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HEALTH & SAFETY PROCEDURE

GAS AND CARBON MONOXIDE EMERGENCY PROCEDURE

SP16

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1. INTRODUCTION

There are two major safety hazards associated with gas services that are as follows. The potential risk of a **gas escape**, causing explosion, fire or asphyxiation that may cause serious harm or fatalities and damage to assets. The other major hazard is a risk of a **fumes escape** associated with faulty fuel burning appliances that can cause incomplete combustion that may release carbon monoxide into the room causing people serious health issues or death. Both hazards may negatively impact the reputation of the Council.

Natural Gas is distributed to domestic properties and non-domestic premises owned by East Dunbartonshire Council (EDC) by means of distribution from suppliers through a network of underground pipes. Natural gas is mainly made up of methane in the UK with a pungent chemical which has also been added to help people detect a gas leak by smell. Natural gas is lighter than air and will only burn when there is a range of concentration of gas mixed with air. The concentration required is known as flammability limits and are typically for **Methane – 5% to 15% gas in air**. An energy source, which is typically in the form of heat, must be introduced to ignite the air/gas mixture.

Liquefied Petroleum Gas (LPG) is a hydrocarbon gas that exists in a liquefied form. LPG is used as a fuel in a range of applications including the supply to heating and cooking appliances, industrial applications, in vehicles and as a propellant and refrigerant. LPG can be obtained primarily as propane, butane or a mixture of the two. A powerful odorant is added so that it is easily detected. LPG is flammable and heavier than air so that it will settle and may accumulate in low spots such as drains and basements if a leak occurs. Here it could present a fire or explosion or a suffocation hazard. LPG boils at a low temperature and to avoid it evaporating due to its low boiling point, it is typically stored in pressurised steel vessels such as gas bottles or bulk LPG tanks in which the fuel is delivered to site by suppliers. East Dunbartonshire Council have some domestic properties where heating and cooking appliances are supplied by LPG fuel.

Carbon Monoxide (CO) is a colourless and odourless poisonous gas produced when a fuel is not burnt properly. This mostly happens with faulty boilers, gas fires, and cookers or when a chimney or ventilation shaft is blocked. The more it is absorbed into the body the greater the toxic effect it has, with the brain and heart, the two organs which are most vulnerable. The symptoms of exposure to CO are generally dependant on the degree of exposure where in severe cases deterioration can happen quite quickly ultimately resulting in, seizures, coma then death.

EDC employ qualified competent persons for instance gas safe registered engineers and contractors to install, commission, service and maintain gas appliances in accordance with the Gas Safety (installation and use) Regulations 1998 as amended 2018, Industry standards and the manufacturer's instructions. EDC install carbon monoxide detectors, carbon dioxide detectors, heat detectors, gas detectors and smoke alarms to help mitigate the risk from an accidental release from toxic fumes including gas leaks or fire.

The purpose of this procedure is to provide guidance for all EDC employees and contractors to follow when dealing with a reported gas or fumes escape from a property user. This procedure is to be adopted by all involved in the process.

2. SCOPE

This procedure applies to all EDC properties, workplaces, housing stock, the common parts of multi-occupancy properties in which the Council, as commercial landlord retains maintenance responsibility and all relevant work undertaken in these properties on behalf of EDC.

This procedure applies to all Council employees, contractors undertaking work on the Council's behalf and anyone likely to be put at risk as a result of work on these properties. It complements the Health and Safety Policies HSP01, HSP02 Gas Safety Policy, Procedure SP01 Accident and Incident Reporting and the Fire Emergency Evacuation Plan for each site. In addition to our natural gas and fumes escape procedure this document also includes a gas emergency plan to help manage a potential hazardous release from liquefied petroleum gas (LPG) and from solid fuel appliances for instance from Bio-Mass renewable energy boilers.

3. ROLES AND RESPONSIBILITIES

3.1 CHIEF EXECUTIVE

EDC is the Gas Landlord as defined under the Gas Safety (Installation and Use) Regulations 1998 as amended 2018. The landlord of domestic and non-domestic premises and retains the ultimate responsibility for ensuring the safety of employees, occupants and tenants in properties under their control.

The Chief Executive is ultimately responsible for ensuring the health, safety and welfare of staff, visitors, tenants and other building occupiers.

It is important to acknowledge that the Chief Executive's responsibilities are shared, in that the Depute Chief Executive, Executive Officers and Managers will be responsible and accountable within their areas of responsibility for ensuring gas safety and compliance in accordance with the Gas Safety (Installation and Use) Regulations 1998 as amended 2018.

3.2 EXECUTIVE OFFICERS & MANAGERS

Executive Officers and Managers must ensure the following:

- Adequate resources and competent person(s) are allocated to support the implementation of this Gas and Carbon Monoxide Emergency Procedure and with relevant Gas safety legislation and industry standards within the respective service or section.
- Nominated person(s) are supported in implementing the measures of this Emergency Procedure to comply with relevant Gas Safety legislation and industry standards with continual resources and arrangements made available.

