REGULATED QUALIFICATION FRAMEWORK (RQF)

QUALIFICATION SPECIFICATION

- **LCL Awards Level 4 Certificate in Gas Safety Management in Social Housing**

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 combustion and carbon monoxide, the flueing and ventilation of gas appliances, the design, types, operation and installation requirements of gas appliance, meters and pipework, the management responsibilities in managing gas safety in social housing and the legislative requirements affecting the management of gas safety in social housing environments.

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

1. Updating occupational competence, continuous professional development and or obtaining a licence to practice

2. Preparing for further learning or training and/or developing knowledge and or skills in a subject area who are existing workers in the occupation seeking to extend their range of work}

2. Qualification Framework:

The qualification comprises of 5 mandatory Units;

Unit Titles	Unit Reference Number	Type of Unit	Level	Credit value
Gas Safety Management in Social Housing D/505/6658	LCL-G4004	Knowledge	4	4
Combustion and Carbon Monoxide D/505/5252	LCL-G4003	Knowledge	4	1
Gas Safety Legislation M/505/5269	LCL-G4009	Knowledge	4	4
Flueing and Ventilation of Domestic Gas Appliances K/505/5254	LCL-G4007	Knowledge	4	2
Domestic Appliances, Meters and Pipework A/505/5260	LCL-G4001	Knowledge	4	4

Qualification Structure:

- **LCL Awards Level 4 Certificate in Gas Safety Management in Social Housing**
- **QAN –** 601/1725/4
- **QW -** C00/0605/6
- 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 **16**

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-G4004: Gas Safety Management in Social Housing (D/505/6658)
Assessment Method {SR}

Learning Outcome 01: The learner will know how the Gas Safety (Installation and Use) Regulations 1998 (GSIUR), Health & Safety Executive (HSE) and the Health & Safety at Work Act (HASAWA) impact upon the operation of social housing providers.
The learner can:

1.1 Identify the GSIUR and HSE guidance that place requirements on providers of social housing in maintaining safe gas installations
1.2 Give examples of the job roles within a social housing organisation that include tasks which ensures compliance with the GSIUR
1.3 Describe the processes within a social housing organisation where GSIUR and HASAWA need to be complied with.
1.4 Analyse how the GSIUR impacts on the way social housing providers structure works programmes to comply with Regulation 8.

Learning Outcome 02: The learner will be able to identify how the GSIUR and HSE guidance place requirements on the operation of social housing providers.
The learner can:

2.1 Identify which requirements are placed upon social housing providers by GSIUR and HSE guidance during the following processes:
- Void property letting
- Mutual Exchanges
- Maintenance programmes

2.2 Analyse the risks posed by the refurbishment of social housing stock where the following equipment is to be installed:
- Extract Fans
- Other fossil fuel burning appliances
- External cladding
- Cavity wall and loft insulation

2.3 Outline the requirements of GSIUR regulation 36 and how the regulation impacts on social housing providers
2.4 Explain the responsibilities of Social Housing providers where a single non domestic gas boiler providing heating and hot water to multiple dwellings is located in a plant room and forms part of a social housing complex
2.5 Describe the responsibilities of a Social Housing provider where a tenant owns gas appliances which are installed within a property other than that owned by the Landlord

Learning Outcome 03: The learner will know how to identify, appoint and manage external gas contractors carrying out work on behalf of a social housing provider.
The learner can:

3.1 Specify the criteria that need to be applied, with regards to gas safety, when identifying and assessing the suitability of external gas contractors and their operatives to work within social housing properties.
3.2 Explain the role of Gas Safe Register in the gas industry and explain what they do to maintain the register of gas business and competent operatives.
3.3 Design a spreadsheet to monitor gas utilisation qualifications and competencies of operatives employed by an external gas contractor.
3.4 Develop a performance meeting agenda that will cover all aspects of gas safety for use when chairing a meeting with external gas contractors.

