T-LEVELS | IfATE Institute for Apprenticeships and Technical Education

T Level Technical Qualification in Building Services Engineering for Construction

8710-355 Heating Engineering

Grade standard exemplification material

Distinction - Summer 2024

Version 1-0

City & Guilds | eal

Version and date	Change detail	Section	Question
v1-0 October 2024			

Contents

Introduction

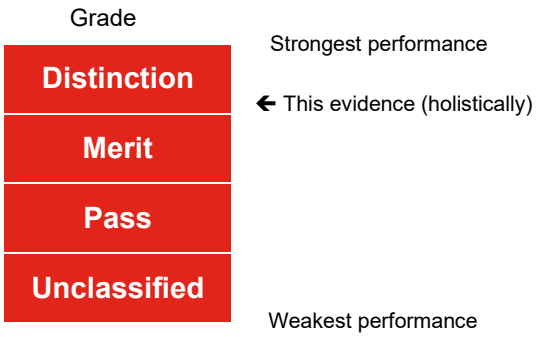
Summer 2024 Results

This document is aimed at providers and learners to help understand the standard that was required in the summer 2024 assessment series to achieve a distinction grade for the 8710-355 Heating Engineering Occupational Specialism (OS).

The grade standard exemplification evidence (Grade SEM) provided for the distinction grade displays the holistic standard required across the tasks to achieve the distinction grade boundary in the summer 2024 series.

The aim of these materials is to provide examples of knowledge, skills and understanding that attested to **2 marks above** distinction competence in summer 2024. It is important to note that in live assessments a candidate's performance is very likely to exhibit a spikey profile and standard of performance will vary across tasks.

The Occupational Specialism is graded Distinction, Merit, Pass or Unclassified.



The distinction grade boundary is based on a synoptic mark across all tasks. The materials in this Grade SEM are separated into two sections as described below. Materials are presented against a number of tasks from the assignment.

Task

This section details the tasks that the candidate has been asked to carry out. What needs to be submitted for marking and any additional evidence required including any photograph/video evidence. Also referenced in this section are the assessment themes the candidates were marked against when completing the tasks within it. In addition, candidate evidence that has been included or not been included in this Grade SEM has been identified within this section.

In this Grade SEM there is candidate evidence from:

Task 1
Task 2
Task 3

Candidate evidence

This section includes exemplars of candidate work, photographs of the work in production (or completed) and practical observation records of the assessment completed by centre assessors. This was evidence that was captured as part of the assessment and then internally marked by the centre assessor.

The Occupational Specialism brief and tasks can be downloaded from here: 8710-355_heating_engineering_os_summer24_v1-0

Important things to note:

- We discussed the approach to standard setting/maintaining with Ofqual and the other awarding organisations before awarding this year. We have agreed to take account of the newness of qualifications in how we award this year to recognise that students and teachers are less familiar with the assessments (grading-arrangements-for-vtqsand-technical-qualifications-within-t-levels-in-the-academic-year-2023-to-2024), whilst also recognising the standards required for these qualifications.

- The evidence presented, as a whole, was 2 marks above the distinction grade. However, performance across the tasks may vary (i.e. some tasks completed to a higher/lower standard than distinction grade).

Grade descriptors

To achieve a distinction, a candidate will be able to:

Demonstrate an exemplary performance that fully meets the requirement of the brief and is able to enter the industry to begin to work in the occupational area.

Demonstrate exemplary technical skills in cutting, bending, fixing pipework and installing components that is in line with industry standards. They will also demonstrate relevant and comprehensive knowledge and understanding of heating principles and processes through the tasks completed.

Work safely and make informed and appropriate use of tools, materials and equipment within the heating environments that they are working in.

Competently and independently interpret information and apply the technical skills to practical tasks and procedures to an exemplary standard as recognised by industry, producing an excellent quality of work that meets acceptable tolerances, regulations and standards.

Confidently attempt some complex tasks and the level of performance meets an exemplary level.

Identify causes and diagnose heating faults and have a thorough understanding and the skills to be able to repair and rectify them.

Consistently use accurate industry terminology in both written and verbal contexts.

Task 1 – Planning the installation

Assessment number (eg 1234-033)	8710-355
Assessment title	Heating Engineering Occupational Specialism

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234

Provider name	<provider name>
City & Guilds provider No.	999999a

Task(s)	1
Evidence title / description	• A materials list • A method statement • A risk assessment • An installation diagram
Date submitted by candidate	DD/MM/YY

Task

Assessment themes:

- Health and safety
- Design and planning
    - Documents
    - Drawings and diagrams
- Systems and components
    - Installation
    - Decommissioning

The purpose of this task is for you to demonstrate you can correctly plan the installation, produce a detailed materials list, complete a detailed method statement, assess the risks involved in the installation activity and produce an accurate installation diagram showing the pipework layout, pipe clips and control components.

You will be provided with the assignment brief and given time to plan the installation of the central heating pipework and associated components in the apartment.

a) Plan the installation of the boiler pipework, S Plan Plus heating system and system controls, magnetic filter, radiator, and underfloor heating circuit in the apartment, following the client brief.

