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## REGULATED QUALIFICATION FRAMEWORK (RQF)

### QUALIFICATION SPECIFICATION

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- **LCL Awards Level 4 Certificate in Gas Safety Management of Plant and Appliances in Non-Domestic Premises**

#### 1. Objective:

The qualification allows learners to continue to learn, develop and practise the skills required for employment within the Gas sector. The objective of this qualification is for learners to demonstrate they know and understand;

How the Gas Safety (Installation and Use) Regulations impact upon the gas safety management role, how to appoint and manage competent external gas contractors, to ensure operational performance of gas operatives is monitored and how to deal with reports of gas escapes or fumes,

How the gas combustion process works, the effects that Carbon Monoxide (CO) has on the human body, how Carbon Monoxide detectors are used to reduce the risk of Carbon Monoxide poisoning and the requirements for gas engineers responding to alarm activation or reports of fumes.

The requirements of the legislation and normative standards and codes of practice that are relevant to gas safety, application of the relevant legislation, normative standards and codes of practice (CoP) to gas safety situations, the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) within the gas industry, the Gas Industry Unsafe Situation Procedure (GIUSP) and the legal requirements for businesses and individuals carrying out gas work,

The construction and operation of chimney systems serving Type B appliances, the construction and operation of chimney systems serving Type C appliances, the construction and operation of fan dilution systems and the ventilation requirements for non-domestic gas appliances

The types of non-domestic gas appliances used for heating water, their design, installation, commissioning & maintenance requirements, the installation requirements and operation of forced convection air heaters, the installation requirements and operation of overhead radiant heaters, the installation requirements for non-domestic plant and ancillary equipment, the requirements for non-domestic gas fired laundry appliances and equipment and the installation requirements for pipework in non-domestic premises.

The target groups for the Qualification are those learners who are;

1. Updating and continuing their professional development (CPD).
2. Developing knowledge and understanding relevant to a particular specialisation within an occupation or set of occupations.
3. Developing their knowledge and understanding in order to gain recognition at a higher level or any different role

## 2. Qualification Framework:

The qualification comprises of 5 mandatory Units;

Units Title	Unit Reference Number	Type of Unit	Level	Credit Rating
Gas Safety Facilities Management	LCL-G4002	Knowledge	4	4
Combustion Process and Analysis of Non Domestic Appliances	LCL-G4006	Knowledge	4	2
Gas Safety Legislation	LCL-G4009	Knowledge	4	4
Non Domestic Appliances, Plant and Pipework	LCL-G4005	Knowledge	4	4
Flueing & Ventilation of Non Domestic Plant and Appliances	LCL-G4011	Knowledge	4	4

### Qualification Structure:

- **LCL Awards Level 4 Certificate in Gas Safety Management of Plant and Appliances in Non-Domestic Premises**
- **QAN – 601/2942/6**
- **QW – C00/0626/0**
- The Guided Learning Hours (GLH) are **40 hours**
- The Total Qualification Time (TQT) is **150 hours**
- The total credit required to achieve the qualification is **15**

## 3. Unit Grading Structure:

The learner is required to successfully achieve a pass in each unit for this qualification to be awarded.

#### 4. Unit specification:

##### **LCL-G4002: Gas Safety Facilities Management Assessment Method {SR}**

**Learning Outcome 01: The learner will know how the Gas Safety (Installation and Use) Regulations (GSIUR) impacts on gas safety facilities management responsibilities.**

The learner can:

- 1.1 Describe the requirements of the GSIUR that place specific duties on businesses responsible for managing gas work and gas installations
- 1.2 Describe how the GSIUR impacts on the way in which businesses structure programmes of gas work to ensure compliance with Regulation 8
- 1.3 Describe how Regulation 36 of the GSIUR applies where a non-domestic gas appliance is located on site and is providing a service (heating, hot water or catering) to a building used for rented accommodation.

**Learning Outcome 02: The learner will know how to appoint and manage gas fitting operatives and contractors.**

The learner can:

- 2.1 Specify the criteria to be considered when employing or appointing:
  - gas fitting operatives
  - contractors
- 2.2 Explain the role of Gas Safe Register in maintaining the register of gas operatives and businesses.
- 2.3 Design a process or method to monitor the gas qualifications and competences held by operatives and contractors.

