EAST DUNBARTONSHIRE COUNCIL

HEALTH & SAFETY PROCEDURE

Natural Gas Scope of Works

SP41

Date of First Issue:	September 2023
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Revision:	**01**
Approved by:	**Laura Gold**

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DOCUMENT CONTROL AMENDMENT RECORD

Date	Issue No	Amendment	Person Responsible for Amendment
Sept 2023	**01**	Initial issue	Colin Hannigan

1. INTRODUCTION

East Dunbartonshire Council (EDC) has a legal duty under the Health and Safety at Work Act 1974 to ensure the health, safety and welfare at work of its employees. Additionally, The Management of Health and Safety at Work Regulations 1999 (MHSWR) require that every employer undertake risk assessments to identify potential hazards to employee health and safety and anyone who may be affected by their work activity.

Besides carrying out a risk assessment, EDC have a duty to also;

- appoint competent people to help implement the arrangements;
- set up emergency procedures;
- provide clear information and training to employees;
- work together with other employers sharing the same workplace.

This document has been created to provide a suitable and correct procedure for all direct labour gas engineers and appointed contractors to follow when working on natural gas appliances and installation pipework located in East Dunbartonshire Council premises.

2. SCOPE

This procedure applies to all East Dunbartonshire Council contractors, employees, trade operatives and team/squad leaders and the role specific activities required from them.

Only competent gas engineers are allowed to carry out work on gas appliances and gas installation pipework including fittings in accordance with The Gas Safety (Installation and Use) Regulations 1998 (Amendment) 2018, industry standards and the manufactures instructions.

This procedure will ensure that all direct labour gas engineers and appointed contractors are aware of their role in fulfilling the requirements of the EDC Health, Safety and Environmental management policy, systems and industry best practice standards.

This procedure must be read in conjunction of the HSPO2 Gas Safety Policy and supporting procedures. This procedure may apply when competent gas engineers carry out work on gas appliances owned by the landlord (East Dunbartonshire Council) and where the appliance manufactures instructions are not available.

3. ROLES AND RESPONSIBILITIES

3.1 CHIEF EXECUTIVE

The East Dunbartonshire Council (EDC) Chief Executive has ultimate responsibility for health and safety and for making sure that

It is important to acknowledge that the Chief Executive's responsibilities are shared, in that the Deputy Chief Executive, Executive Officers and Senior Managers will be responsible and accountable within their areas of responsibility for

3.2 DEPUTY CHIEF EXECUTIVE

The Deputy Chief Executive has a delegated responsibility for making sure this management Procedure is implemented in respect of premises under the control of or otherwise, occupied by EDC Place, Neighbourhood and Corporate Assets.

3.3 EXECUTIVE OFFICERS & MANAGERS

The Executive Officers and Senior Manager must ensure the following:

- Adequate resources and competent person(s) are allocated to support the implementation of this Management Procedure and relevant associated Health and Safety legislation.
- Nominated person(s) are supported in implementing the measures of this Management Procedure to comply with relevant Health and Safety legislation.

3.4 HEALTH AND SAFETY & TECHNICAL COMPLIANCE TEAM

The EDC Health and Safety Team and the Technical Compliance Team will advise the management in fulfilling their duties in regards to the implementation of this Management Procedure and associated regulations and guidance.

In particular, the Health and Safety Team and the Technical Compliance Team shall:

- Advise the Executive Officer, Senior Manager, Team and Squad Leaders in fulfilling their duties.
- Work with teams to provide feedback about actions and control measures that may need to be taken to prevent harm and protect employees.
- Provide and reinforce training and education on health risks associated with certain tasks
- Monitor the compliance with this management procedure and the associated regulations and guidance by carrying out periodical audits and inspections and issuing subsequent reports detailing any possible gaps or issues that need to be addressed.

3.5 GAS ENGINEERS AND GAS CONTRACTORS

All gas appliances must be installed, serviced, and repaired in line with the manufacturer's Instructions. However, these may not always be available so therefore the information in this procedure should be followed. Engineers must comply with the gas regulations and should refer to industry standards for best practice to achieve compliance. Engineers can also contact the manufacture directly to seek technical support and should also contact their team leader for advice when required and to report unsafe situations.

4. GENERAL REQUIREMENTS

4.1 PRE-START ARRANGEMENTS

The following is a non-exhaustive list that should be followed as part of a process before work commences and may vary depending on the site conditions for instance the type of appliance, location, type of premises etc.