You should produce the following:

- Materials list
- Method statement to include planning your sequence of work and associated risks (to include justifications)
- Risk assessment
- Installation diagram with pipework layout, pipe clips and associated components

Templates for the materials list, method statement, risk assessment and drawing grid are provided and must be used.

The installation diagram should be applicable to the location you are being assessed in and completed to a commercially acceptable standard. The diagram should include all fixed services and the proposed installation layout.

You should use the installation diagram to carry out the installation. The diagram will also be used by your tutor/assessor for checking the dimensional tolerances of the installed system and pipework.

b) Measure and mark out proposed working area.

You will be provided with a specific working area that has been set up according to **Figure 1**.

You must measure and mark out your work area as detailed in your diagram, and this activity must be completed prior to carrying out the installation.

If you provide plans that are not fit for purpose, it is expected that your tutor/assessor will intervene and provide necessary feedback and corrections to the plans prior to you carrying out the installation. However, this will be commented on in the marking documentation and reflected in marks awarded.

Additional evidence of your performance that must be captured for marking:

Tutor/assessor's observations of:

- Accuracy of measurements and marking out (of space allocation/work area checked against installation drawing).
- Marking out in comparison with the proposed plan and completed drawing including the accuracy of the recording of key dimensions.

Photographs taken by your tutor/assessor at various stages of the task.

Candidate evidence

Completed Materials list

Equipment/Materials	Quantity
Impact driver	1
Magnetic bit holder	1
Impact driver bits	1
Combi drill	1
Pipe bender 15 & 22mm	1
Tape measure	1
Ruler	1
Carpenters pencil	2
Torpedo level	1
Spirit level	1
Stanley knife	1
Side cutters	1
Long nose pliers	1
Cloth	2
Screwdriver set	1
Brazing torch	1
Propane disposable gas cylinder	1
Soldering mat	1
Dust sheet	1
Flux	1

Paint	1
Filler	1
Lead-free solder	1
Paintbrush	1
Sandpaper	1
Lockout kit	1
Thermometer	1
Voltage detector pen	1
Plumbers abrasive 10 pack	1
Slip joint pliers	1
Weir gauge	1
15mm pipe cutter	1
22mm pipe cutter	1
Drain off valve 15mm (C)	3
Motorised valve 2 port	3
Copper pipe 15mm	3m
Copper pipe 22mm	3m
Push-fit polybutylene pipe 15mm	10m
22mm pipe clips white plastic	12
15mm pipe clips white plastic	12
Switched fuse spur 3amp	1
Back box 25mm 1 gang	1
Digital programmer 2 channel Drayton	1

Room thermostat Honeywell	1
Wiring centre	1
1mm² twin & earth cable	10m
1mm² 3 core & earth cable	10m
Grey single cable clips 1mm	1
Countersunk self-tapping multipurpose screws 200 pack	1 box
End feed equal elbows 22mm	6
End feed equal tee 22mm	6
End feed reducing couplers 22mm x 15mm	4
End feed equal couplers 22mm	2
Lock shield radiator valve	1
Thermostatic radiator valve	1
Single panel convector	1
UFH 2 Loop manifold	1
22mm pipe insulation	3m