3.3 PROPERTY MAINTENANCE TEAM

Property Maintenance are responsible for managing gas safety for EDC domestic housing stock. Management systems are developed and implemented to help promote and support gas safety. EDC employ suitably qualified gas safe registered competent gas engineers and or contractors to safely install, commission, service and maintain gas appliances in accordance with the Gas Safety (installation and use) Regulations 1998 as amended 2018, Industry standards and the manufacturer's instructions. Management must ensure that all

specialist equipment are calibrated annually and in accordance with the manufacturer's instructions with certificates made available for audit purposes.

Property maintenance are responsible for managing the safe installation, commission service and maintenance of all liquefied petroleum gas appliances including their flues, ventilation requirements, fittings and installation pipework by appointing suitably competent engineers and or contractors.

Management will arrange the annual testing of carbon monoxide, smoke and heat detectors in conjunction with annual gas safety checks in every EDC domestic housing stock and are responsible for ensuring that all gas paperwork are kept on record for a minimum of two years for audit purposes. Management will ensure that all engineers and staff with key responsibilities have received regular training in regards to the information detailed in this procedure including any updates in the future.

3.4 ESTATES TEAM

The Estates Team are responsible for managing gas safety for EDC's operational and non-operational, non-domestic properties including schools. Management systems are developed and implemented to help promote and support gas safety. EDC employ suitably qualified gas safe registered businesses with competent gas safe registered engineers (Contractors) to safely install, commission, service and maintain gas appliances in accordance with the Gas Safety (installation and use) Regulations 1998 as amended 2018, Industry standards and the appliances manufactures instructions.

Management will arrange for the annual testing of carbon monoxide, carbon dioxide, gas and heat detectors in conjunction with annual gas safety checks that are carried out in every EDC property with all related gas safety paperwork kept on record for a minimum of two years for audit purposes.

Estates management are responsible for the production and maintenance of associated information related to the Council wide gas assets and other fuel burning appliances to be kept on a register.

Estates management are responsible for managing the safe installation, servicing, maintenance and commissioning of all Biomass boilers including their fuel storage areas in accordance with industry standards and the manufacturer's instructions. This is achieved by employing competent contractors.

Estates management are responsible for managing the safe installation, servicing, maintenance and commissioning of all oil fuelled boilers in accordance with industry standards and the manufacturer's instructions. This is also achieved by employing competent contractors.

3.5 FACILITIES MANAGEMENT

Facilities Management are responsible for managing commercial gas catering appliances for EDC commercial catering establishments including schools. Management systems are developed and implemented to help promote and support commercial gas catering safety. EDC employ suitably qualified commercial catering gas safe registered competent gas engineers (Contractors) to safely install, commission, service, test and maintain commercial catering gas appliances. This includes mechanical ventilation systems and interlock systems in accordance with the Gas Safety (installation and use) Regulations 1998 as amended 2018, Industry standards and the manufacturer's instructions.

Facilities Management shall ensure that all commercial gas catering equipment are gas safety checked annually including all associated mechanical ventilation systems, interlock

systems, carbon monoxide detectors and or carbon dioxide detectors where applicable. All gas safety records shall be kept and securely stored for a minimum of two years for audit purposes.

Facilities Management are responsible for the production and maintenance of associated information related to Council wide commercial gas catering assets which should be kept on a register.

Facilities Management are responsible to ensure staff are trained where applicable to safely De-Ash a Biomass Boiler and provide suitable and sufficient risk assessments and method statements with clear and concise information and instructions for all key staff identified.

3.6 HEALTH AND SAFETY TEAM

The Health and Safety Team shall provide support and guidance to all staff about occupational health, safety and gas safety issues. The Health and Safety Team shall review all HS1a, HS1b and the gas escape and fumes forms related to gas incidents and store records for audit purposes. The Health and Safety Team will aim to attend all gas incidents where applicable to support the management team for instance at our educational establishments and will complete the HS1b form and save a copy to help analyse data and learn from past events to help make further improvements. If for whatever reason the Health & Safety representative is not present during a gas incident then the Building Manager and or the Estates representative may also complete the HS1b form and submit a copy to the Health & Safety Team.

3.7 RESPONSIBLE PERSON

The responsible person in relation to any premises owned by the Council could be a tenant in a domestic property or an appointed duty holder who is responsible for a building such as a Head Teacher, Deputy Head Teacher, School Support Manager and or the Building Manager in a school. The Duty Holder is required to maintain an overall standard and quality that is conductive to good health, safety and quality of work. This should include good record keeping of all fuel burning appliances, stored on site and ensure a regular inspection/testing regime of all carbon monoxide and carbon dioxide detectors where applicable are applied. They must ensure that all staff have been trained and are made familiar of this emergency procedure and information is located on notice boards.

EDC shall appoint a suitably competent gas safe registered person(s) to report all gas safety incidents to the HSE as a requirement by RIDDOR where applicable on behalf of the Council along with the Health and Safety Manager. Further information may be found in EDC's Health and Safety Procedure SP01 Accident and Incident Reporting. The nominated person(s) will provide gas safety advice and support to all services where applicable throughout the Council.

3.8 EMERGENCY RESPONSE CENTRE (ERC)

On receipt of a call, the ERC shall contact the Emergency Service Provider (SGN) on 0800 111 999 regarding all potential gas and fumes escapes. They aim to be onsite within two hours for all controlled leaks and one hour for all uncontrolled leaks. Our nominated direct labour gas safe registered engineer(s) and or the relevant fuel contractor shall also be contacted by the ERC team and instruct them to attend the site however they may only start work once SGN complete their initial investigation/repair were gas services are present on site.

