeting with employer and learner. Employer completes confirmation documentation, learner completes their documented evidence.



### Step 7

Learner progresses to the final qualification assessment. (Professional Discussion).



### Step 8

Upon successful completion of all components EAL will certificate the qualification.

## Form A Employer confirmation

Employer confirmation is confirming the learner is occupationally proficient and has met all the performance requirements of the units and can now continue to their final qualification assessment, the Professional Discussion.

- The confirmation document is the responsibility of the employer with the support of the training provider.
- Quality assurance of the process will be the responsibility of the internal quality assurer.
- The awarding body will check the process as part of external quality assurance.

### Section 1: Learner details

Learner name

Learner registration number

Qualification title and number

Centre name

### Section 2: Performance requirements

Performance requirements met in units for	✓	Employer initial
Apply Health and Safety and Environmental Legislation in the Building Services Engineering Sector		
Establish and Maintain Relationships in the Building Services Engineering Sector		
Coordinate a Work Site in the Building Services Engineering Sector		
Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems		

# Form A Continued

Upon completion the learner can now be entered for their final qualification assessment, the Professional Discussion.

## Section 3: Employers confirmation

Role	Company name	Employee name	Position in company	Signature <small>(which may be typed)</small>	Initial	Date
Employer 1						
Employer 2						
Employer 3						
Employer 4						
Internal Quality Assurer						



# Form B Employer checklist

## Performance requirements checklist: Heating and Ventilation Craftsperson

Learner Name

Apply Health and Safety and Environmental Legislation in the Building Services Engineering Sector (Unit 312)	Employer			
	E1	E2	E3	E4
<b>The learner must be able to:</b>				
Identify the appropriate industry standards and regulations				
<b>Apply relevant organisational procedures:</b> learners must be witnessed on <b>seven</b> of the following:				
<ul style="list-style-type: none"><li>information management</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>method statement</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>project management</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>risk assessment</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>implementing and monitoring health and safety requirements and issues</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>implementing and monitoring issues relating to the natural environment</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>customer services</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>accident reporting</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>emergencies</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>communication with relevant people</li></ul>				
<hr/>				
<b>Identify hazards and risks:</b>				
Hazards and risks (internal and/or external): learners must be witnessed on at least <b>one</b> of the following:				
<ul style="list-style-type: none"><li>domestic</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>non-domestic (commercial, industrial, agricultural, horticultural, leisure and entertainment, residential medical and care facilities, public highways and parks, public services establishments, pre-1919 traditional/historic buildings)</li></ul>				
<hr/>				
Site: learners must be witnessed on at least <b>one</b> of the following:				
<ul style="list-style-type: none"><li>new build construction – building or structure</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>existing building or structure</li></ul>				

## Form B Continued

### Apply Health and Safety and Environmental Legislation in the Building Services Engineering Sector (Unit 312)

#### Employer

E1

E2

E3

E4

#### The learner must be able to:

Complete documentation in accordance with the requirements of the organisational procedures

**Review the organisational procedures to ensure that they will not cause potential hazards and risks:** learners must be witnessed on **six** of the following:

- disposal of substances and materials
- installation and/or maintenance methods and techniques
- lifting and handling (manual and mechanically assisted)
- presence of vehicle thoroughfares
- storage of liquids, substances and materials
- use of appliances, tools and equipment
- use of access equipment
- use of personal protective equipment (PPE)
- working in a potentially hazardous atmosphere (e.g. presence of asbestos, dust, fumes or vapour)
- working at height
- working in confined spaces

#### The learner must be able to:

Implement organisational procedures, suppliers' and manufacturers' instructions appropriate to the safe use, maintenance, handling, transport and storage of:

- tools, plant and access equipment
- equipment and components
- materials and substances