Completed method statement

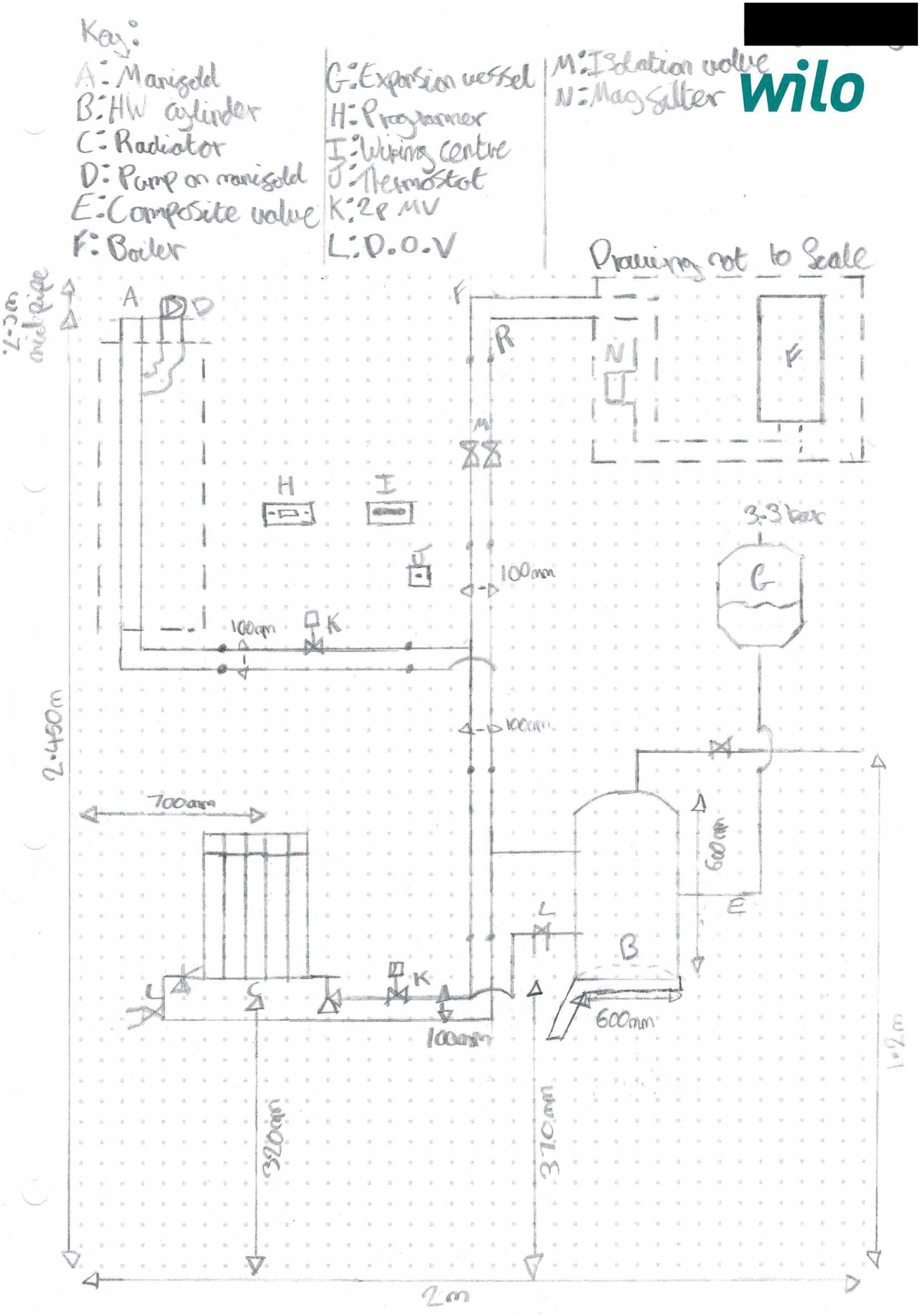
1. Drawing
2. Equipment/materials list
3. Risk assessment
4. Full safe isolation procedure
5. Marking out – plan all pipe runs and positions of components
6. Start install
7. Clipping out
8. Install/Dress radiator
9. Install under floor heating pipework
10. Install magnetic filter at boiler location
11. Piped out flow and return to all 3 zones , UFH, CH, & Cylinder
12. Complete wiring to electrical component – MVs, fuse spur, digital programmer & room thermostat to wiring centre
13. Fill system
14. Check for leaks (fault find)
15. Pressure test pipework to 2 bar
16. Hot flush with cleanser:
    - Drain down fill with inhibitor
17. Commission system to manufacturers instructions
    - The Water Supply (Water Fittings) Regulations 1999
        - 2 bar x 1.5 = 3 bar
    - The Building Regulations Approved Document G1 and G2
    - The manufacturer's instructions of any equipment and appliances
    - Set flow temp at 75 C
    - Set return temp to boiler at 65 C
    - Check all functional components (motorised valves etc) are working as they should
18. Benchmark
    - The boiler and any hot water cylinder installed are checked for compliance with manufacturer's instructions including:
        - Hot water flow rates
        - Flow and return temperatures
        - Hot water temperature
        - Operation and types of control
        - Gas rates
    - The certificate should be signed by a commissioning engineer
19. Handover
    - The customer will require all documentation regarding the installation:
        - All manufactures installation and servicing instructions for boilers, electrical controls, taps, sanitary ware and any other equipment fitted to the installation
        - The benchmarking certificate
        - The Building Regulations Compliance certificate
20. Decommissioning
    - Salvage all goods and recycle/make good
    - Fill and paint.

Completed risk assessment

SEVERITY (S): Degree of harm which may be caused (including numbers affected) 1 Minor Injury 2 Major Injury 3 Fatality LIKELIHOOD (L): Probability that event will occur 1 Remote 2 Possible 3 Likely					RISK RATING (RR): Severity x Likelihood 1-2 Low 3-5 Medium 6-9 High			
Item No:	**Activity**	**Hazard**	**Persons at Risk**	**Existing Controls (Mitigation)**	**S 1-3**	**L 1-3**	**RR**	**Are the Risks Controlled?**
1	Use of hand/power tools	Blows and cuts	Myself	Toolbox talks	2	1	2	Yes
2	Working at heights	Falling	Myself	Assess risk of falling before going up and use of approved equipment	4	1	4	Yes
3	Spillage of water	Slips, trips and falls	Myself and anyone around me	Using wet & dry vac	1	1	1	Yes
4	Chemical usage (flux)	Irritation	Myself and occupants	Gloves, barrier cream	3	1	3	Yes