ERC staff will follow the flowchart provided in this procedure (See Appendix 3) and shall complete a Reported Gas/Fumes Escape Form (See Appendix 4). ERC staff will

immediately save a copy and send copies to the relevant service Manager for Property Maintenance or the Estates Team Leader where applicable and the Health and Safety Team who will keep a copy on file for audit purposes.

ERC staff must contact the relevant service Manager for Property Maintenance or the Estates Team Leader where applicable and the Health and Safety Manager by telephone during normal working hours to discuss an action plan and arrangements for key personnel to attend the site to supervise.

All ERC personnel shall receive training to help manage all gas safety calls in accordance with this procedure. The emergency response team ERC can be contacted by telephone on 0141-574-5773 24hrs a day seven days a week.

3.9 EMPLOYEES AND GAS ENGINEERS

Employees: To take reasonable care for the health and safety of themselves and of other persons who may be affected by their acts or omissions at work. To cooperate with EDC in assisting those to fulfil the requirements detailed in this procedure.

Staff shall report all RIDDOR reportable gas incidents to their manager immediately who shall report to the health and safety team in accordance with the instructions in the HR Accident and Incident Reporting Procedure. All gas incidents must be reported to the health and safety team by completing an HS1a form related to accidents and an HS1b form for dangerous occurrences where applicable.

The Health and Safety Team are only permitted to report all RIDDOR reportable incidents to the HSE assisted by the appointed gas safe responsible person(s).

Contractors are responsible for reporting all RIDDOR reportable incidents to the HSE and must also inform the relevant council manager and the Health and Safety Team immediately.

Engineers: Must comply with the Gas Safety (installation and use) Regulations 1998 as amended 2018, Industry standards and the manufacturer's instructions. They must follow the Gas Industry Unsafe Situations Procedure (GIUSP) and report all unsafe situations to the responsible person(s) and to their manager immediately. All gas engineers must use an in date calibrated flue gas analyser and consider the use of a personnel calibrated CO Alarm where necessary. Engineer's 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. All gas paperwork must be kept for at least two years for audit purposes. Please see section 5 for more information about attending gas incidents.

4. NATURAL GAS METER AND ISOLATION VALVES

4.1 GAS METER LOCATION

Gas meter refers to a meter which is used by the gas supplier to determine gas billing.

Domestic gas meters may be in the following locations:

- An external meter box that will require a universal key to open (See Figure 1). This may be a surface mounted box, built in meter box to the fabric of the building or a semi-concealed meter box which is partially buried into the ground.
- Internally within a garage, premises, or outbuilding, or
- At the property boundary in a purpose-built meter housing (Multi-Occupancy)

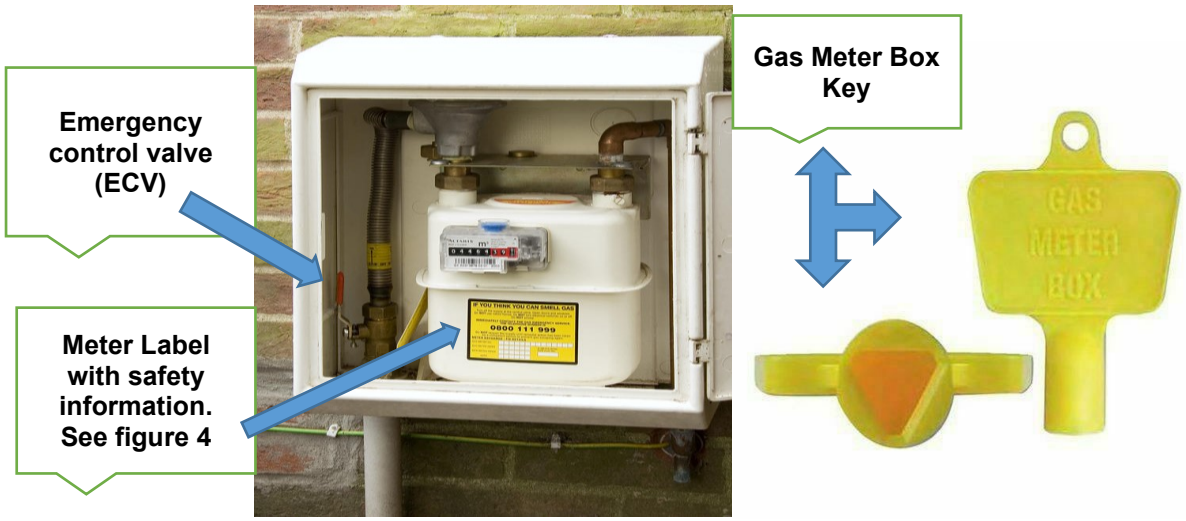


Figure 1: Surface mounted domestic gas box and gas meter box key

Commercial gas meters may be located in the following locations:

- An external meter box that will require a universal key to open. This may be a surface mounted box. (See Figure 2).
- Internally within a room, cupboard, premises (Plant room) or outbuilding (See Figure 5).
- At the property boundary in a purpose built meter housing