## Form B Continued

Apply Health and Safety and Environmental Legislation in the Building Services Engineering Sector (Unit 312)	Employer			
	E1	E2	E3	E4
<b>The learner must be able to:</b>				
<b>Report to the relevant people in accordance with organisational procedures potential hazards and risks, potentially harmful materials and substances:</b>				
Relevant people: learners must be witnessed on at least <b>one</b> of the following:				
<ul style="list-style-type: none"><li>customers/clients</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>client representatives</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>supervisors</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>site/contract manager</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>other contractors/trades</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>members of the public</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>work colleagues</li></ul>				
<hr/>				
<b>The learner must be able to:</b>				
Confirm that the conduct of people when undertaking the installation and/or maintenance activity does not cause potential hazards and risks				
<b>Comply with organisational procedures in the event of: injuries to self and/or others, emergencies, evacuation procedures:</b>				
Injuries/emergencies/evacuation: learners must be witnessed on <b>two</b> of the following: (due to the nature of the range, the two activities that are NOT naturally occurring can be covered via oral questioning)				
<ul style="list-style-type: none"><li>fire</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>flood</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>explosion</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>toxic atmosphere</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>electric shock</li></ul>				
<hr/>				
<ul style="list-style-type: none"><li>injury to person(s)</li></ul>				
<hr/>				
<b>The learner must be able to:</b>				
Implement organisational procedures for the safe transport and/or disposal of waste material, substances and liquids in accordance with suppliers' and manufacturers' instructions				

## Form B Continued

Establish and Maintain Relationships in the Building Services Engineering Sector (Unit 313)	Employer			
	E1	E2	E3	E4
<b>The learner must be able to:</b>				
Identify the clients and customers that need to be supplied with technical and functional information				
Obtain the current and relevant technical and functional information that needs to be provided to the clients and customers				
Provide accurate guidance and advice to the clients and customers on technical and functional matters associated with the building services engineering system that has been installed and/or maintained in terms of: <ul style="list-style-type: none"><li>• health and safety issues</li><li>• safe and effective operation</li></ul>				
<b>Provide information in accordance with organisational procedures:</b>				
Organisation procedures: learners must be witnessed on <b>seven</b> of the following:				
• information management				
• method statement				
• project management				
• risk assessment				
• implementing and monitoring health and safety requirements and issues				
• implementing and monitoring issues relating to the natural environment				
• customer services				
• accident reporting				
• emergencies				
• communication with relevant people				
<b>Demonstrate to the clients and customers, as appropriate, the operation of the building services engineering system that has been installed and/or maintained:</b>				
Working environment of the system (internal and/or external): learners must be witnessed on at least <b>one</b> of the following:				
• domestic				
• non-domestic (commercial, industrial, agricultural, horticultural, leisure and entertainment, residential medical and care facilities, public highways and parks, public services establishments, pre-1919 traditional/historic buildings)				

## Form B Continued

Establish and Maintain Relationships in the Building Services Engineering Sector (Unit 313)	Employer			
	E1	E2	E3	E4
<b>The learner must be able to:</b>				
Confirm in relation to the installation and/or maintenance activity: <ul style="list-style-type: none"><li>the client and customer expectations and requirements</li><li>the building services engineering system is in a satisfactory condition</li><li>the hand over process</li></ul>				
Establish and maintain productive working relationships with clients and customers, including dealing with disagreements in an amicable and constructive way, so that good relationships are maintained				
Respond effectively to requests for technical and functional information from clients and customers				
<b>Report, record and recommend, in accordance with organisational procedures and as appropriate, any variation to the installation and/or maintenance activity to the clients, customers and other relevant people:</b>				
Relevant people: learners must be witnessed on at least <b>one</b> of the following:				
<ul style="list-style-type: none"><li>customers/clients</li></ul>				
<ul style="list-style-type: none"><li>client representatives</li></ul>				
<ul style="list-style-type: none"><li>supervisors</li></ul>				
<ul style="list-style-type: none"><li>site/contract manager</li></ul>				
<ul style="list-style-type: none"><li>other contractors/trades</li></ul>				
<ul style="list-style-type: none"><li>members of the public</li></ul>				
<ul style="list-style-type: none"><li>work colleagues</li></ul>				
<b>The learner must be able to:</b>				
Comply with organisational standards for appearance and behaviour				