5	Transport of materials from storage	Hitting someone with copper pipe	Anyone within the workshop	Load is assessed, route is planned, correct lighting and manual handling technique	1	2	2	Yes
6	Soldering	Burns and potential fire of building	Anyone within the college	Use of soldering mats when undertaking work, fire alarms withing the workshop to alert people of danger	3	1	3	Yes
7	Wiring components	Electrocution	Myself	Voltage tested before work begins, emergency stop button engaged and full safe isolation procedure	3	1	3	Yes
8	Decommissioning (making good and sanding)	Breathing dust into lungs	Myself	Dust mask worn appropriately	3	1	3	Yes

Completed drawing grid



Completed PO Form

Practical Observation (PO) Form (Task 1)

8710-35/36 T Level Technical Qualification in Building Services Engineering for Construction

8710-355 Heating Engineering (Summer 2024)

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234
Date	DD/MM/YY

Provider name	<provider name>
City & Guilds Provider No.	999999a

Task 1 assessment themes:

- Health and safety
- Design and planning
  - Documents
  - Drawings and diagrams
- Systems and components
  - Installation
  - Decommissioning

Record observation notes below to inform internal marking and external moderation. Notes must be detailed, accurate and differentiating which use terminology from the mark grid along with specific examples observed. Notes must identify areas of strength and weakness, distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.

Assessment Themes	Assessor observation notes
Health and safety • Risk assessment • Risk mitigation • Harm and probability factors • Adherence to health and safety	[candidate name] risk assessment is very detailed and covers a wide range of risk factors. Risk mitigation methods have been identified for all potential risks. Consideration is given to potential risks which effect personnel and structure. Adhered to HASAWA throughout this task.
Design and planning (documents) • Quality of documentation • Adherence to brief	[candidate name] documents were complete and of acceptable standard. Method statement is quite detailed and would aid the practical install. Adherence to brief has clearly been met. Excellent material and tool list.

Design and planning (drawings and diagrams) • Accuracy • Positioning	[candidate name] drawings were generally below an acceptable standard. It showed some inefficiencies and lacked attention to detail and clarity. [candidate name] general planning and design work lacked some specification i.e., pipe sizes, pipe centres, clip distances, referencing to datum lines and floor levels. Plan drawing very unclear.
Systems and components (installation) • Marking out • Measurements • Sequencing • Tolerances • Tools • Skills	[candidate name] actions demonstrated a keen desire to achieve a high-quality competent installation. Despite a sub-standard working drawing, [candidate name] marked out all pipe runs accurately to a standardised accurate measurement. They approached each stage with a thoughtful attitude and in a correctly sequenced manner. In general, sizes, and distances were unified and kept within acceptable tolerances. Their marking out and clipping was good. This allowed them to make good progress. All pipework was level and plumb and within industry tolerances. Jointing methods were all achieved to a good standard. Good technique seen on pipe bending. Tool skills were good. They demonstrated the ability to think and plan ahead of the current objective.
Systems and components (decommissioning) • Sequencing • Disposal • Waste removal • Techniques and finish	Decommissioning was done sensitively by careful removal of all pipe work and components. Pipes were salvaged in long lengths and all components had nuts replaced. Recycling was done correctly and place in designated bins. Wall finishes were filled sanded and painted proficiently.

Any other aspects

Internal assessor signature	**Date**
X	

If completing electronically, double click next to the 'X' to add an electronic signature once the record is **finalised**.

Task 2 – Installation, commission and decommission

Assessment number (eg 1234-033)	8710-355
Assessment title	Heating Engineering Occupational Specialism

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234

Provider name	<provider name>
City & Guilds provider No.	999999a

Task(s)	2
Evidence title / description	Commissioning checklist Photographic evidence
Date submitted by candidate	DD/MM/YY

Task

Assessment themes:

- Health and safety
- Systems and components:
    - Installation
    - Decommissioning
- Reports and information (commissioning checklist)
- Inspecting and testing of systems and components
- Handover and communication

You will have access to your drawing and plans from Task 1.

Your tutor/assessor will ensure that systems are fully decommissioned, and walls prepared, prior to you beginning installation.

a) Install the boiler pipework, the S Plan Plus heating system and system controls, magnetic filter, radiator, and underfloor heating circuit, in accordance with your drawing and as agreed by your tutor/assessor.

All central heating flow and return pipework to the radiator should be 100 mm centre to centre.

All pipework should be clipped directly to the wall surface with the pipe brackets at a maximum 300 mm spacing to demonstrate the ability to clip competently.

Marking out and final measuring of installed components and pipework should be within +/- 2 mm.

All pipework should be installed level and plumb.

There should be no burns, scorches or excessive marking to walls/property.

The finished product should be aesthetically pleasing.

Good housekeeping should be maintained throughout assessment.

Pipe insulation must be installed on primary pipework supplying the cylinder as per current Building Regulations.

b) Connect the electrical supply to the boiler from a suitably supplied fused spur connection, following the safe isolation procedure.

You must connect the electrical supply to the system controls from a suitably supplied isolator.

The safe isolation procedure should be followed and must be directly observed by your tutor/assessor.

All power, interconnecting and control wiring must be in accordance with manufacturer's requirements and meet current UK regulations.

c) Commission the system (pipework only) and hand over to customer.

Once the installation has been completed, you must commission the system and hand over to the customer.