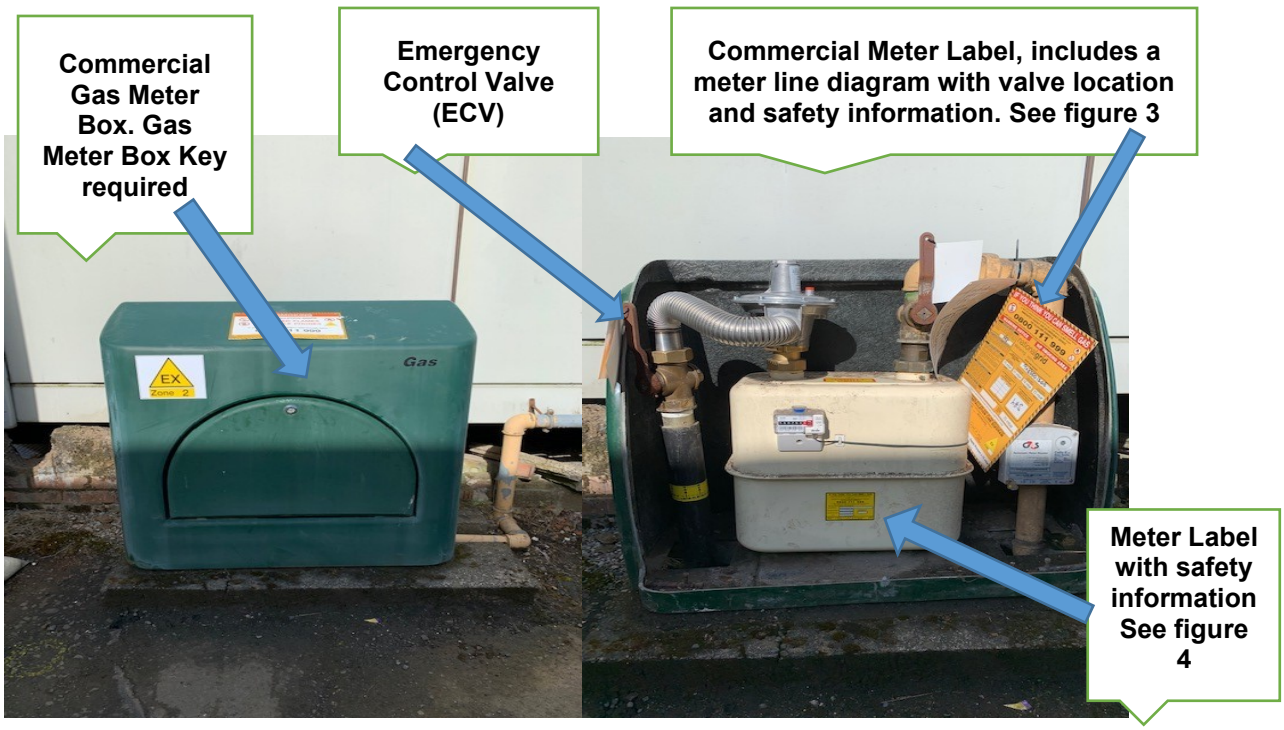


Figure 2: An External Commercial Gas Meter Box

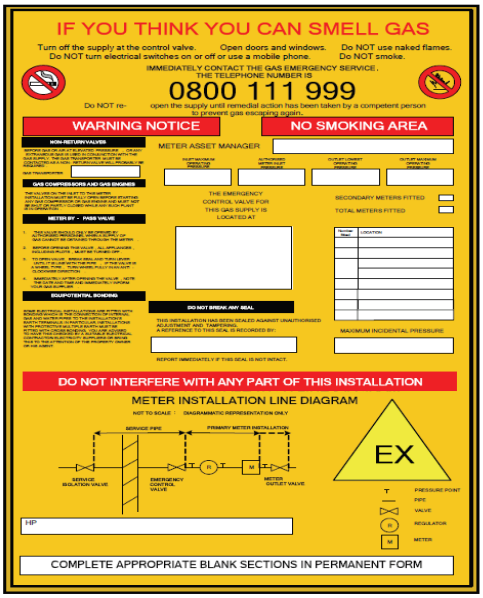


Figure 3: Natural Gas Commercial Installation emergency warning sign.

Figure 4: Natural gas emergency warning sign (Meter label)

Figure 5: Commercial Gas Meter located in Plant Room

4.2 EMERGENCY CONTROL VALVE (ECV)

To satisfy the Gas Safety (Installation and Use) Regulations, an Emergency Control Valve (commonly referred to as an ECV) must be provided for the user to shut off the supply of gas to the premises in an emergency. It will be situated at the end of the gas service or distribution main and upstream of the incoming primary meter installation normally located on the left hand side of the meter installation. (See Figure 1, 2 & 5).

The emergency control must be operated by a key, lever or **hand-wheel** (Hand-Wheel -Turn fully clockwise to isolate the gas) which should be securely attached to the operating spindle. Where a **key or lever** is used, the 'open' position should be when the key or lever is parallel to the axis of the pipe. The 'off' position should be approximately one quarter turn of the key or lever to the right or left and, where the key or lever moves in the vertical plane, the move to the 'off' position should be in a downwards direction. Either the key or lever itself, or a nearby permanent notice, should indicate how the control operates and when the gas is 'off' and 'on'.

The ECV must be readily accessible for use in an emergency and the space around it must be kept clear of stored items and flammable materials.