- Call the responsible person (Tenant, Building Manager) and advise of your estimated time of arrival
- On arrival at the property, introduce yourself showing your identification and gas safe licence card, sign in the contractors sign in/out and follow all instructions provided by the responsible person on site.
- Engage with the responsible person and anyone who may be affected by the work in the area and discuss all safety matters.
- The Engineer should ask to see the onsite six pack providing information and instructions before work commences for instance asbestos surveys and registers.
- If the boiler is over twenty years old then you should consult the manufacture to determine if the appliance contains asbestos before work commences.
- Engineers will review all risk assessments and method statements relevant for the task and implement all controls necessary before work commences.
- Engineers should complete a D02 Dynamic Risk Assessment at the start of each job.
- Lay dustsheets, around work area, erect safety signage and barriers where necessary. Engineers must wear personal protective equipment identified in the RAMS.
- Ensure all relevant manufacturer's instructions are available. Consider contacting the manufacture for technical support if necessary. A copy of the manufacturer's instructions' should be present onsite or you may be able to download a free copy from the manufactures website.
- Check the job history if available and contact the previous engineer for advice if the job is a revisit.
- The engineer should check the operation of both central heating and hot water before work commences and recheck on completion. Reset all external controls in accordance with the responsible person, advice on site once work is completed.
- Walk the system, checking all radiators are working correctly
- Visual inspect all encountered gas appliances and complete a visual risk assessment in accordance with the gas industry unsafe situations
- Comply or investigate with any existing warning notices and labels.
- Ensure all necessary tools are available, fit for purpose and of sound quality. Any specialised equipment must be correctly calibrated and certified.
- Check and test all carbon monoxide alarms in accordance with the manufactures instructions and record results on the service/maintenance certificate and or the Landlord Gas Safety Certificate.
- Carry out an initial gas tightness test as part of an annual gas safety check and service to establish if a leak is present before work commences.
- If a gas leak is present contact your team leader to discuss an action plan. Carry out a final tightness test once work is completed
- If in doubt or are concerned about safety, then you **MUST STOP** work immediately and contact your team leader or manager for advice. The Health and Safety Team may also be contacted for advice and support.

4.2 TIGHTNESS TESTING OF GAS INSTALLATION

When tightness testing and purging natural gas installations, the Operative shall carry out such work in accordance with the appropriate Institution of Gas Engineers and Managers (IGEM standards) listed below.

- IGE/UP/1: Strength testing, tightness testing and direct purging of industrial and commercial gas installations
- IGE/UP/1A: Strength testing, tightness testing and direct purging of small low pressure industrial and commercial natural gas installations
- IGE/UP/1B: Tightness testing and direct purging of small natural gas installations

The relevant test shall be determined in accordance with the guidance contained within these standards. The following are examples of when a tightness test will be required to be carried out in premises owned or managed by East Dunbartonshire Council.

- Annually as part of the gas safety check and service programme;
- Investigating a report of a gas escape;
- Investigating a report of a fumes escape including a carbon monoxide alarm activation;
- Installation and or altering gas pipework;
- Void properties;
- Engineering judgement for instance when an engineer changes gas components in a boiler, isolation of appliances, alteration of pipework or fittings;
- Engineer smells gas during a site visit or someone else reports a smell of gas during a visit.

The list above is non exhaustive.

In all cases where a gas escape has been identified or reported, the operative shall, once any repair has been completed, undertake a tightness test to confirm the system is free from any leaks in accordance with the appropriate standards.

In the event of a tightness test being unsuccessful and the escape cannot be repaired, the installation shall be made safe in accordance with The Gas Industry Unsafe Situations Procedure. Engineers shall complete a Strength, tightness testing and purging certificate and any warning advice notices and labels where necessary. Landlord Gas Safety Records will capture a tightness test, completed during an annual visit. Engineers will advise the responsible person(s) for the premises and the relevant service team leader or manager of all the work carried out including any remedial work if required immediately. All records must be kept for a minimum of two years for audit purposes.

4.3 ON GOING MAINTENANCE – WORK ON GAS APPLIANCES

Where a competent gas person performs **Work** on a gas appliance as defined in the gas safety installation and use regulations then that person will immediately thereafter

examine the following in accordance with section (26.9 gas safety checks) detailed in the Gas Safety (Installation and Use) Regulations 1998 (Amendment) 2018:

(a) the effectiveness of any flue;
(b) the supply of combustion air;
(c) subject to sub-paragraph (ca), its operating pressure or heat input or, where necessary, both;
(ca) if it is not reasonably practicable to examine its operating pressure or heat input (or, where necessary, both), its combustion performance;
(d) its operation so as to ensure its safe functioning,

And forthwith take all reasonably practicable steps to notify any defect to the responsible person and, where different, the owner of the premises in which the appliance is situated or, where neither is reasonably practicable, contact the gas transporter.