**Learning Outcome 03: The learner will know how to appoint and manage gas fitting operatives and contractors.**

The learner can:

- 3.1 Analyse the following regulatory and guidance documents to identify the requirements for quality controlling and monitoring of gas work:
  - Gas Safety (Installation & Use) Regulations
  - Health and Safety at Work Act HASWA
  - HSE publication "Use of contractors a joint responsibility".
- 3.2 Outline 3 methods of quality controlling operative's work and confirm the advantages and disadvantages of each method.
- 3.3 Develop a quality control procedure to measure the performance of operatives gas work.
- 3.4 Specify action plans for monitoring the improvement of operatives or contractors performance where failings have been found in:
  - Completion of documentation
  - Maintenance work
  - Installation work
  - Fault diagnosis
  - Identification of gas safety defects.

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**Learning Outcome 04: The learner will know how to deal with reports of gas escapes, fumes or carbon monoxide/dioxide alarm activation.**

The learner can:

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- 4.1 Describe the management responsibilities when receiving a report of a gas escape, fumes or carbon monoxide/dioxide alarm activation.
- 4.2 Develop a procedure for responding to a report of a gas escape, fumes or carbon monoxide/dioxide alarm activation.
- 4.3 Develop a procedure to be used where a variation to the guidance in the Gas Industry Unsafe Situations Procedure is necessary to deal with a gas emergency.
- 4.4 Outline the management and emergency actions to be taken where occupants have been confirmed as been subjected to CO poisoning.

**LCL-G4005: Non Domestic Appliances, Plant and Pipework**

Assessment Method {SR}

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**Learning Outcome 01: The learner will know how to deal with reports of gas escapes, fumes or carbon monoxide/dioxide alarm activation.**

The learner can:

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- 1.1 Describe the requirements of the GSIUR that place specific duties on businesses responsible for managing gas work and gas installations
- 1.2 Describe how the GSIUR impacts on the way in which businesses structure programmes of gas work to ensure compliance with Regulation 8.
- 1.3 Describe how Regulation 36 of the GSIUR applies where a non-domestic gas appliance is located on site and is providing a service (heating, hot water or catering) to a building used for rented accommodation.

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**Learning Outcome 02: The learner will know how to appoint and manage gas fitting operatives and contractors..**

The learner can:

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- 2.1 Specify the criteria to be considered when employing or appointing:
  - gas fitting operatives
  - contractors
- 2.2 Explain the role of Gas Safe Register in maintaining the register of gas operatives and businesses.
- 2.3 Design a process or method to monitor the gas qualifications and competences held by operatives and contractors

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**Learning Outcome 03: The learner will know how to appoint and manage gas fitting operatives and contractors..**

The learner can:

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- 3.1 Analyse the following regulatory and guidance documents to identify the requirements for quality controlling and monitoring of gas work:

- Gas Safety (Installation & Use) Regulations
  - Health and Safety at Work Act HASWA
  - HSE publication “Use of contractors a joint responsibility”.
- 3.2 Outline 3 methods of quality controlling operative’s work and confirm the advantages and disadvantages of each method.
- 3.3 Develop a quality control procedure to measure the performance of operatives gas work.
- 3.4 Specify action plans for monitoring the improvement of operatives or contractors performance where failings have been found in:
- Completion of documentation
  - Maintenance work
  - Installation work
  - Fault diagnosis
  - Identification of gas safety defects.

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**Learning Outcome 04: The learner will know how to deal with reports of gas escapes, fumes or carbon monoxide/dioxide alarm activation.**

The learner can:

- 4.1 Describe the management responsibilities when receiving a report of a gas escape, fumes or carbon monoxide/dioxide alarm activation
- 4.2 Develop a procedure for responding to a report of a gas escape, fumes or carbon monoxide/dioxide alarm activation.
- 4.3 Develop a procedure to be used where a variation to the guidance in the Gas Industry Unsafe Situations Procedure is necessary to deal with a gas emergency
- 4.4 Outline the management and emergency actions to be taken where occupants have been confirmed as been subjected to CO poisoning.

**LCL-G4009: Gas Safety Legislation**  
**Assessment Method {SR}**

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**Learning Outcome 01: The learner will know the requirements of the legislation and normative standards and codes of practice that are relevant to gas safety.**

The learner can:

- 1.1 Describe how each of the following relates to gas safety:
- British Standards (BS)
  - Building Regulations
  - Gas Industry Unsafe Situations Procedure (GIUSP)
  - Gas Safety (Installation and Use) Regulations (GSIUR)
  - Health & Safety at Work Act (HASAWA)
  - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).
- 1.2 Outline the requirements of the following Gas Safety (Installation & Use) Regulations 1998:
- Regulation 3 Qualifications and Supervision
  - Regulation 4 Duties on the Employer
  - Regulation 8 Existing Gas Fittings
  - Regulation 18 Safe Use of Pipes
  - Regulation 26 Gas Appliances – Safety Precautions

- Regulation 27 Flues
- Regulation 30 Room Sealed Appliances
- Regulation 33 Testing of Appliances
- Regulation 34 Use of Appliances

1.3 Outline the main points of the Gas Safety Management Regulations in relation to gas escapes and other emergencies.

1.4 Analyse the Ronan Point incident and its effect on gas safety legislation in the UK.

1.5 Describe how the GSIUR have influenced the design and publication of gas safety normative standards and codes of practice.