## Form B Continued

Coordinate a Work Site in the Building Services Engineering Sector (Unit 314)	Employer			
	E1	E2	E3	E4
<b>Produce a risk assessment and method statement for the work to be carried out on the identified building services engineering system:</b> learners must be witnessed on at least <b>one</b> of the following:				
<ul style="list-style-type: none"> <li>domestic</li> <li>non-domestic (commercial, industrial, agricultural, horticultural, leisure and entertainment, residential medical and care facilities, public highways and parks, public services establishments, pre-1919 traditional/historic buildings)</li> </ul>				
<b>The learner must be able to:</b>				
Allocate duties and responsibilities to operatives, when appropriate, to make best use of their competence				
Instruct the operatives, where relevant, about their duties and responsibilities clearly and concisely				
Confirm that any instructions given are understood				
Coordinate effectively, when relevant, the work of other contractors				
Monitor, as appropriate, that the work of operatives is safe, fit-for- purpose, cost effective and in accordance with: <ul style="list-style-type: none"> <li>industry recognised working practices</li> <li>the specification</li> <li>the current versions of appropriate industry standards and regulations</li> </ul>				
Ensure that safe and appropriate action is taken promptly where a non-compliance is identified during the programme of work				
<b>Ensure that all documentation associated with the installation and/or maintenance work is in accordance with organisational procedures, the current versions of appropriate industry standards and regulations:</b>				
Organisation procedures: learners must be witnessed on at least <b>three</b> of the following:				
<ul style="list-style-type: none"> <li>information management</li> <li>method statement</li> <li>maintenance (planned and reactive)</li> <li>project management</li> <li>risk assessment</li> <li>implementing and monitoring health and safety requirements and issues</li> <li>implementing and monitoring issues relating to the natural environment</li> <li>customer services</li> </ul>				

(range continued on next page)

## Form B Continued

Coordinate a Work Site in the Building Services Engineering Sector (Unit 314)	Employer			
	E1	E2	E3	E4

- accident reporting
- emergencies
- communication with relevant people

**Liaise with the relevant people to resolve issues which are outside the scope of your job role:** (relevant people: learners must be witnessed on **two** of the following):

- customers/clients
- client representatives
- supervisors
- site/contract manager
- other contractors/trades
- members of the public
- work colleagues

**The learner must be able to:**

Verify that the equipment, accessories, and components are:

- compatible to the working environment
- in accordance with the specification
- of the required and correct type
- delivered on time and undamaged
- suitable and safely stored

Confirm that the installation and/or maintenance work completed is in accordance with:

- the specification
- the current versions of appropriate industry standards and regulations

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
Install and test industrial and commercial heating and ventilating pipework systems				
<p>The learner must be able to:</p> <p>Verify that the job information and documentation are current and relevant and that the plant, instruments, access equipment and tools are fit for purpose</p> <p>Plant: <b>cover all:</b></p> <ul style="list-style-type: none"> <li>generators</li> <li>transformers for low voltage hand tools</li> <li>lifting equipment</li> <li>access equipment</li> </ul> <p>Job information and documentation: <b>cover all:</b></p> <ul style="list-style-type: none"> <li>materials requisition</li> <li>method statements</li> <li>risk assessments</li> </ul> <p>Confirm that the site services are compatible with the system's design:</p> <p>Site services: <b>cover three:</b></p> <ul style="list-style-type: none"> <li>electricity</li> <li>water</li> <li>gas</li> <li>oil</li> </ul> <p>The learner must be able to:</p> <p>Produce a risk assessment and method statement in accordance with organisational procedures for the work to be carried out, including the identification and use of personal protective equipment</p>				



Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
<p>The learner must be able to:</p> <p>Confirm before work starts that the work location and work area can be accessed safely and has been checked for the risk to other personnel on the site and take appropriate action if a risk is present:</p> <p>Work location and work area: <b>cover either:</b></p> <ul style="list-style-type: none"> <li>new build construction – building or structure</li> </ul>				
<ul style="list-style-type: none"> <li>an existing building or structure</li> </ul>				
<p>Work location and work area (internal and/or external): <b>cover one:</b></p> <ul style="list-style-type: none"> <li>commercial</li> </ul>				
<ul style="list-style-type: none"> <li>industrial</li> </ul>				
<ul style="list-style-type: none"> <li>agricultural</li> </ul>				
<ul style="list-style-type: none"> <li>horticultural</li> </ul>				
<ul style="list-style-type: none"> <li>leisure and entertainment</li> </ul>				
<ul style="list-style-type: none"> <li>residential medical and care facilities</li> </ul>				
<ul style="list-style-type: none"> <li>public services establishments</li> </ul>				
<ul style="list-style-type: none"> <li>pre-1919 traditional/historic buildings</li> </ul>				