Where work has been carried out on the (Wet) central heating system pipework or part of the system then the operative should aim to complete the following tasks where applicable*:*

- Thoroughly flush systems with clean cold water;
- Thoroughly flush the system, or appropriate part of the system, with hot water;
- Power flush system if necessary
- Refill, completely vent all points and radiators and hydraulically test where applicable;
- Add the correct dosage of corrosion inhibitor where applicable;
- Check for water leaks
- Inspect and test all components and confirm safe operation.
- Instruct the site responsible person in the proper and safe working of the systems and hand over all manufacturers literature provided with each part, pump, thermostat and programmer intended for user's instructions
- Remove all waste from site and offer best advice.

Engineers and Contractors will carry out Preliminarily Electrical Checks before and after the exchange of all electrical components for instance printed circuit boards (PCB), pumps, fans, gas valves, diverter valves etc.

Engineers and Contractors when carrying out work on gas appliances will complete a gas service/maintenance certificate and will carry out a maintenance certificate when carrying out work on wet central heating systems including hot water systems.

4.4 TENANT OWNED APPLIANCES & VISUAL INSPECTION OF GAS APPLIANCES

All appliances owned by the tenant will be subject to a visual inspection during an annual gas safety check and servicing of all appliances owned by East Dunbartonshire Council with the results positively recorded on the landlord gas safety certificate and or service/maintenance certificate where appropriate.

A visual inspection of a gas appliance will be carried out when an appliance has been encountered but not worked on for instance during routine maintenance work with the test

results positively recorded on certificates. Please refer to HSPO2 Gas Safety Policy section 9 and the gas industry unsafe situations procedure for more information.

4.5 COMMISSIONING OF NEWLY INSTALLED GAS APPLIANCES

When the installation phase is complete, the gas appliance(s) will now need to be commissioned. The Gas Safety Installation and use regulations, building regulations and the Gas Industry Unsafe Situations Procedure state that only commissioned appliance(s) may be left connected to the gas supply. If the appliance(s) cannot be commissioned then the Engineer or contractor will cap the appliance(s) from the gas supply with an appropriate fitting, attach an Un-Commissioned label to each appliance, complete a written warning notice and inform the responsible person(s) for the premises and the estates team leader and or representative immediately.

Contractors appointed to install gas appliances in non-domestic premises shall provide a written commissioning procedure along with Risk assessments and method statements as part of a Pre-Construction Phase Plan before woks start and will be checked by the Health and Safety Team, Technical and Compliance Team and the Estates Team.

In house engineers install appliances in domestic premises and Contractors appointed to install gas appliances in non-domestic premises will commission appliance(s) in accordance with the manufactures instructions and industry standards for instance IGEM IGE/UP/4-Commissioning of Gas-Fired Plant on Industrial and Commercial Premises. Contractors will aim to take advantage of the manufacture to attend site and commission appliance(s) and equipment. This process is the preferred method as it often allows the warranty to be extended.

The Engineer or Contractor must complete all relevant certification as described in section 12 of the Gas Safety Policy HSPO2. The benchmark must be completed normally found in the manufactures instructions and the instructions must be left with the responsible Person(s) for the premises on completion. All certificates must be kept on file for a minimum of two years for audit purposes.

4.6 GAS EMERGENCIES

Our direct labour gas engineers and external contractors will refer to East Dunbartonshire Council's procedure titled SP16 Gas and Carbon Monoxide Emergency Procedure for more information. Our policies and procedures must be read in accordance with the gas regulations, building regulations and industry standards. The procedure explains what certificates will be completed for various scenarios and that our gas safe registered engineer(s) or contractors should follow the guidance for investigating reports of fumes and carbon monoxide and/or alarm activation detailed in BS 7967 and complete appropriate fumes investigation forms accordingly.

5. COMMERCIAL GAS APPLIANCES – ANNUAL GAS SAFETY CHECK(S) AND SERVICING

5.1 GAS FIRED CENTRAL HEATING AND HOT WATER BOILERS

The gas fired central heating and hot water boilers may include the following appliances and is not an exhaustive list:

- Wall mounted boilers
- Free standing boilers
- Traditional hot water boilers
- Condensing boilers
- System boilers
- Combination boilers
- Thermal storage boilers

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions.
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check the stability of the appliance
- Check the suitability of any boiler base / plinth
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check the size location and suitability of any open vent and cold feeds
- Check all pressure relief and safety valves discharge to a safe position
- Check the condensate trap, pipework is clear and is installed with suitable material and terminated in an acceptable position
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Inform the estates team leader and or representative of any damage that exists on the appliance and / or surroundings before commencing work
- Check ventilation is adequate with appropriate warning labels fitted and check mechanical ventilation interlocks are operational where applicable
- Safely isolate gas, electric and where applicable water supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard
- Visually inspect the entire chimney, removing access panels as required, including any section in the roof space including the termination
- Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed where applicable

- Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required
- Check the feed and expansion cistern water level and or a sealed systems pressure, top up as required
- Check the appliance for obvious signs of gas escapes and repair or make safe
- Check the appliance and system for obvious water leaks and other defects
- Check all appliance seals, gaskets, sight glasses and baffles (if fitted) Replace if necessary
- Clean dust and deposits from within the appliance casing and surrounding area
- Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components
- Check the ignition system and clean replace as required
- Check and clean fans and any air pressure sensing tubes
- Check and clean condensate traps, refill with clean water and refit to the appliance
- Check clean and lubricate, as required, all plant / boiler room automatic isolation valves and their associated systems
- Check, clean, lubricate and adjust other controls as required
- Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components
- Check all plant / boiler room automatic isolation valves and their associated systems for correct operation
- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system
- Reconnect the water supply and checks for any leaks
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Ensure all gas test points are reinstated after tests and check with leak detection fluid and calibrated gas sniffers when required
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings where applicable
- Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, pressure and temperature safety valves, and all other safety devices
- Check hot water flow rate and temperature rise is in accordance with manufacturer's instructions on instantaneous hot water appliances
- Check operation of radiators / heat emitters / calorifiers / plate heat exchangers
- Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests
- Carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results
- Ensure all Flue gas sample test points are reinstated after tests where necessary

- Test and reset all controls to suit the building user and discuss with the building manager and or the Duty Holder
- Complete all necessary documentation and advise the Estates Team Leader and the responsible person for the building of any remedial work required
- The contractor will complete a service/maintenance certificate and a Strength, tightness testing and purging certificate. Warning notices will be completed in accordance with the gas industry unsafe situations if required.

5.2 GAS FUELLED SPARK IGNITION ENGINES - COMBINED HEAT AND POWER

Gas Fuelled Spark Ignition Engines – Combined Heat and Power (CHP) and the range of units may include the following:

- Micro – up to 5kW electrical power
- Small – scale turbines producing approximately 500kW of electrical power e.g.
- Spark ignition engines
- Micro – turbines producing between 30 and 100 KW of electrical power
- Small – scale turbines producing approximately 500KW of electrical power

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check that the unit has been correctly assembled and supported
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Flexible gas connections are in good condition (In accordance with the manufactures instructions or if not available, every 5 years even if it appears to be in good condition
- Safely isolate the gas and electric services
- Replace any components which show signs of wear or damage
- Replace/top up lubricating oil to required level (Dispose of old oil legally)
- Replace oil filter if required by the manufacturer
- Lubricate all bearings
- Inspect air intake system and check pressure drop through air filter and replace if required by the manufacturer
- Inspect the engine cylinder head valve clearance and adjust accordingly if necessary
- Check inlet and exhaust valve seats for regression, wear deposits (Where identified establish the cause and rectify prior to re-commissioning the engine)
- Inspect the heat exchanger(s) for signs of damage. Establish cause and rectify before re-commissioning the engine
- Check the condition and operation of any air or gas pressure switches and their connecting tubes for blockages or damage etc. Replace as necessary
- Examine the spark ignition device. Clean, reposition for correct spark gap, replace as necessary

- Check the condensate trap if fitted. Ensure that there are no blockages in condense line. Check any non-return valve in the condense line for correct operation. Look for signs of corrosion and rectify
- Inspect the exhaust system for signs of water ingress. Repair and or reseal as necessary
- Reassemble all components and turn on electricity
- With the gas supply isolated, carry out a tightness testing on disturbed joints and or the pipe system up to the nearest means of isolation
- Carry out let-by tests on all safety shut of valves (SSOVs)
- Turn on gas and re-commission
- Complete relevant documentation and handover to the responsible person(s) Building Manager, Estates Team Leader and or representative

5.3 GAS FIRED, DIRECT AND INDIRECT, FORCED CONVECTION AIR HEATERS

Gas Fired, Direct and Indirect, Forced Convection Air Heaters and System may include the following appliances:

- Free standing floor mounted
- Suspended high level
- Ducted / Combined units

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check the stability of the appliance
- Check the suitability of any heater base / plinth
- Check the suitability of the method of suspension of the appliance and if necessary replace any corroded components.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check registers and diffusers for damage and operation
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.
- Inform the estates team leader or representative/ site responsible person of any damage that exists on the appliance and / or surroundings before commencing work
- Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks are operational
- Isolate gas and electric supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards

- Visually inspect the entire chimney including any section in the roof space
- Check that the appliance chimney connection is satisfactory
- Check flue flow and continuity using a smoke pellet and re-inspect all exposed chimney pipe including any section in the roof space for leakage
- Check the appliance for obvious signs of gas escapes
- Check all appliance seals
- Clean dust and deposits from within the appliance casing and surrounding area
- Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components
- Check and clean combustion and recirculation fans and any air pressure sensing tubes
- Check clean and lubricate, as required, all boiler room automatic isolation valves and their associated systems
- Check, clean, lubricate and adjust other controls as required
- Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components
- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Ensure all gas test points are reinstated after tests and check with leak detection fluid and calibrated gas sniffers when required
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats
- Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices
- Check air flow rate and temperature rise is in accordance with manufacturer's instructions where appropriate
- Carry out an electronic analysis of the products of combustion to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results
- Carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO2 levels, recording all results where necessary.
- Test appliance for spillage in accordance with manufacturer's instructions
- Test and reset all controls to suit the site responsible person's requirements
- Complete all necessary documentation and advise the Estates Team Leader and the responsible person for the building of any remedial work required
- The contractor will complete a service/maintenance certificate and a Strength, tightness testing and purging certificate. Warning notices will be completed in accordance with the gas industry unsafe situations if required.

5.4 RADIANT HEATERS AND MULTI-BURNER SYSTEMS

Gas Fired Overhead Radiant Heaters and Systems may include the following appliances:

- Suspended overhead radiant tube heaters
- Radiant Plaque heaters
- Ducted / Combined units

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance/s, and that the appliance/s is / are installed in accordance with the appropriate standards and manufacturer's instructions
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance / s in proximity to other fixtures, fittings and combustible materials
- Check the suitability of the method of suspension of the appliance and if necessary, replace any corroded components.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check condition of flexible hose and replace where necessary (In accordance with the MI's or if not available, every five years even if it appears to be in good condition)
- Check than air / flue ductwork is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Inform the estates team leader or representative/ site responsible person of any damage that exists on the appliance and / or surroundings before commencing work
- Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks are operational
- Isolate gas and electric supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct, and that the electrical installation complies with the appropriate standards
- Check the appliance / s for obvious signs of gas escapes
- Check all appliance seals
- Check radiant tubes or plaques for integrity where applicable
- Ceramic plaques should be cleaned with a soft brush or compressed air as they are very fragile and should be treated with care where applicable
- Clean inside of tubes using large tube brush where applicable
- Check and clean burners and injectors. Examine for any signs of cracking or damage to these components and if necessary, replace
- Clean reflector and inspect for damage or corrosion. Clean further or replace where necessary.
- Check and clean combustion fans, exhaust fans and any air pressure sensing tubes.
- Check, clean, lubricate and adjust other controls as required
- Clean the flame supervision device components

- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Ensure all gas test points are reinstated after tests and check with leak detection fluid and calibrated gas sniffers when required
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings
- Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, temperature controls and all other safety devices
- Flueless systems - carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO2 levels, recording all results
- Flued systems - carry out an electronic analysis of the products of combustion to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results
- Test and reset all controls to suit the site responsible person's requirements
- Complete all necessary documentation and advise the Estates Team Leader and the responsible person for the building of any remedial work required
- The contractor will complete a service/maintenance certificate and a Strength, tightness testing and purging certificate. Warning notices will be completed in accordance with the gas industry unsafe situations if required.

5.5 COMMERCIAL CATERING APPLIANCES AND INSTALLATIONS

Commercial gas catering appliances may include the following:

- Hotplates / Ovens / Ranges and Combination Appliances
- Over / Underfired Grillers and Salamanders
- Deep Fat Fryers
- Steaming, Proving and Baking Ovens
- Baine Marie and Warming Cupboards or any combination thereof

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings, and combustible materials
- Check the stability of the appliance
- Confirm that the appliance's restraining device is correctly fitted
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used

- Check ductwork is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Inform the site responsible person of any damage that exists on the appliance and / or surroundings before commencing work
- Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks, where fitted, are operational
- Check the extract flow rate against the rate detailed on the canopy data plate; ensure that the canopy is capable of clearing products of combustion and cooking vapours without spillage
- Isolate gas and electric supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct, and that the electrical installation complies with the appropriate standards
- Check the appliance for obvious signs of gas escapes
- Check all appliance seals
- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats
- Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices
- Carry out an ambient air test to the requirements of BS7967 to confirm satisfactory CO2 levels, recording all results
- Test and reset all controls to suit the responsible person for the premises and or the FM team leader
- Complete all necessary documentation and advise East Dunbartonshire Council of all remedial work required. Please see section 12 of the Gas Safety Policy HSP02 for more information about record keeping.