Learning Outcome 04: The learner will be able to ensure operational performance of gas operatives is monitored.
The learner can:

4.1 Analyse regulatory documentation, and guidance documents, and identify the requirements for quality control and monitoring safe gas work:
- Gas Safety (Installation & Use) Regulations
- HASAWA
- HSE publication “Use of contractors a joint responsibility”

4.2 Propose different methods of undertaking quality control on all aspects of gas operative’s work that confirms overall assessment of the application of competence.
4.3 Develop a quality control procedure that could be used to measure the performance of the gas operatives undertaking gas work
4.4 Specify action plans for the improvement and monitoring of operatives performance where failings have been found in the areas of work:
- Documentation completion
- Cleaning of gas appliances at point of service
- Diagnosis of gas component defects
- Identifying GSIUR defects on existing gas installations.

4.5 Examine the following completed documentation
- Landlord gas safety record forms
- Service records
- Commissioning reports (Benchmark)
- Attend to breakdown reports
- Building compliance notification

Identify any faults in the way they have been completed.

Learning Outcome 05: The learner will know how to deal with reports of gas escapes or fumes received from tenants.
The learner can:

5.1 Describe the responsibilities of a social landlord when receiving a report of a gas escape, fumes or Carbon Monoxide detector activation from a tenant.
5.2 Develop a procedure for handling reports of gas escapes, fumes or Carbon Monoxide detector activation from tenants.
5.3 Explain why only suitably qualified operatives should be called to attend reports of gas escapes, or genuine Carbon Monoxide detector activation from tenants.
5.4 Explain the actions to be taken by a landlord or their agents where tenants have been subject to Carbon Monoxide poisoning in a premise.

LCL-G4003: Combustion and Carbon Monoxide (D/505/5252)
Assessment Method {SR}

Learning Outcome 01: The learner will know how the gas combustion process works.
The learner can:

1.1 Describe the specific characteristics of the following gases :
- Natural Gas
- Propane
- Butane.

1.2 Analyse the effect that certain factors have on the combustion process and how those affect the constituents of the products of combustion
1.3 Explain how the combustion process of gas takes place and describe the products of complete and incomplete combustion.
1.4 Describe how an atmosphere sensing device operates

Learning Outcome 02: The learner will understand the effects Carbon Monoxide (CO) has on the human body.
The learner can:

2.1 Describe why Carbon Monoxide (CO) is dangerous
2.2 Describe the effects of CO
2.3 Describe how incomplete combustion from gas appliances can lead to death or serious injury through CO poisoning.
2.4 Explain the actions be taken to minimise the risk of appliances producing CO
2.5 Identify causes of CO in a property other than from gas appliances

Learning Outcome 03: The learner will know how Carbon Monoxide (CO) detectors are used to reduce the risk of CO poisoning and the requirements for gas engineers responding to alarm activation or reports of fumes.
The learner can:

3.1 Analyse and compare different types of CO detectors and recommend which types would be use in a property containing gas appliances.
3.2 Describe why CO detectors should not be used as a 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 a CO alarm activation.
3.5 Describe the requirements for gas engineers responding to a CO alarm activation.
3.6 Describe the requirements for gas engineers attending premises where CO poisoning has occurred

LCL-G4007: Flueing and Ventilation of Domestic Gas Appliances (K/505/5254)

Learning Outcome 01: The learner will understand the operation of an open flue chimney system.
The learner can:

1.1 Compare the following types of chimney systems and explain why, where and how they are used for gas appliances:
1.2 Describe the checks required to confirm the safe operation of an open flue chimney system
1.3 Explain the importance of the positioning of a natural draught open flued chimney outlet and give an example of correct and incorrect outlet positions explaining the reasoning in each example
1.4 Describe the requirements where a fan is to be installed in an open flue chimney system
1.5 Describe the actions to take to confirm the safe operation of chimney systems passing through other dwellings and loft spaces in a property.
1.6 Explain the effects that fans can have on an open flued chimney system and describe the action to take to counter act any adverse effects.