The system will be commissioned as per the Commissioning Checklist template provided, with all the data recorded in full.

Your tutor/assessor must observe you carrying out the commissioning checks detailed in the Commissioning Checklist template.

You must record all data in full on the Commissioning Checklist template.

Following commissioning and testing, you will hand over to the customer. The handover should include:

- Demonstration of system operation and controls.
- Boiler service requirements.
- Maintenance requirements.

Your tutor/assessor will act as the customer during the handover and will capture notes on your performance.

d) Decommission the system.

Once your tutor/assessor has checked and verified the system and handover is complete, you must decommission the system.

Decommissioning procedure:

- Isolate fuel/electricity supply to the system as appropriate.
- Isolate water supply.
- Apply warning notices and signs.
- Drain system to a suitable location.
- Remove required pipework, radiators and controls.
- Cap pipework sections as required.
- Repair and paint wall surfaces as required.

Additional evidence of your performance that must be captured for marking:

Tutor/assessor observations of:

- Health and safety.
- Installation of system and components.
    - Whether tolerances have been met for the measurement of pipework.
    - Whether there are excess/waste materials caused by inaccurate measurements.
    - Use of tools (bending and cutting equipment) and piping skills.
    - Results of tool usage.
    - The use of heat mats whilst soldering and the quality of pipework fabrication.
- Safe isolation
- Commissioning.

- Handover to customer.
- Decommissioning.

Photographs taken by your tutor/assessor at various stages of the task.

Candidate evidence

Completed commissioning checklist

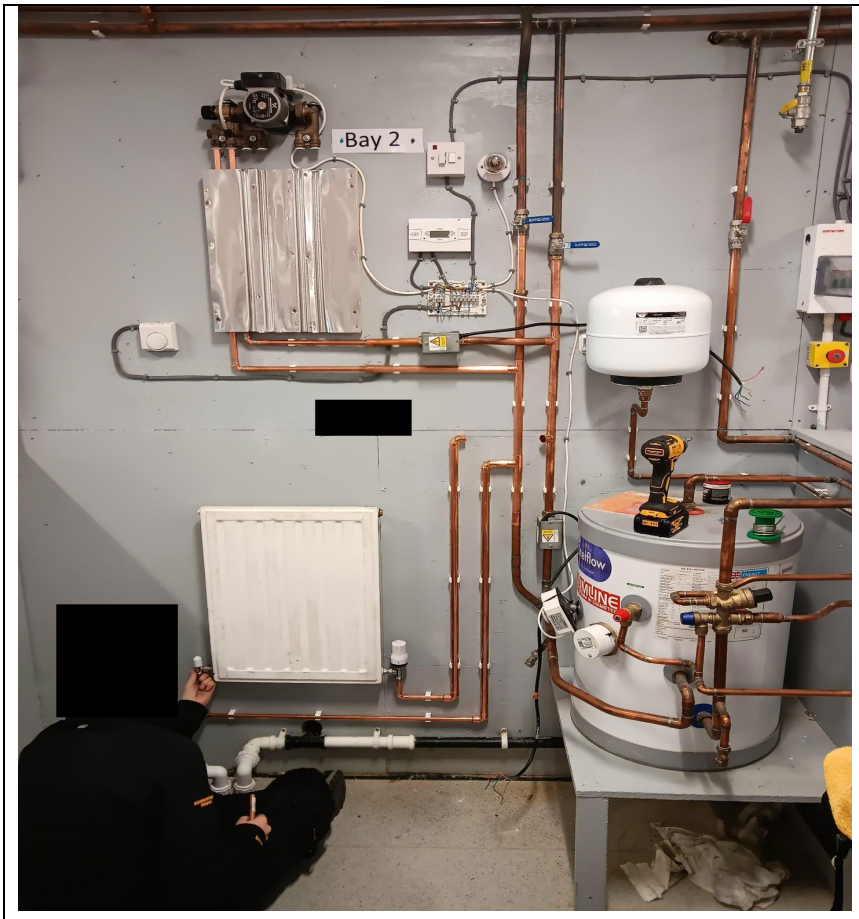
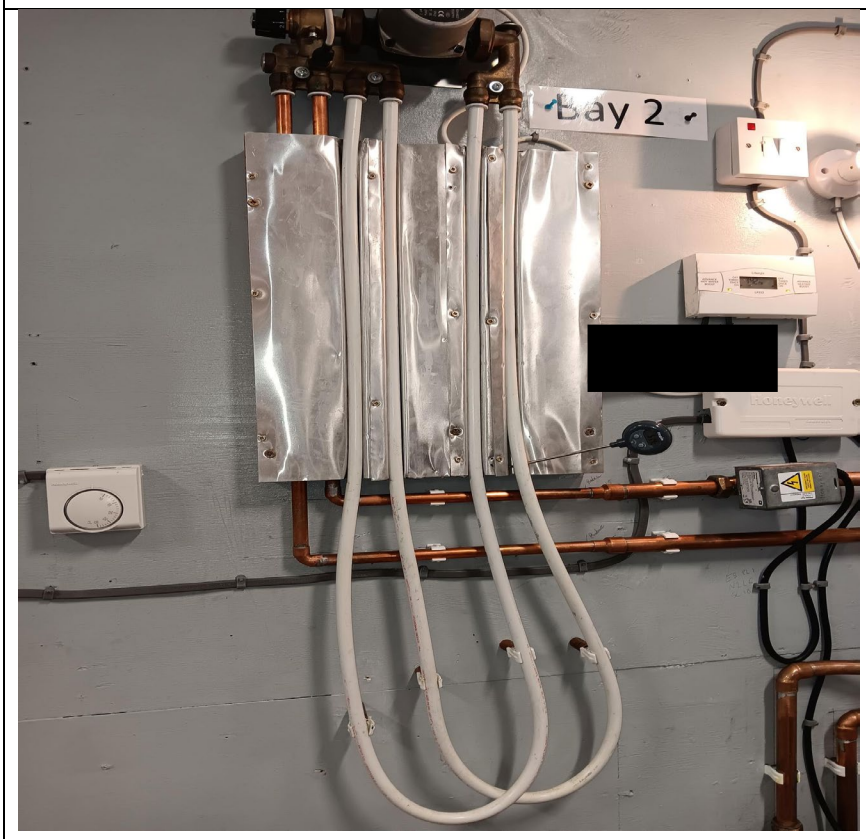
Heating Commissioning Sheet	
Address	[centre name]
Engineer's Name	[candidate name]
Date	DD/MM/YY
Boiler Manufacturer	Vaillant
Model	EcoTEC pro 28 R2 Condensing Combination Boiler
Serial Number	[serial number]
Rating in kW	Central heating: 24 kW Domestic hot water: 28 kW
Type of system	Sealed
Type of control system	Fully programed
Type of cylinder installed	Unvented 120L
TRVs fitted	Yes
Magnetic filter fitted	Yes