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
<p>The learner must be able to:</p> <p>Select the equipment, components, and accessories to be installed ensuring they are of the right type and size, fit for purpose, in accordance with the system's design and suitable for the working environment in which they are to be installed:</p> <p>Equipment, components, and accessories: <b>cover five:</b></p>				
• fuel-fired boilers (gas; oil; solid fuel)				
• hot water storage vessels				
• water heaters				
• pumps				
• heat emitters				
• heat exchangers				
• burners				
• flues				
• cisterns				
• calorifiers				
• valves (including motorised)				
• pressure vessels				
• traps and strainers				
• measuring instruments				
• environmental technology equipment				
• prefabricated modules				
• supports and fixings				

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
<p>The learner must be able to:</p> <p>Determine at the outset, that the plans for positioning and fixing equipment, components and accessories are in accordance with the system's design, the working environment and manufacturer instructions:</p> <p>Equipment, components, and accessories: <b>cover five:</b></p>				
• fuel-fired boilers (gas; oil; solid fuel)				
• hot water storage vessels				
• water heaters				
• pumps				
• heat emitters				
• heat exchangers				
• burners				
• flues				
• cisterns				
• calorifiers				
• valves (including motorised)				
• pressure vessels				
• traps and strainers				
• measuring instruments				
• environmental technology equipment				
• prefabricated modules				
• supports and fixings				

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
<p>The learner must be able to:</p> <p>Comply with industry practices and organisational procedures to ensure the coordination of site services and the activities of other trades</p> <p>Organisational procedures: <b>cover four:</b></p> <ul style="list-style-type: none"> <li>information management</li> <li>project management</li> <li>risk assessment management</li> <li>implementing and monitoring health &amp; safety requirements and issues</li> <li>implementing and monitoring issues relating to the natural environment</li> <li>customer service</li> <li>accident reporting</li> <li>emergencies</li> <li>communication with relevant people</li> </ul>				
<p>Measure and mark out locations for fitting and fixing the selected equipment, components, and accessories in accordance with the system's design and manufacturer instructions:</p> <p>(Systems) industrial and commercial heating, and ventilating pipework: <b>cover three:</b></p> <ul style="list-style-type: none"> <li>hot water – open vented/unvented/indirect/secondary circulation/instantaneous</li> <li>hot water heating (low, medium, and high temperature)</li> <li>cold water – storage/non storage</li> <li>chilled water systems – air conditioning, refrigeration, heat rejection</li> <li>steam</li> </ul>				

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
Inspect and pre-commission industrial and commercial heating and ventilating systems				

The learner must be able to:

Prepare, fit, fix, and connect the selected pipework and equipment, components and accessories using suitable jointing methods in accordance with the working environment and manufacturer instructions

Jointing methods: **cover three:**

- welding
- crimped/press fit
- threaded
- grooved
- flanges
- compression
- adhesive

Welding (**only when required**):

- manual arc welding
- oxy-acetylene welding
- tungsten inert welding

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4

The learner must be able to:

Confirm with the relevant people those necessary variations to the planned programme of work and the correct actions to be taken to ensure that any variations to the planned programme of work will minimise the potential for hazard and risk

Relevant people: **cover one:**

- customers/clients
- client representatives
- supervisors
- site/contract manager
- other contractors/trades
- members of the public
- work colleagues

The learner must be able to:

Implement organisational procedures for the safe transport and/or disposal of waste material, substances, and liquids in accordance with suppliers' and manufacturers' instructions

## Form B Continued

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
Inspect and pre-commission industrial and commercial heating and ventilating systems				
<p>The learner must be able to:</p> <p>Determine at the outset, that the plans for inspecting and pre- commissioning the system and its equipment, components and accessories are in accordance with the system's design, the working environment, manufacturer instructions and organisational procedures:</p> <p>Equipment, components, and accessories: <b>cover seven:</b></p> <ul style="list-style-type: none"><li>• fuel-fired boilers (gas; oil; solid fuel)</li><li>• water storage vessels</li><li>• water heaters</li><li>• pumps</li><li>• heat emitters and exchangers</li><li>• burners</li><li>• flues</li><li>• cisterns</li><li>• valves (including motorised)</li><li>• pressure vessels</li><li>• traps and strainers</li><li>• measuring instruments</li><li>• environmental technology equipment</li><li>• prefabricated modules</li><li>• supports and fixings</li></ul>				