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**Learning Outcome 02: The learner will be able to apply the relevant legislation, normative standards and codes of practice (CoP) to gas safety situations.**

The learner can:

2.1 Identify the normative standard or CoP & its section and the gas engineer documentation that apply in each of the following situations:

- Open flue chimney blocked by birds nest
- Gas escape caused by poor workmanship
- Open ended gas pipe connected to a gas installation
- A new construction enclosing an existing chimney outlet.
- Open flue gas appliances with only 85% of the required permanent ventilation to outside air provided

2.2 Describe how gas safety legislation applies to completing a gas safety record form

2.3 Describe the range of normative standards and CoP available to gas engineers and give a scenario where they would apply.

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**Learning Outcome 03: The learner will know how to apply the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) within the gas industry**

The learner can:

3.1 Describe the content and purpose of RIDDOR applied to the gas industry.

3.2 Give 5 examples of situations that are RIDDOR reportable.

3.3 Describe the reporting process for RIDDOR including relevant documentation.

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**Learning Outcome 04: The learner will know how to apply the Gas Industry Unsafe Situation Procedure (GIUSP)**

The learner can:

2.3 Describe the content and purpose of the GIUSP.

2.4 Provide 3 different examples of each category of unsafe situation that is classified as:

- Immediately Dangerous (ID)
- At Risk (AR)

2.5 Explain the importance of the GIUSP documentation issued by a gas engineer and the actions taken by the engineer according to the (2) categories of unsafe situation

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**Learning Outcome 05: The learner will know the legal requirements for businesses and individuals carrying out gas work.**

The learner can:

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5.1 Describe the legal requirements for the following;

- Installation businesses employing gas engineers
- Self-employed gas engineers
- Individuals carrying out gas work outside the scope of the Gas Safety (Installation & Use) Regulations) GSIUR.

**LCL-G4006: The Combustion Process and Analysis of Non Domestic Appliances****Assessment Method {SR}**

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**Learning Outcome 01: The learner will know the process of combustion, factors affecting combustion and combustion analysis.**

The learner can:

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- 1.1 Explain how the combustion process of gas takes place and state the products of complete and incomplete combustion.
- 1.2 Describe the effect that the following situations have on the combustion process and how those situations affect the constituents of the products of combustion;
  - A lack of ventilation.
  - Blocked lint arrestors.
  - Oversized burner injectors.
- 1.3 Describe the operation of different types of safety devices fitted to appliances designed to shut off the appliance in the event of a build-up of combustion products in or around the appliance.
- 1.4 Explain the effect of vitiation on the combustion process.
- 1.5 Describe how Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>) and CO/CO<sub>2</sub> ratio measurement is used to determine the state of combustion within an appliance.
- 1.6 Describe the flame picture of an appliance with complete and incomplete combustion, incorporating a:
  - Natural draught burner.
  - Fan draught burner.
- 1.7 Describe the signs of incomplete combustion in and around an appliance.
  - Natural draught burner.
  - Fan draught burner.
- 1.8 Describe the signs of incomplete combustion in and around an appliance.
  - Combustion analysis.
  - Atmosphere sampling for CO & CO<sub>2</sub>.
- 1.9 Describe the calibration requirements and the operational checks to be carried out prior to the use of portable electronic combustion performance equipment.
- 1.10 Describe the calibration requirements and the operational checks to be carried out prior to the use of portable electronic combustion performance equipment.
- 1.11 Outline the process for carrying out combustion performance analysis on a Type B appliance incorporating a;
  - Natural draught burner.
  - Fan draught burner.
- 1.12 Outline the procedure for carrying out analysis of indoor ambient atmospheres.

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**Learning Outcome 02: The learner will understand the effects CO has on humans.**

The learner can:

- 2.1 Describe why CO is dangerous to life.
- 2.2 Describe the effects CO has on humans..
- 2.3 Describe how incomplete combustion from gas appliances can lead to death or serious injury due to CO poisoning
- 2.4 Explain the actions be taken to minimise the risk of appliances producing CO.
- 2.5 Identify the causes of CO in a property other than from gas appliances.