5.6 GAS APPLIANCES IN EDUCATIONAL ESTABLISHMENTS

The following appliances may be in science laboratories, the technical department, the art department, and the food technology department. This is a non-exhaustive list:

- Domestic gas cooking appliances
- Brazing Hearth/Forge gas burners
- Fume cupboards
- Kilns

East Dunbartonshire Council will appoint a gas safe registered business and licenced engineers to safely install, commission, service and maintain gas appliances located in

classrooms in accordance with the gas and building regulations, industry standards and the manufactures instructions. Please refer to the Gas Safety Policy HSPO2 section 5.5 and SP16 Gas and Carbon Monoxide Emergency Procedure for more information.

6. DOMESTIC GAS APPLIANCES – ANNUAL GAS SAFETY CHECK(S) AND SERVICING

6.1 CENTRAL HEATING AND HOT WATER BOILERS

Domestic gas boilers may include the following:

- Wall mounted boilers
- Free standing boilers
- Traditional hot water boilers
- Condensing boilers
- System boilers
- Combination boilers
- Thermal storage boilers
- Back Boiler and or circulator with fire front

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions.
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check the stability of the appliance
- Check the suitability of any boiler base / plinth
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check the size location and suitability of any open vent and cold feeds
- Check all pressure relief and safety valves discharge to a safe position
- Check the condensate trap, pipework is clear and is installed with suitable material and terminated in an acceptable position
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Check ventilation is adequate with appropriate warning labels fitted if installed in a compartment
- Safely isolate gas, electric and where applicable water supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard
- Visually inspect the entire chimney, removing access panels as required, including any section in the roof space including the termination

- Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed where applicable
- Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required
- Check the feed and expansion cistern water level and or a sealed systems pressure, top up as required
- Check the appliance for obvious signs of gas escapes and repair or make safe
- Check the appliance and system for obvious water leaks and other defects
- Check all appliance seals, gaskets, sight glasses and baffles (if fitted) Replace if necessary
- Clean dust and deposits from within the appliance casing and surrounding area
- Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components
- Check the ignition system and clean replace as required
- Check and clean fans and any air pressure sensing tubes
- Check and clean condensate traps, refill with clean water and refit to the appliance
- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system
- Reconnect the water supply and checks for any leaks
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Ensure all gas test points are reinstated after tests and check with leak detection fluid and calibrated gas sniffers when required
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings where applicable
- Check the integrity of any positive pressure appliance using an approved method
- Check the safe operation of all the appliance and system controls including thermostats, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, pressure and temperature safety valves, and all other safety devices
- Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests
- Carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results
- Ensure all Flue gas sample test points are reinstated after tests where necessary
- Test and reset all controls to suit the building user (Tenant)
- Complete all necessary documentation and advise the Tenant of any remedial work if required
- Check hot water flow rate and temperature rise is in accordance with manufacturer's instructions on instantaneous hot water appliances
- Check operation of radiators / heat emitters / calorifiers / plate heat exchangers

- The engineer shall complete a Landlord Gas Safety Certificate and if applicable a Warning notices for any unsafe gas situations which will be completed in accordance with the gas industry unsafe situations.

6.2 WARM AIR HEATERS

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions.
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check the stability of the appliance
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check the size location and suitability of any open vent and cold feeds
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Check ventilation is adequate with appropriate warning labels fitted if installed in a compartment
- Safely isolate gas, electric and where applicable water supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard
- Visually inspect the entire chimney, removing access panels as required, including any section in the roof space including the termination
- Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required
- Check the appliance for obvious signs of gas escapes and repair or make safe
- Check the appliance and system for obvious water leaks and other defects
- Check all appliance seals, gaskets, sight glasses and baffles (if fitted) Replace if necessary
- Check the ignition system and clean replace as required
- Clean dust and deposits from within the appliance casing and surrounding area
- Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components
- Remove circulation fan from housing, clean with a soft brush and check for smooth running
- Check condition of the seal between the appliance and the plenum and reseal if necessary
- Check condition of the return air duct and its associated seals and clamps and replace any defects accordingly
- Check that there is a satisfactory return air path from each room which has a warm air outlet, except kitchen, bathroom and WC
- Remove the circulation filter and clean, replace if necessary

- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Ensure all gas test points are reinstated after tests and check with leak detection fluid and calibrated gas sniffers when required
- Check the safe operation of all the appliance and system controls including thermostats, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, pressure and temperature safety valves, and all other safety devices
- Check the flame picture with the fan turned off and again with the fan running If flames are disturbed when fan is running, check heat exchanger's integrity- See note below for more information
- Replace heat exchanger if necessary, however your team leader may replace the appliance accordingly based on risk. Consult your team leader for advice.
- Test appliance(s) for spillage in accordance with the manufacturer's instructions
- Carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results
- Test and reset all controls to suit the building user (Tenant)
- Complete all necessary documentation and advise the Tenant of any remedial work if required
- The engineer shall complete a Landlord Gas Safety Certificate and if applicable a Warning notices for any unsafe gas situations which will be completed in accordance with the gas industry unsafe situations.