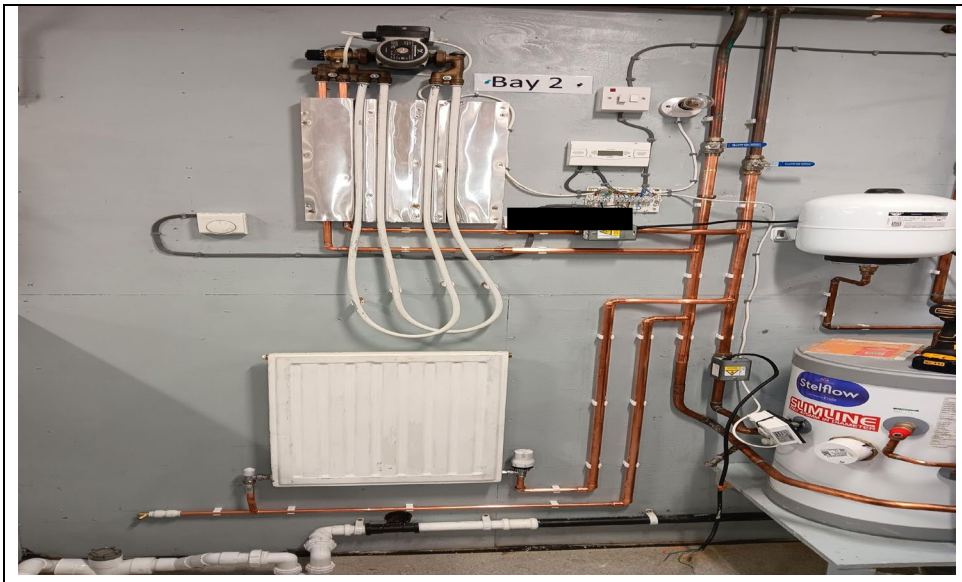
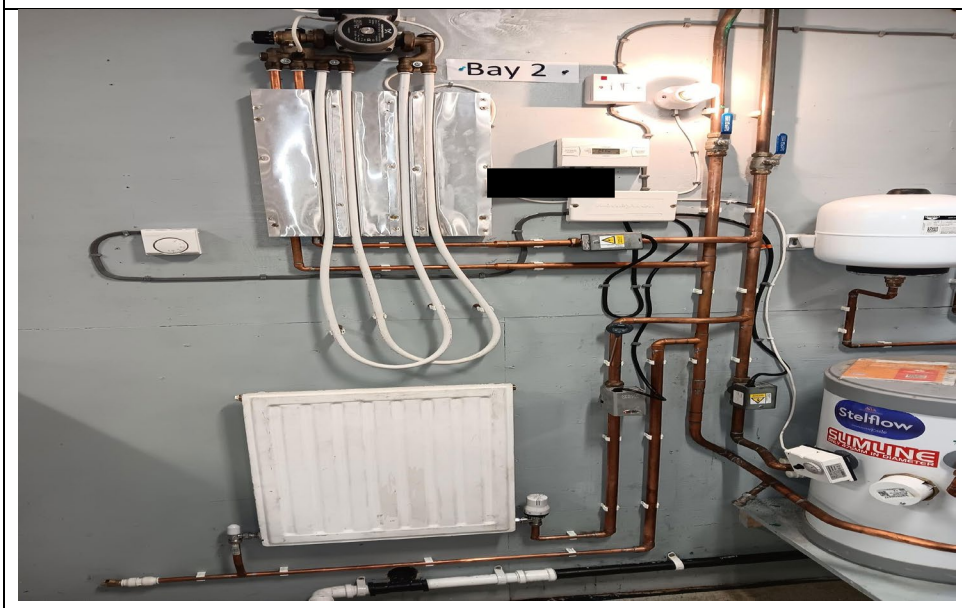
Commissioning Information	
Has the system been flushed	Yes
Has inhibitor been added to the system	Yes
What inhibitor was added to the system?	Fernox System Neutraliser