4.3 ADDITIONAL EMERGENCY CONTROL VALVE (AECV)

For use in emergency situations, further manual Additional Emergency Control Valves (commonly referred to as AECVs) may have been installed as near to the points where gas pipework enters each separate teaching, preparation area, commercial kitchens or premises such as multi occupancy properties or flats. Particular attention shall be given to considerations of unauthorised use and accessibility in the event of an emergency. (See Figure 6).

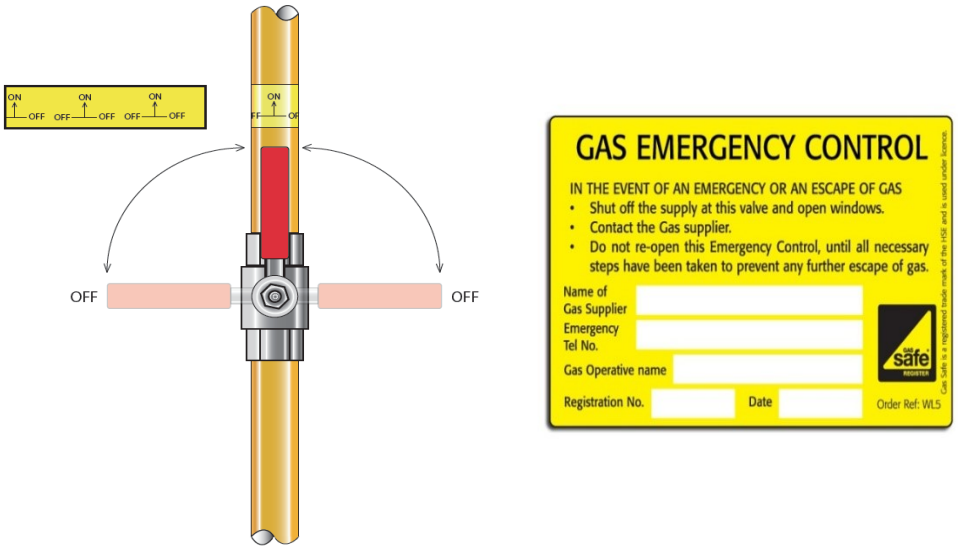


Figure 6: Additional Emergency Control Valve (AECV) with information/instructions

Any AECV shall:

- Be easy to operate and located in a readily accessible position for use by teaching and technical staff. It shall not be in a locked area such as in a secure box or in another teaching or preparation area unless suitable provisions are made for access in an emergency.
- If manually operated, be fitted with a suitable key, lever or hand-wheel which is securely attached to the operating spindle.

- Where the key or lever moves in the vertical plane, move to the “off” position in a downward direction.
- Be labelled or marked to show its open and closed positions (See figure 6).

Note: Teachers **must ensure** that the AECV is **turned off** after each class and double check all gas valves serving individual burners are isolated prior to closing or opening the AECV. A permanent notice near the AECV to remind the teacher to turn off the gas before leaving the class and provide safety information/emergency plan in the form of a sign should also be installed.

Note: FM employees **must ensure** that the AECV is **turned off** after each shift and double check all gas valves serving individual burners are isolated prior to closing or opening the AECV in the commercial kitchen where applicable. A permanent notice near the AECV to remind the FM staff to turn off the gas when not in use and a sign to provide safety information/emergency plan should also be installed.

4.4 AUTOMATIC ISOLATION VALVES

Where it is not practicable to install a manual isolation valve in a readily accessible position or where it is required to interlock the gas supply with other safety systems such as a mechanical ventilation system, an automatic means of isolation (AIV) shall also be installed.

Ventilation shall be designed to provide adequate ventilation for occupants and to dilute fumes and water vapour generated from combustion processes for example in science laboratories while carrying out experiments using Bunsen burners. Food technologies department’s while using domestic gas cookers or technical departments while using brazing equipment. The same ventilation principle may also apply to commercial gas catering appliances in kitchen environments connected to mechanical ventilation systems.

Where CO2 monitors are employed as part of the ventilation control or alarm strategy, the monitors should be installed and inspected in accordance with industry standards and in accordance with the manufacturer’s instructions. The CO2 monitors should be linked to the gas proving unit in spaces that have gas appliances to check for high levels of CO2 in the room while appliances are in operation. The monitor shall have an audible or visual alarm to activate at 2800ppm. In addition, high level of CO2 shall shut down the gas supply/appliances at 5000ppm. Staff should be trained in the operation of the carbon dioxide monitor and be aware of the appropriate action to take in the event of an alarm activation (See Figure 7).

Figure 7: Example of a Gas Proving Unit linked to a CO2 detector

Where an AIV is required in gas supplies in teaching areas which have appliances that are not fitted with flame safeguards, an automatic means of proving the downstream valves of the burners/appliances is closed should be fitted (See Figure 8). This gas proving system should not supply more than one teaching area. The system shall be such that it can only be reset by authorised persons, for example with a key or a key code.
A means to stop the system in an emergency shall be positioned near the teacher's desk/board and either next to the main light switches or at the exit from the room. The stop device may need to be shielded unless in a protected position.