Learning Outcome 02: The learner will understand the operation of room sealed appliances and their chimney systems.
The learner can:

2.1 Compare the differences between a natural draught balanced flue appliance and a fanned draught balanced flue appliance.
2.2 Describe how fanned draught chimney systems have led to greater versatility of the positioning of appliances with this chimney type and explain the limitations that exist regarding chimney lengths
2.3 Explain the limitations on the positioning of balanced flue chimney outlets in relation to boundaries and openings into buildings. Explain how and why the input of an appliance can have an effect on the positioning of the chimney outlet.
2.4 Explain the requirements for the installation of a Vertex flue system.
2.5 Compare the operation of a Vertex flue system with a natural draught open flue system
2.6 Describe the use of pluming kits and their limitations of use.

Learning Outcome 03: The learner will understand the design and operation of shared chimneys and flue systems.
The learner can:

3.1 Compare the differences between a Se-duct and a U-duct flue system.
3.2 Describe the process of installing an appliance to a Se-duct or U-duct flue system and explain the importance of selecting the correct type of appliance to install.
3.3 Explain the labelling requirements for appliances fitted to Se-ducts and U-ducts.
3.4 Describe the design and operation of communal flue systems and explain the requirements for the connection of appliances to the system.

Learning Outcome 04: The learner will know the ventilation requirements for domestic gas appliances.
The learner can:

4.1 Explain why there is a requirement for permanent ventilation to be provided to outside air for certain types of gas appliances
4.2 Describe the requirements for installing ventilation to compartments containing gas appliances.
4.3 Explain the construction, location and installation requirements for ventilators supplying air to gas appliances
4.4 Describe how ventilation requirements are calculated in the following scenarios:
- Open flue appliance, input 27kW, in an internal space containing no other gas appliances
- Open flue gas fire in a single room containing no other gas appliances
- Open flue boiler with a heat input of 34kW installed in a compartment in a kitchen that also contains a gas cooking appliance.

4.5 Compare the differences between the way ventilation is calculated for open flue and flueless appliances and explain the reasons why
4.6 Compare the difference in ventilation calculations for Inset Live Fuel Effect Fires (ILFE) and Decorative Fuel Effect Fires (DFE) and explain the reasons why.
4.7 Describe the effects of a passive stack ventilation system on the operation of gas appliances

Learning Outcome 05: The learner will understand the dangers that can occur if chimney systems do not operate correctly.
The learner can:

5.1 Identify the factors that have a detrimental effect on the performance of an open flued appliance.
5.2 Describe the actions to be taken where fan assisted room sealed chimney systems are inaccessible for inspection and maintenance.
5.3 Describe the circumstances that can lead to vitiation occurring and the subsequent effect on the operation of the appliance.
5.4 Describe the visual signs that may indicate an appliance flue is spilling products of combustion into the room.

Learning Outcome 05: The learner will understand the dangers that can occur if chimney systems do not operate correctly.
The learner can:

5.1 Identify the factors that have a detrimental effect on the performance of an open flued appliance.
5.2 Describe the actions to be taken where fan assisted room sealed chimney systems are inaccessible for inspection and maintenance
5.3 Describe the circumstances that can lead to vitiation occurring and the subsequent effect on the operation of the appliance.
5.4 Describe the visual signs that may indicate an appliance flue is spilling products of combustion into the room.