Boiler flow temperature	75°C
Boiler return temperature	65°C
Hot water temperature at nearest outlet	40°C (with mixer valve)
Hot water flow rate at the nearest outlet	13l per minute
Does the system comply with current regulations	Yes
Has the system been installed and commissioned in compliance with manufacturer instructions	Yes
Have instruction been left with the customer and have they received a demonstration of system controls	Yes

Photographic evidence

	**Start of assessment marking & clipping out**
	**Piping up all zones**

	**Installing radiator**
	**UFH manifold install**

	**Completed installation**
	**Completed installation**
	**Decommissioned**

Completed PO Form

Practical Observation (PO) Form (Task 2)

8710-35/36 T Level Technical Qualification in Building Services Engineering for Construction

8710-355 Heating Engineering (Summer 2024)

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234
Date	DD/MM/YY

Provider name	<provider name>
City & Guilds Provider No.	999999a

Task 2 assessment themes:

- Health and safety
- Systems and components:
  - Installation
  - Decommissioning
- Reports and information (commissioning checklist)
- Inspecting and testing of systems and components
- Handover and communication

Record observation notes below to inform internal marking and external moderation. Notes must be detailed, accurate and differentiating which use terminology from the mark grid along with specific examples observed. Notes must identify areas of strength and weakness, distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.

Assessment theme	Assessor observation notes
Health and safety • Risk assessment • Risk mitigation • Harm and probability factors • Adherence to health and safety (including safe isolation)	[candidate name] risk assessment is very detailed and covers a wide range of risk factors. Risk mitigation methods have been identified for all potential risks. Consideration is given to potential risks which effect personnel and structure. Adhered to HASAWA throughout this task.

Systems and components (installation) • Measurements • Sequencing • Tolerances • Tools • Skills	[candidate name] actions demonstrated a keen desire to achieve a high-quality competent installation. Despite a sub-standard working drawing, [candidate name] marked out all pipe runs accurately to a standardised accurate measurement. They approached each stage with a thoughtful attitude and in a correctly sequenced manner. In general, sizes, and distances were unified and kept within acceptable tolerances. Their marking out and clipping was good. This allowed them to make good progress. All pipework was level and plumb and within industry tolerances. Jointing methods were all achieved to a good standard. Good technique seen on pipe bending. Tool skills were good. They demonstrated the ability to think and plan ahead of the current objective.
Systems and components (decommissioning) • Sequencing • Disposal • Waste removal • Techniques and finish	Decommissioning was done sensitively by careful removal of all pipe work and components. Pipes were salvaged in long lengths and all components had nuts replaced. Recycling was done correctly and place in designated bins. Wall finishes were filled sanded and painted proficiently.
Inspecting and testing of systems and components • Commissioning tests • Commissioning checks • Reference to / follows manufacturer's instructions	Carried out commissioning checks in a timely manner. Used all correct testing equipment, stopwatch, thermometer, and checked against CHESS (best practices), WRAS, Boiler Manual literature. CH including UFH Flow and Return temperature set and checked and balanced with thermometer. Commissioning completed with confidence.
Handover and communication • Customer Care • Demonstration of system • Communication	Conversed clearly and in a confident manner. Gave clear explanation of system operation. Advised customer of future maintenance, break down and servicing requirements. Left all documentation with customer.

Any other aspects

Internal assessor signature	Date
X	DD/MM/YY

If completing electronically, double click next to the 'X' to add an electronic signature once the record is **finalised**.

Task 3 – Carry out maintenance

Assessment number (eg 1234-033)	8710-355
Assessment title	Heating Engineering Occupational Specialism

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234

Provider name	<provider name>
City & Guilds provider No.	999999a

Task(s)	3
Evidence title / description	A written report of the maintenance activity.
Date submitted by candidate	DD/MM/YY

Task

Assessment themes:

- Health and safety
- Reports and information (written report of the maintenance activity)
- Handover and communication
- Working with faults

You must:
a) Discuss the fault with the customer, investigate and diagnose.

You must discuss the central heating fault with your tutor/assessor to determine the cause of the fault and suggest appropriate methods for repair. You will be assessed on your ability to ask relevant questions to determine fault and to select a suitable solution.

Your tutor/assessor will act as the customer during the maintenance discussion and record any feedback on the tutor/assessor feedback form.