The gas proving system should be checked daily when in use and the teacher must turn the gas supply off by pressing the system stop button and turn the key to the off position and remove the key. The teacher must do this at the end of the working day and or if leaving the classroom at any time. A permanent notice near the control system to remind the teacher to turn off the gas proving unit and a notice to provide safety information/emergency plan should also be installed.

Note: A similar system should be installed in a commercial gas catering kitchen environment and FM staff should check daily when in use and must turn the gas supply off by pressing the system stop button at the end of the working day. A permanent notice near the control system to remind the FM catering employee to turn off the gas at the proving unit and also a notice to provide safety information/emergency plan should also be installed.

Staff need to be made aware of the function of the automatic valve system. If the gas supply has been shut down for two weeks or more without physical closure of all upstream and downstream manual valves to the isolated section, consideration needs to be made to purge the air out of the downstream pipework by a competent gas engineer.

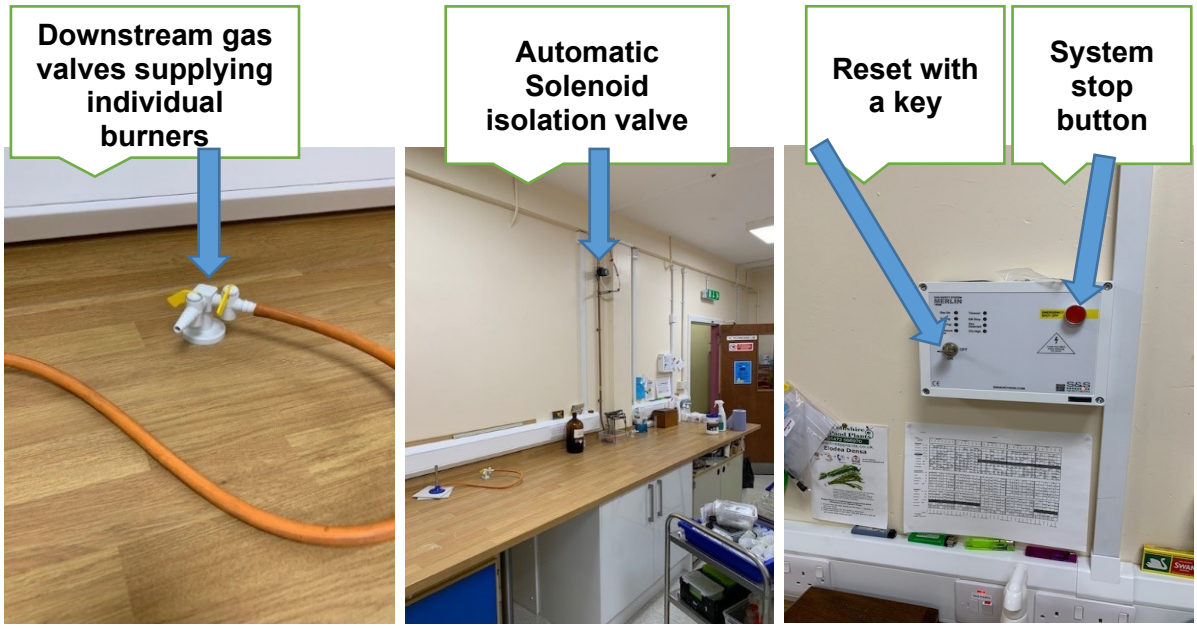


Figure 8: Example of an automatic isolation valve/Gas proving Unit in teaching and or commercial catering areas

4.5 BOILER PLANT ROOM

A means to automatically shut off the fuel supply (both oil and gas) in the event of a fire shall be installed. This should include an emergency shut-off push button at the entrance/exit to the plant room/boiler house and for any gas system shut off shall be accomplished by closure of a valve complying with BS EN 161. (See Figure 9). The system shall isolate the electrical power to some or all the plant as considered appropriate. In the event of an alarm condition, the system should require manual resetting by an authorised person.

Figure 9: Example of an emergency shut of push button and an automatic isolation valve installed to the gas supply located in the plant/boiler house

Where shut-down of the heating plant is the result of a power supply failure and the burners are fitted with a full flame safeguard system (this is normally the case), automatic resetting (local or remote) is permitted. Alternatively, a system of alarm notification to remote key holders may be used. Many modern package burners require local manual reset in the event of loss of power, as required by BS EN 676.

Fitting of a gas detection system which will in the event of a gas escape, leading to elevated levels of gas in air, trigger the closure of the fuel supply valve. Flammable gas detectors need to be mounted in accordance with the manufacturer's instructions and at locations where gas leakage may accumulate. There should be a carbon monoxide detection system which will in the event of a fumes escape or alarm activation isolate the fuel burning appliance in the plant room with an alarm system to help warn people. If this is not practical then a battery operated carbon monoxide alarm should be installed and interlinked to other carbon monoxide alarms located in the building and interlinked with one another to help warn people if the alarm activates.

Boiler rooms are to be locked secure at all times to prevent unauthorised access. Entry to boiler rooms is to be restricted to site maintenance staff and servicing engineers and other specified authorised individuals. No unauthorised access warning signs should be fitted at the entrance of each plant room.

Plant rooms need to be visited on a regular basis to visually check that nothing appears to be untoward. The person performing the visits (Building Managers) has to be aware of the procedures for responding to gas escapes as well as other operational problems with the plant.

It is not permissible to store combustible materials near, or be allowed to accumulate around any fuel fired appliances or within meter rooms.