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**Learning Outcome 03: The learner will understand the effects CO has on humans.**

The learner can:

- 3.1 Describe the operation and use of different types of CO detectors and recommend which type should be use in properties containing gas appliances.
- 3.2 Describe why CO detectors should be not be used as the first line of defence against CO poisoning.
- 3.3 Explain the importance of the correct positioning of a CO detector to ensure maximum protection against poisoning.
- 3.4 Describe how gas engineers can be protected from CO poisoning when responding to CO alarm activation.
- 3.5 Describe the actions to be taken by gas engineers when on site and dealing with a response to CO alarm activation
- 3.6 Describe the precautions to be taken by gas engineers attending premises where CO poisoning has occurred.

**5 National Occupational Standard:**

The Units used in this qualification have a direct relationship with the National Occupational Standards for the areas of work contained within.

**6 RQF Descriptor Level 4.**

**Knowledge descriptor:** *(the holder can)*

*Has practical, theoretical or technical knowledge and understanding of a subject or field of work to address problems that are well defined but complex and non-routine. Can analyse, interpret and evaluate relevant information and ideas.*

*Is aware of the nature of approximate scope of the area of study or work.*

*Has an informed awareness of different perspectives or approaches within the area of study or work.*

**7 Prior qualifications, knowledge, skill or understanding which the learner is required to have before taking this qualification. (Pre-requisites)**

{None prescribed.}



**8 Units which a learner must have completed before the qualification will be awarded and any optional routes.**

{Learners must complete the 6 mandatory units before the qualification will be awarded. See Section 4.0 above.}

**9 Other requirements which a learner must have satisfied before the learner will be assessed or before the qualification will be awarded.**

{See Section 8.0 above.}

**10 The design and delivery of the examination associated with these units are based on the following documents;**

- Gas Safety installation & use Regulations
- Relevant British Standards
- Relevant IGEM utilisation procedures
- RIDOR
- Relevant Building Regulations (Approved Documents)
- HASWA

**11 The criteria against which learners' level of attainment will be measured.**

The Learning Outcomes and Assessment Criteria against which learners' level of attainment will be measured are detailed in Section 4 of this specification.

**12 Planned exemptions**

None

**13 Specimen assessment materials.**

None

**14 Specified levels of attainment**

Learners must pass all the mandatory units for the qualification to be awarded.

**15 Other information**

*Where the qualification(s) is awarded in the various devolved regions of the UK i.e. England, Scotland, Northern Ireland and Wales, the examination questions and learner responses to those questions are set and responded to in the context of the legislation, normative standards and guidance applicable in that region. Assessors will mark examinations in accordance with the generic model answers and rationales provided by LCL taking into account any variations applicable to that region.*

## **Assessment and Examination Terminology**

**AC** – *Approved Centre; an examination conducted either at the approved centre or a location approved by the centre, using staff approved by the centre to conduct the examination.*

**CBSR** – **Closed Book** *Short Response; Short response written questions will be set by the awarding organisation and administered and marked locally at the approved centre by approved markers. Learners will be prohibited from using industry normative or informative documents.*

**CE** – *Customer Evidence; evidence provided by a customer in the form of a written witness statement confirming a competent performance by the learner. That evidence may also be provided by an employing supervisor or manager of the learner. Witness statements that relate to a technical competence will only be accepted from a person technically competent in that particular activity to provide the statement.*

**IK** – *Inferred Knowledge; inferred knowledge is assessed as part of a performance assessment by a centre approved assessor. To deem the learner as having sufficient knowledge the learner must satisfactorily pass the performance assessment.*

**LE** – *Learner Evidence; learner generated evidence is for example documented recordings of readings, calculations or the production of a risk assessment or other procedural document.*

**MC** – *Multiple Choice; set by the awarding organisation and administered and marked locally or electronically. Learners will be able to answer multi-choice questions using reference to appropriate industry normative or informative sources.*

**O/L** – *Online: a secure web-based assessment system (XAMS)*

**OP** – *Observed Performance; the assessment of a learner's performance by an approved assessor either in the learner's work place or at the approved centre or a location approved by the centre.*

**OQ** – *Oral Questions; oral questions may be asked by an assessor as part of a performance assessment or knowledge examination to confirm the understanding of the criteria by the learner.*

**PA** – *Performance Assessment; a performance assessment conducted either in the learner's work place or at the approved centre or a location approved by the centre.*

**RWE** – *Realistic Work Environment; an area at the approved centre or a location approved by the centre which replicates and has the features of a Work Place. The learner must not be permitted to be familiar with the simulated environment prior to undertaking assessment.*

**SR** – *Short Response question*

**WP** – *Work Place; is the naturally occurring environment in which the learner works, typically that would be in a customer's premise where work is being paid for by the customer.*

SSAs: {4.1 Engineering}/{5.2 Construction}

Review Date {31st December 2021}