(systems covered on next page)

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
Industrial and commercial heating and ventilating pipework: <b>cover three:</b>				
• hot water – open vented/unvented/indirect/secondary circulation/instantaneous				
• hot water heating (low, medium and high temperature)				
• cold water – storage/non storage				
• chilled water systems – air conditioning, refrigeration, heat rejection				
• steam				
<b>The learner must be able to:</b>				
Perform inspection and pre-commissioning activities and procedures in accordance with:				
• The system's design				
• The working environment				
• Manufacturer instructions				
• Organisational procedures				



### Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)

Employer

E1

E2

E3

E4

Commission industrial and commercial heating and ventilating systems

The learner must be able to:

Commission equipment, components and accessories, adjusting the controls to ensure the configuration, safety and effective performance of the system in accordance with the system's design, the working environment, manufacturer instructions and organisational procedures:

Equipment, components, and accessories: **cover six:**

- terminal units
- measuring instruments
- fuel-fired boilers (gas; oil; solid fuel)
- water storage vessels
- water heaters
- pumps
- heat emitters and exchangers
- burners
- flues
- cisterns
- calorifiers
- valves (including motorised)
- pressure vessels
- traps and strainers
- measuring instruments
- environmental technology equipment
- prefabricated modules

(systems covered on next page)

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
(Systems) industrial and commercial heating and ventilating pipework: <b>cover three:</b>				
• hot water – open vented/unvented/indirect/secondary circulation/instantaneous				
• hot water heating (low, medium and high temperature)				
• cold water – storage/non storage				
• chilled water systems – air conditioning, refrigeration, heat rejection				
• steam				
Apply the methods, techniques and procedures used to carry out, as required, appropriate testing to confirm the integrity of the system and its associated equipment, accessories and components				
Appropriate testing: <b>cover two:</b>				
• pressure				
• system hygiene and charging				
• performance				
• hydraulic testing				
• pneumatic testing				
<b>The learner must be able to:</b>				
Obtain customer/client acceptance of the commissioned system and its associated equipment, components and accessories in accordance with organisational procedures				

### Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)

#### Employer

E1

E2

E3

E4

#### Decommission industrial and commercial heating and ventilating Systems

The learner must be able to:

Decommission the system and its associated equipment, components, and accessories in accordance with the system's design, organisational procedures, the working environment and manufacturer instructions

Equipment, components, and accessories: **cover one:**

- terminal units
- measuring instruments
- fuel-fired boilers (gas; oil; solid fuel)
- water storage vessels
- water heaters
- pumps
- heat emitters and exchangers
- burners
- flues
- cisterns
- calorifiers
- valves
- pressure vessels
- traps and strainers
- measuring instruments
- environmental technology equipment
- prefabricated modules

(systems covered on next page)

Install, Test, Commission and Decommission Complex Building Service Engineering Pipework Systems (Unit 329HV)	Employer			
	E1	E2	E3	E4
(Systems) industrial and commercial heating and ventilating pipework: <b>cover one:</b>				
• hot water – open vented/unvented/indirect/secondary circulation/instantaneous				
• hot water heating (low, medium and high temperature)				
• cold water – storage/non storage				
• chilled water systems – air conditioning, refrigeration, heat rejection				
• steam				
<b>The learner must be able to:</b>				
Ensure that the system cannot be accidentally reactivated or become dangerous				
<b>Complete relevant documentation in accordance with organisational procedures</b>				
Documentation: <b>cover one:</b>				
• pre-commissioning documentation				
• test certificates				
• job reports				
• commissioning documentation				

Form B Continued

Employer	Company name	Employee name	Employee initial	Date
Employer 1				
Employer 2				
Employer 3				
Employer 4				

## Contact us

### City & Guilds

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### About City & Guilds | EAL

City & Guilds and EAL are two awarding bodies who have come together to collaborate on the development of a suite of construction and building services engineering qualifications for Wales.

We bring over 140 years' experience of developing qualifications and assessments in the construction and built environment sector. City & Guilds and EAL have always shared a great relationship, so this really is a proven partnership that is truly focused on supporting the sector to meet the opportunity that the future holds.

We strongly believe in empowering people with opportunities for the future, and our aims of this new suite of qualifications are to help people get into a job, get on in the job and go further.

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