5. GAS AND FUMES ESCAPES

5.1 HIERARCHY OF PRIORITIES AND GAS SAFETY INSTRUCTIONS

Apply the following hierarchy of priorities when dealing with natural gas or fumes escapes:

- Safeguard life
- Safeguard property
- Isolate all gas escapes by turning off the appropriate Emergency Control Valve, Additional Emergency Control Valve and or automatic isolation valve, Appliance control valves if safe to do so.
- Isolate all fumes escape by turning off all fuel burning appliances and ventilate the area by opening windows and doors if safe to do so.

The responsible person for the building should make the area safe pending an investigation by the Emergency Service Provider (SGN) and the relevant competent engineer by following the safety instructions provided by the Emergency Response Centre (ERC) listed below:

- **Do** isolate the gas supply at the gas meter (ECV) and fuel burning appliances if safe to do so
- **Do** ventilate the property (open doors and windows) if safe to do so.
- **Do** extinguish all naked flames, if safe to do so
- **Do** not smoke or strike matches
- **Do** keep away from the affected area **and or** evacuate the building
- **Do** contact the 24hrs Emergency Response Centre (ERC) 0141-574-5773 who will contact the Gas Emergency Service Provider (SGN) 0800 111 999
- **Do Not** enter a basement or cellar if there is a smell of gas or report of fumes
- **Do Not** enter wood pellet storage areas
- **Do Not** enter Biomass boiler rooms if CO alarm reactivates
- **Do Not** operate electrical switches (On or Off)
- **Do Not** enter the building unless instructed to do so by SGN
- **Do Not** operate fuel burning appliances until instructed to do so by a competent engineer

5.2 FIRST PERSON ON SITE

Where engineers encounter a gas incident which has resulted in death, unconsciousness, or persons being taken to hospital, or significant property damage rendering either part, or the whole property uninhabitable.

It is extremely important that the incident scene is not disturbed so as to preserve evidence for any future investigation. However, if safe to do so, they shall make safe.

Please see Health and Safety Procedure **SP37 Gas Industry Unsafe Situations - Section 7: Gas Incidents** for more information. The official industry version of the Gas Industry Unsafe Situations Procedure which has also been published as Gas Safe Register Technical Bulletin (TB) 001, is in effect a ”live” document and is revised periodically as new information/guidance is developed. To ensure that you keep up-to-date with the current requirements of this Procedure visit: http://igem.org.uk/ or https://www.gassaferegister.co.uk/sign-in/ login and visit the Technical Information area and search for the controlled (current) copy which should be read in conjunction with East Dunbartonshire Councils version of the same titled procedure.

5.3 NATURAL GAS ESCAPE PROCESS FOR GAS ENGINEERS AND CONTRACTORS

The Emergency Response Centre on receipt of a call will contact the Emergency Service Provider (SGN) who will arrive on site and carry out an investigation that will include a tightness test of the gas installation in accordance with industry standards. In the event of a gas industry unsafe situation the SGN engineer will provide advice and guidance during their visit and if necessary, will make the installation safe, inform the responsible person(s) on site of any action taken and will leave a warning advice notice and attach a warning label where applicable.

Once SGN have conducted their investigation and have informed EDC's appointed gas engineer that they are happy for them to carry out any remedial work then the engineer will carry out an investigation on behalf of East Dunbartonshire Council and will provide both verbal and written information and instructions to the responsible person(s) as soon as reasonably practicable.

In the event of a gas or fumes escape our gas engineer will carry out a tightness test in accordance with industry standards for instance IGEM/UP/1, IGEM/UP/1A or IGEM/UP/1B where applicable. They will complete appropriate paperwork to record details of the work carried out for instance a gas tightness testing and purging form and if they have carried out work on a gas appliance as part of their investigation, they will complete all 26.9 checks in accordance with the Gas Safety (Installation and Use) Regulations 1998 Amendment 2018 (GSIUR). If they perform work on a gas appliance, then they must complete the relevant paperwork to record all details for instance a service/maintenance form.

If they encounter an unsafe situation on the pipework or related to a gas appliance then they must follow the gas Industry unsafe situation procedure by informing the responsible person(s), and with their permission make safe, leave a warning advice notice and where applicable attach a warning notice.

A copy of the paperwork should be left on site, a copy must be sent to the relevant service representative for East Dunbartonshire Council and a copy kept by the engineer and or our appointed gas safe registered business for audit purposes. All paperwork must be kept for a minimum of two years for audit purposes.

5.4 FUMES ESCAPE PROCESS FOR GAS ENGINEERS AND CONTRACTORS

In addition to all the points raised in section 5.3 of this procedure our gas safe registered engineer(s) 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. All gas paperwork must be kept for at least two years for audit purposes.

Property Maintenance Domestic Gas Engineers should follow Appendix 9 titled IGEM/G/11 Supplement 1 - Responding to domestic CO alarm activations/reports of fumes after attendance by the emergency service provider or the Liquefied Petroleum Gas supplier.

If a fuel burning appliance other than gas may be the cause of an escape of fumes, then they must be isolated and not turned back on until investigated by the relevant competent fuel contractor. The contractor must provide by means of written paperwork details of all safety checks carried out including, the date the checks were carried out, signatures obtained by both the engineer and the representative from the council who received the paperwork and information confirming the safe operation of the appliance before the appliance may be considered safe and turned back on. All paperwork must be kept for at least two years for audit purposes.

