T Level: Building Services Engineering for Construction

Occupational Specialism: Plumbing and Heating Engineering

Role Title	Working Pattern	To be agreed between the
		provider and employer
Heating engineering / Plumbing engineering trainee	Duration	315 hours
Objective(s)		
To support the heating engineering team by contributing to the installation of heating systems using quality driven techniques and modern practices in order to contribute to reducing humanities burden on precious resources		
Typical Activities		
 Work under supervision to plan the installation of heating systems or plan the maintenance of plumbing systems(at least once a week) by Interpreting installation information/plumbing systems information and data Producing risk assessments and method statements Identifying additional information requirements and obtaining information required Updating installation documentation, drawings, and sketches as appropriate Calculating resource requirements and Costing materials required for installation Work within a team to install mechanical and/or electronic components of heating systems (at least once a week) by Installing pipework systems Installing / replacing / repairing system components e.g. ventilators, appliances Connecting control systems and testing the system Setting heating controls and parameters Work under supervision to evaluate heating systems (at least once a week) Testing system operation Recording testing data and information Comparing test results against design parameters Update digital building information management system software 		
Learning goals		TQ Reference
On the placement the student will need to furthe hone through activity 1: Employability skills • Planning: identifying discrete steps, estim	er develop and	I [Insert corresponding reference from the TQ d content]

- Analysing: classifying, ordering
- Investigating: identifying sources, interrogating data
- Self-managing: reflecting and inviting feedback on own performance, referring to others for advice
- Assessing a situation for potential adverse effects

Technical skills and understanding

- Using software to record and analyse data
- Communicating effectively with different audiences using different media
- Updating records digitally
- Understanding of heating science and systems

On the placement the student will need to further develop and hone through activity 2:

Employability skills

- Working with others with different skills, expertise, and experience to accomplish a task or goal
- Assessing a situation for potential adverse effects
- Physical dexterity: precise and controlled movement, agility, coordination, delicacy, appropriate application of force
- Evaluating: considering and appraising process and evidence, making recommendations
- Observing: situational awareness, monitoring

Technical skills and understanding

- Measuring and marking out installation requirements
- Cutting, placing, and fixing pipework
- Attaching components to each other in a system
- Setting system controls and parameters
- Understanding heating engineering science and systems
- Replacing/ repairing component equipment
- Understanding of plumbing systems

On the placement the student will need to further develop and hone through activity 3:

Employability skills

- Applying a logical approach to identifying issues and propose solutions
- Assessing a situation for potential adverse effects
- Investigating: identifying sources, interrogating data, designing, and carrying out tests
- Self-managing: setting personal goals, referring to others for advice
- Recording: transcribing, noting, capturing, saving, storing
- Observing: situational awareness, monitoring
- Physical dexterity: precise and controlled movement, agility, coordination, delicacy, appropriate application of force

Technical skills and understanding

- Carry out tests on systems ensuring they are fit for purpose
- Understanding heating engineering science and systems

Minimum starting requirements

- Information pack from the employer providing the placement
- Attendance at induction day into employer policies and procedures
- Health and Safety Training (Mandatory)
- Any PPE required for carrying out activities
- Training in the use of any specific software
- Details of their mentor or other ways they will be supported by the employer

Suggested prior learning

- Knowledge of typical hazards associated with installation activities and related controls
- Experience of installing heating engineering systems effectively in controlled environments
- Knowledge of heating engineering science
- Knowledge of installation techniques and potential risks
- Knowledge of the range of tools and equipment that can be used for installation and their suitability for different situations
- Knowledge of building technology and how that knowledge is used to plan for installation, review installation plans and make recommendations for adjustment and change
- Knowledge and skills needed to interpret drawings and other sources of information and data
- Experience in using digital building information system software
- Typical workplace behaviours needed for role, including:
 - o Punctuality
 - Respect for others and their property
 - o Clean and tidy in their work
 - Safety conscious
 - o Positive thinking and 'can do' attitude
 - o Polite
 - Awareness of potential risks from the environment to their own safety e.g. dogs on site
 - Awareness of potentially compromising situations e.g. where expensive items are on site and unsecured