

## Gas Network Craftsperson: Level 3

The main role of a Gas Network Craftsperson is to safely build, maintain and repair components of the UK's gas network infrastructure to provide a reliable supply of gas to domestic, commercial and industrial users. There are three main roles within the apprenticeship: Network Maintenance Craftsperson (Electrical & Instrumentation), Network Maintenance Craftsperson (Pressure Management) and Emergency Response Craftsperson.

Candidates will normally have 3 to 5 GCSEs at grades A to C (including mathematics, English and a science), or equivalent qualifications. Upon successful completion of this apprenticeship, the successful apprentice will be eligible for Engineering Technician Grade (Eng.Tech) Professional Registration with the Institution of Gas Engineers and Managers (IGEM). The apprenticeship is graded at Pass and Distinction and the final grade will be dependent on performance at the end of programme synoptic assessment.

While all new apprentices will complete the core requirements as mandatory elements during the course of their apprenticeship, the subsequent specific requirements will be completed dependent upon the particular job role route being undertaken.

### Core Requirements (all Job Roles): Technical Knowledge

- Testing and commissioning procedures needed to establish the condition of specific assets, equipment, network infrastructure and the actions needed as a result of the tests
- Legislation and Codes of Practice involved in the practical installation and maintenance of specific gas network assets
- Current industry health and safety standards and regulations, and environmental and regulatory requirements
- Maintenance practices, processes and procedures associate with specific gas network systems, controls and equipment
- Relevant level of theory and principles that underpin the design and function of complex assets, components and associated systems and equipment
- Principles and processes that underpin the location, diagnosis and rectification of faults
- Company policies, procedures and engineering instructions as defined by the employer

### Core Requirements (all Job Roles): Skills

- Undertake and document risk assessments
- Comply with workplace health, safety & environmental practices, maintaining a safe and secure working environment
- Follow engineering instructions and company procedures
- Install gas engineering assets, components and associated equipment
- Install, test, purge and commission gas assets
- Operate powered tools and equipment for network maintenance operations
- Locate and avoid supply apparatus and sub-structures
- Comply with the New Roads and Street Works Act requirements for signing, lighting and guarding
- Use approved gas detection equipment to ensure safe environment
- Use Personal Protective Equipment (PPE) and safety equipment in accordance with manufacturer's instructions and employer policy
- Liaise with gas consumers, statutory agencies and members of the public
- Obtain and analyse information to facilitate decision making
- Record information, complete job reports and process

### Core Requirements (all Job Roles): Behaviours

- Display a self-disciplined, self-motivated approach
- Deliver a polite, courteous professional service to customers and members of the public
- Work effectively when undertaking individual and team tasks and objectives
- Work with appropriate supervision, and when required under own initiative, to approved standards and safe work practices
- Undertake and complete work in a way that contributes to sustainable development
- Be risk aware and minimise risks to life, property and the environment when undertaking work activities
- Be quality focussed and professional in work and in personal standards
- Work safely with others and when working alone
- Recognise personal limitations and seek advice from fact holders and specialists when required
- Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact
- Accept responsibility for work of self and others
- Accept, allocate and supervise technical and other tasks
- Be aware of the needs and concerns of others, especially where related to diversity and equality
- Carry out and record CPD necessary to maintain and enhance competence
- Exercise responsibilities in an ethical manner

## Specific Requirements for each Job Role

### 1. Emergency Response Craftsperson

- Respond to public reported upstream gas emergencies
- Respond to public reported downstream gas emergencies
- Install gas meters and regulators
- Tightness test, purge, commission and de-commission gas pipework
- Locate and avoid underground plant and equipment
- Replace emergency control valves
- Carry out investigations in relation to gas escapes, in line with company procedures
- Liaise with emergency services and other statutory authorities as necessary
- Organise additional resources to facilitate repairs as required
- Achieve Gas Safe Registration in Emergency Services categories

### 2. Network Maintenance Craftsperson (Electrical & Instrumentation)

- Apply theories and principles of electronics to use equipment to carry out diagnostic fault finding procedures
- Maintain instrumentation and control equipment and circuits
- Repair and overhaul instrumentation and control equipment
- Maintain site lighting, fixed and portable equipment
- Inspect, Test and Calibrate Instrumentation and control equipment and circuits in line with electrical regulations
- Carry out cable testing across a range of voltages
- Assist in installing instrumentation and control equipment
- Use Instrumentation and Control Systems knowledge and skills to install, maintain and dismantle instruments, controllers, probes, attachments, cabling, meters and display units
- Carry out telemetry outstation and internal system configuration
- Identify and resolve data quality and calibration issues
- Test, calibrate and validate fixed and portable analogue and digital instrumentation using approved procedures and standards
- Repair, maintain, configure and calibrate field instrumentation, communication devices and associated equipment used in system and process control
- Use standards and specifications to improve the information gathered by telemetry data
- Inspect and maintain security equipment, telecommunication devices and alarm systems
- Carry out isolation procedures to ensure process or system stability and safety of personnel when carrying out operations
- Provide support to day-to-day users of instrumentation and control systems
- Complete data cleansing to ensure consistent and valid data is available for business and regulation purposes
- Apply electrical knowledge and skills to install, maintain and dismantle a wide range of complex plant, machinery and components

### 3. Network Maintenance Craftsperson (Pressure Management)

- Apply mechanical theories and principles in order to carry out diagnostic fault finding procedures
- Carry out Pressure Monitoring & Control (PMAC)
- Inspect and monitor mechanical systems and equipment
- Maintain, dismantle and repair mechanical equipment and components
- Test mechanical equipment and systems
- Assist in installing mechanical systems and equipment
- Use mechanical knowledge and skills to install, maintain and dismantle a wide range of complex plant, machinery and components
- Consult design specifications to analyse and calculate mechanical system parameters and rectification procedures
- Interpret plans and drawings to install, position or re-locate mechanical equipment and components
- Test, service and repair mechanical equipment as part of planned preventative maintenance and/or reactive maintenance programmes
- Install and maintain mechanical components including regulators, filters, valves, compressor equipment
- Inspect and maintain high pressure storage, and condition monitoring equipment

## Apprenticeship Durations

Dependent upon the specific job role within the apprenticeship, the total programme durations are expected to be up to 48 months, although most will complete in a shorter period.

## Review

This Standard shall be reviewed by employers within three years of approval