You will inspect a pre-installed operational central heating system with faults placed on various components within the system for you to diagnose and locate.

You will carry out testing to identify one fault as given by your tutor/assessor and replace the faulty component. If you do not initially identify the faulty component, you are allowed to be prompted by your tutor/assessor, but this will be reflected in the marking.

Once you have diagnosed the fault, you should check with your tutor/assessor to ensure this has been done correctly. If you require additional feedback and guidance, this will be reflected in the marking.

b) Produce a written report detailing the maintenance activity.

Once fault diagnosis is confirmed, you must produce a written report detailing the maintenance activity to include:

- Details of the fault.
- How to repair the fault.
- Details of how to reinstate the system.

c) Repair and rectify fault.

This task requires you to:

- Isolate and/or drain down the heating system safely.
- Apply temporary continuity bonding as required.
- Install replacement component as required.
- Wire the component.
- Refill system and commission in line with manufacturer’s instructions.

Additional evidence of your performance that must be captured for marking:

Tutor/assessor observations of:

- Health and safety.
- Communication with customer.
- Working with faults.
    - Results of tool usage, taking into consideration any tooling marks.
    - Re-commissioning of the system following component replacement.
- Handover.

Photographs taken by your tutor/assessor at various stages of the task.

Candidate evidence

Completed Report of Maintenance Activity

Fault:
Description of fault diagnosis I spoke to the customer, ascertained,all zones (UFU & CYL) reaching temperature. CH zone not heating up (single radiator). **Possible solutions** CH 2 port valve TRV stuck in closed position Block radiator Room stat Loose connection or faulty electric components Air lock **Actions taken to rectify fault** Checked electric feed to 2 port valve (yes) Noticed faulty motor (MV) not opening. Full safe isolation procedure Drain down system. Remove MV Replace MV Refill system. Commission Checked fully working, rad reaching temp Hand over

Completed PO Form

Practical Observation (PO) Form (Task 3)

8710-35/36 T Level Technical Qualification in Building Services Engineering for Construction

8710-355 Heating Engineering (Summer 2024)

Candidate name	<first name> <surname>
City & Guilds candidate No.	ABC1234
Date	DD/MM/YY

Provider name	<provider name>
City & Guilds Provider No.	999999a

Task 3 assessment themes:

- Health and safety
- Reports and information (written report of the maintenance activity)
- Handover and communication
- Working with faults

Record observation notes below to inform internal marking and external moderation. Notes must be detailed, accurate and differentiating which use terminology from the mark grid along with specific examples observed. Notes must identify areas of strength and weakness, distinguish between different qualities of performance and to facilitate accurate allocation of marks once all evidence has been submitted.

Assessment theme	Assessor observation notes
Health and safety • Risk assessment • Risk mitigation • Harm and probability factors • Adherence to health and safety	[candidate name] risk assessment is very detailed and covers a wide range of risk factors. Risk mitigation methods have been identified for all potential risks. Consideration is given to potential risks which effect personnel and structure. Adhered to HASAWA throughout this task.
Handover and communication • Customer Care	[candidate name] demonstrated high level of customer care skills. They calmly explained their diagnosis of the fault. They further explained what actions they were going to undertake and the estimated time for the repair.

• Communication	Their explanation also included the system design and the operating features.
Working with faults • Systematically / logically • Knowledge of fault-finding techniques • Reference to / follows manufacturer's instructions • Fault rectification • Efficiency / accuracy • Use of tools	[candidate name] made good use of manufacturers fault section. They worked in a well thought out sequence starting with full safe electrical isolation. Their knowledge was clearly evident through their actions. Once the repair had been completed, they reinstated the water supplies and electric. Used manufacturers instruction to confirm performance. Proficient use of tools.

Any other aspects

Internal assessor signature	**Date**
X	

If completing electronically, double click next to the 'X' to add an electronic signature once the record is **finalised**.

Get in touch

The City & Guilds Quality team are here to answer any queries you may have regarding your T Level Technical Qualification delivery.

Should you require assistance, please contact us using the details below:

Monday - Friday | 08:30 - 17:00 GMT

T: 0300 303 53 52

E: **technicals.quality@cityandguilds.com**

W: **http://www.cityandguilds.com/tlevels**

Web chat available **here**.

The T Level is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Copyright in this document belongs to, and is used under licence from, the Institute for Apprenticeships and Technical Education, © 2024. 'T-LEVELS' is a registered trademark of the Department for Education. 'T Level' is a registered trademark of the Institute for Apprenticeships and Technical Education. 'Institute for Apprenticeships & Technical Education' and logo are registered trademarks of the Institute for Apprenticeships and Technical Education.

We make every effort to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement, and the right is reserved to change products and services from time to time. City & Guilds cannot accept responsibility for any loss or damage arising from the use of information in this publication.

City & Guilds is a trademark of the City & Guilds of London Institute, a charity established to promote education and training registered in England & Wales (312832) and Scotland (SC039576). City and Guilds Group Giltspur House, 5–6 Giltspur Street London EC1A 9DE