LCL-G4001: Domestic Appliances, Meters and Pipework A/505/5260
Assessment Method {SR}

Learning Outcome 01: The learner will know the design and operation of gas boilers.
The learner can:

1.1 Describe the difference between types of boilers
- System boiler
- Combination boiler
- Regular boiler

1.2 Compare a system boiler and a combination boiler and highlight the advantages and disadvantages of each type
1.3 Compare the operating differences between a condensing boiler and non-condensing boiler
1.4 Describe the requirements for the siting of the chimney outlet of condensing boilers and explain why the requirements are necessary.
1.5 5 Describe the methods of installing condensate pipework both internally and externally to the building, stating the materials that are used and the reasons why they are used.
1.6 Explain the requirements for the commissioning and maintenance of gas boilers using a portable electronic combustion analyser

Learning Outcome 02: The learner will know the design and operation of gas fires.
The learner can:

5.1 Compare the four types of gas fire and explain the differences between them and the requirements for their installation:
5.2 Describe the installation requirements for cassette type gas fires
5.3 Explain why users or unqualified personnel should not adjust or disturb the coals on an Inset Live Fuel Effect Fire or a Decorative Fuel Effect Fire.
5.4 Describe the legislative requirements of a gas fire fitted into a room used for sleeping.
5.5 Explain the purpose of the catchment space
5.6 Identify suitable and unsuitable chimney outlets for use with gas fires.
- Radiant fire
- Inset Live Fuel Effect fire (ILFE)
- Decorative Fuel Effect fire (DFE).

5.7 Explain the requirements for installing a gas fire to a chimney system previously used for solid fuel.

Learning Outcome 03: The learner will understand the requirements for the installation of flueless appliances.
The learner can:

3.1 Compare the different ventilation requirements for the following flueless appliances:
- Gas cooker
- Instantaneous Water Heater
- Fixed space heater in an internal space.

3.2 Specify three different methods of satisfying the requirements for cooker ventilation in rooms with no opening window to the outside of the building.
3.3 Specify the locations and rooms into which flueless appliances must not be installed.
3.4 Outline the restrictions for the use of flueless appliances

Learning Outcome 04: The learner will understand the types, design and operation of ducted air heaters.
The learner can:

4.1 Describe the types and operation of ducted air heaters
4.2 Outline the installation requirements when replacing a ducted air heater.
4.3 Explain the purpose of providing return air paths back to a ducted air heater and describe the problems that could occur if the correct paths are not provided.

Learning Outcome 05: The learner will understand the installation requirements of combined back boiler unit and gas fire.
The learner can:

5.1 Outline the flueing, chimney and ventilation requirements for a combined back boiler unit and gas fire
5.2 Explain why the sealing of all extraneous holes in the builders opening containing a back boiler unit is important
5.3 Describe the method for the de-commissioning of a back boiler unit so that the fire can still be used safely.

Learning Outcome 06: The learner will know the location of gas meters and the requirements for installation pipework
The learner can:

6.1 Outline the location requirements for gas meters
6.2 Explain the purpose of connecting the protective bonding conductor to gas pipework and why the positioning is important.
6.3 Describe how gas pipework should be protected when:
6.4 Explain the relationship between the sizing of gas pipework and the correct operation of gas appliances
6.5 Explain the factors to be considered when sizing gas pipework
6.6 Describe the requirements for installation pipework supplied to individual flats from a remote meter location
6.7 Describe the process of undertaking a tightness test.
6.8 Describe the process of testing the operating pressure at the meter.
6.9 Outline suitable materials and jointing methods used for installation pipework and fittings

LCL-G4009: Gas Safety Legislation M/505/5269
Assessment Method {SR}

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.

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.

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

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

4.1 Describe the content and purpose of the GIUSP.

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

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

4.3 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.

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

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.

1 National Occupational Standard:

All Units have a direct relationship with the National Occupational Standards for the areas of work contained in each Unit.

2 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.

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

None prescribed

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

Learners must complete the 5 mandatory units before the qualification will be awarded. See Section 4.0 above.

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

None

6 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

7 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.

8 Planned exemptions

None

9 Specimen assessment materials.

None

10 Specified levels of attainment

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

11 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 Awards taking into account any variations applicable to that region.

SSAs: 5.2 Construction **Review Date:** Dec 2023

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*.