Note - This is most easily achieved by watching the flames before the circulating fan starts up. If the flames get distorted or blown around when the circulating fan starts, then the heat exchanger may be cracked or corroded. Further checks must then be carried out in accordance with industry standards to determine if the heat exchanger is damaged for instance a visual inspection using a torch and or carrying out a smoke test. If the heat exchanger is damaged and the appliance is not working safely and left in operation, then this could lead to products of combustion (Carbon Monoxide) being forced around the property through the ductwork that could lead to a fatality. If in doubt, contact your team leader for advice immediately and if necessary make the appliance safe in accordance with the gas industry unsafe situations procedure.

6.3 GAS FIRES AND SPACE HEATERS (LANDLORD OWNED ONLY)

Domestic Gas Fires may include the following appliances:

- Radiant Gas Fire
- Inset Live Fuel Effect Gas Fire (ILFE)
- Decorative Fuel Effect Gas Fire (DFE)
- Flueless Catalytic Gas Heater
- Cassette Gas Fire

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions.
- Complete all checks in accordance with the manufacturer's instructions.
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials
- Check the stability of the appliance
- Check the suitability of the hearth, dimensions, and constructions
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check visually for signs of spillage on the appliance and / or adjacent surfaces
- Check the ventilation requirements in accordance with the manufactures instructions and industry standards
- Check the room space is suitable for such an appliance
- Isolate the gas supply
- Remove the dress guard and radiants on **radiant gas fires** and handle with care due to the fragile nature of the material. Clean or replace if necessary
- If damaged and unable to replace radiants during visit, then make safe in accordance with the gas industry unsafe situations
- Visually inspect fire via aperture for evidence of cracking in heat exchanger (Where the heat exchanger has split most models are not repairable and the appliance should be removed and made safe or replaced)
- Remove imitation coals on Inset Live Fuel Effect (ILFE) and decorative fuel effect (DFE) Gas Fires taking note of their position on the fire tray. Always refer to the manufactures instructions as incorrect alignment may lead to incomplete combustion. If the instructions are not available, make safe in accordance with the gas industry unsafe situation.
- Check condition and number of imitation coals – clean or replace if necessary
- Remove base material (often vermiculite or similar) where necessary on some fires
- Remove the gas fire
- Remove closure plate on radiant gas fires and discard old closure plate tape
- Remove tray and appliance assembly from firebox (ILFE) fires
- Release fixing cables and remove firebox from builders opening (ILFE) fires
- Inspect fire tray for evidence of corrosion or distortion
- Check condition of foam seal on firebox and replace if necessary (ILFE) fires
- Check condition of fixing cables and replace if necessary (ILFE) fires
- Empty the catchment space and check to see if the space complies with industry standards
- Visually inspect the chimney/flue and remove dampers or fix in the permanently open position when encountered.
- Reinstate the closure plate with new tape and or the firebox depending on type of fire
- Visually inspect the entire chimney, removing access panels as required, including any section in the roof space including the termination

- Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed where applicable
- Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required
- Refit and reassemble the gas fire
- Test disturbed gas joints for leakage with leak detection fluid
- Clean burners and injectors, replace if damaged
- Light appliance, check flame picture and the safe operation of flame failure devices if fitted
- Check the gas operating pressure and heat input
- Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests
- Carry out a Combustion Performance Analysis
- The engineer shall complete a Landlord Gas Safety Certificate and if applicable a Warning notices for any unsafe gas situations which will be completed in accordance with the gas industry unsafe situations.
- Complete all necessary documentation and advise the Tenant of any remedial work if required

6.4 GAS FIRE FRONT WITH DECOMISSIONED REDUNDANT BACK BOILER

Where the fire forms part of a decommissioned redundant back boiler or back circulator unit, the redundant heat exchanger flue ways and any associated components shall be checked for the presence of rust or shale and cleaned accordingly to ensure a clear air passage and integrity of the flue system.

In addition, the fire is treated as a standalone appliance with the ventilation requirements calculated accordingly. ***Unless stated otherwise by the back-boiler manufacturer, the decommissioned back boiler should have the gas supply to the boiler capped at the three-way valve, the electrics safely isolated, a decommissioned warning label attached, and the burner and controls should be left in position.***

6.5 DOMESTIC COOKING APPLIANCES (LANDLORD OWNED ONLY)

Domestic Gas Fired Cooking Appliances. May include the following appliances:

- Free standing cookers – with or without eye level grills
- Built-in hotplates
- Built-in Ovens
- Independent grills
- Any combination thereof

Annual gas safety checks must be carried out with the following service tasks which may include but not limited to:

- Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions
- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings, and combustible materials
- Check the stability of the appliance
- Confirm that the appliance's restraining device is correctly fitted
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used
- Check visually for signs of heat damage on the appliance and / or adjacent surfaces
- Inform the site responsible person of any damage that exists on the appliance and / or surroundings before commencing work
- Check ventilation is adequate for the size of the room. Check for openable window or equivalent direct to outside air
- Carry out a gas tightness test and safely isolate the gas and electric supplies before dismantling
- Check there are no signs of damage to the wiring, the fuse rating is correct, and that the electrical installation complies with the appropriate standards
- Check the appliance for obvious signs of gas escape
- Remove hob burner plates
- Check and clean burner ports, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components
- Inspect all burners for corrosion and signs of distortion and replace if necessary
- Check and clean combustion and recirculation fans and any air pressure sensing tubes.
- Check, clean, lubricate and adjust other controls as required
- Check door seals (stiff taps or scorched facia may indicate a fault)
- Check the condition of the flexible hose and bayonet for cracks or other signs of deterioration and replace if necessary
- Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness
- Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance
- Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary
- Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats
- Check the safe operation of all the appliance and system controls including gas taps, thermostats, ignition devices, flame supervision devices, temperature controls and all other safety devices
- Carry out a flue gas analysis to measure the combustion readings where applicable
- Test and reset all controls to suit the site responsible person's requirements
- The engineer shall complete a Landlord Gas Safety Certificate and if applicable a Warning notices for any unsafe gas situations which will be completed in accordance with the gas industry unsafe situations.

7. MONITOR AND REVIEW

As part of the EDC Health and Safety Management System, the EDC Health and Safety Team will conduct regular audits and inspections to monitor the implementation of this management procedure.

The EDC Health and Safety Team will review this management procedure every two years from the date of signing or sooner as a result of any changes to legislation or some other event i.e. a major incident or accident.

The EDC Health and Safety Team will provide feedback in the form of a report following any audits and inspections. When necessary, the procedure will be amended and reissued with an updated version number.

All Team Leaders must ensure that local procedures are updated to reflect any changes to the management procedure.

8. REFERENCES

HSE Guidance and Regulation

- Health and Safety at Work Act 1974
- The Management of Health and Safety at Work Regulations 1999
- The Gas Safety (Installation and Use) Regulations 1998 (Amendment) 2018
- Gas Safety (Management) Regulations 1996
- Gas Safety (Rights of Entry) Regulations 1996
- Gas Appliance (Safety Regulations) 1995
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
- Construction (Design and Management) Regulations 2015
- Building (Scotland) Regulations 2004
- Control of Asbestos Regulations 2012
- Control of Substances Hazardous to Health Regulations (COSHH) 2002
- The Personal Protective Equipment at Work 1992 (Amendment) Regulations 2022
- Dangerous Substances and Explosive Atmospheres Regulations 2002
- Pressure Systems Safety Regulations 2000
- Pipelines Safety Regulations 1996
- Health and Safety (Safety Signs and Signals) Regulations 1996
- The Provision and Use of Work Equipment 1998
- Housing (Scotland) Act 2014
- The Data Protection Act 2018
- The Gas Industry Unsafe Situations Procedure
- The Institution of Gas Engineers and Managers (IGEM) Standards
- Gas Safe Technical Bulletins
- British Standards (BSI)
- Building Standards Technical handbook
- Approved Codes of Practice (L56) The Gas Safety (Installation and Use) (Amendment) Regulations 2018

East Dunbartonshire Council: Health and Safety Policy / Procedures

- HSP01 Health and Safety Policy
- HSP02 Gas Safety Policy
- HSP03 Fire Safety Policy
- HSP04 Management of Asbestos Policy
- HSP05 Management of Contractors Policy
- HSP06 Occupational Health Policy
- HSP07 Controlling Workplace Hazards Policy

- SP01 Accident & Incident Reporting Procedure
- SP02 Asbestos Management for Property Maintenance Procedure
- SP03 Trade Specification for Scaffolding Procedure
- SP05 Health and Safety Management for Technical Services TRADES Procedure
- SP12 Hazardous Materials Procedure
- SP13 Manual Handling Procedure
- SP15 CDM Procedure
- SP16 Gas and Carbon Monoxide Emergency Procedure
- SP19 Lone Worker Procedure
- SP23 Working at Height Procedure
- SP27 PPE and RPE Procedure
- SP29 Duty Holder Procedure
- SP31 LOLER Procedure
- SP35 Accident and Incident Investigation Procedure
- SP37 Gas Industry Unsafe Situations Procedure
- SP38 Permit to Work Procedure
- SP46 Quality Reviews for Gas Engineers
- SP47 Gas and Fuelled Appliance Service Access Process

The above list is not exhaustive