All fuel burning appliances must not be turned back on again until checked by a competent fuel contractor and Council representatives have received in writing all paperwork to confirm the safe operation of the appliance.

Engineers must use a calibrated flue gas analyser in accordance with industry standards, training and the relevant manufactures instructions. Engineers should also use a personal calibrated carbon monoxide alarm when carrying out a fumes investigation to help warn them of elevated levels of carbon monoxide present in the atmosphere.

5.5 SIGNS OF CARBON MONOXIDE

It can sometimes be difficult to recognise the signs of carbon monoxide (CO) poisoning therefore it is important to have CO detectors installed in accordance with the manufacturer's instructions. All fuel burning appliances must be inspected by competent engineers in accordance with industry standards and the manufactures instructions.

It is important to keep a close eye out for the symptoms associated with (CO) poisoning for instance:

- Headaches
- Dizziness
- Nausea
- Breathlessness
- Collapse
- Loss of consciousness

These can often be mistaken for a cold or "flu like" symptoms, other signs to look out for are:

- The symptoms only occur at work or at home
- They disappear or get better when you leave but come back when you return
- They are worse when the fuel source is turned on or the heating is turned up in the winter
- Other people in the building have reported similar symptoms

There are other danger signs to look out for:

- (Signs of Distress) – Visually inspect fuelled appliances and or chimney/flue systems for signs of discolouration, heat damage or signs of soot deposits
- Excessive condensation in a room where an appliance is in use
- Have an unusual flame picture (Lazy yellow/orange) gas flames rather than a neat blue flame
- When appliances are operated, they are spilling/leaking products of combustion into the dwelling normally evident due to unusual smells, strange tastes, humidity etc.

If you or anyone else is suffering or have symptoms of CO poisoning or concerns, then you should seek medical assistance immediately (Call 999 in an emergency) and evacuate the building.

5.6 INSPECTION, INFORMATION, INSTRUCTION AND TRAINING

The Duty Holder or the senior responsible person for instance the School Support Manager and or the Building Manager must ensure the following requirements:

- Ensure that the requirements of this procedure are communicated to all of their staff and reinforce such communication on a regular basis

- Ensure that all staff receive regular gas safety awareness training and are encouraged to develop and promote safe working practices and attitudes towards gas safety.
- Ensure all detectors are recorded in a register/inspection form and are inspected/tested annually by a competent engineer and monthly by a competent person in accordance with the manufacturer's instructions.
- Ensure copies of all fuel burning appliances, detectors have manufacturer's instructions, including a copy of this procedure and are readily available on site.
- Ensure all fuel burning appliances are inspected, serviced and maintained by competent engineers at least annually and in accordance with industry standards/manufacturer's instructions. All records must be kept on file for a minimum of two years.
- Ensure where applicable that all buildings with an external locked gas meter box have access to a meter box key and that all staff are aware of its location in the event of an emergency.
- Ensure that details of the gas/fumes escape emergency process are located on notice boards, main entrance, beside additional emergency control valves (AECV) and automatic isolation valves in classrooms and commercial kitchens.

5.7 BIOMASS BOILERS

East Dunbartonshire Council have biomass boilers as an alternative to oil or gas boilers in some estates mainly at educational establishments. Bulk wood pellets are stored in large separate sealed silos, hopper/tanks or rooms that is either fitted with a screw feeder (auger) connected to the boiler or the hopper tank is mounted over the boiler for gravity feeding. Due to the enclosed nature of these wood pellet storage areas the atmosphere inside can become oxygen depleted and a toxic atmosphere can accumulate for instance a build-up of carbon monoxide.

These spaces are considered as confined spaces and only trained authorised personnel are permitted to enter these dangerous hazardous areas. East Dunbartonshire Council appoints competently trained contractors approved by the manufacturer/supplier to install, commission, service and maintain wood pellet storage areas and biomass boilers. East Dunbartonshire Council train FM staff to De-ash biomass boilers in accordance with risk assessments and in accordance with manufactures instructions.
Both the wood pellet storage area and the biomass boiler room must be securely locked to prevent unauthorised access. Warning signs should be present on both sides of the store room door and should include the following information:

- **DANGER - RISK OF CARBON MONOXIDE POISONING** - There is a danger to life from odourless carbon monoxide and lack of oxygen. Check atmosphere before entry with an appropriate device. No entry for unauthorised persons.
- Keep children away from the storeroom.
- No smoking, fires or naked flames.
- The room should be adequately ventilated before entering. Keep the door open whilst inside.
- There is a danger of injury from movable parts.
- Filling procedures should be carried out accordance to the instructions of the heating installation company and the pellet suppliers.

Before FM staff (Building Manager) enters the biomass boiler room they must inform the Duty Holder for the building, this may be the Head Teacher at a school.
All openings i.e. doors, windows, hatch to be left open to ensure maximum ventilation.

Biomass boiler rooms must have carbon monoxide detectors installed to warn trained operatives of the potential escape of carbon monoxide in the atmosphere.

If a CO alarm activates in the biomass boiler room which is **external** to the building then the Building Manager and or the Duty Holder must follow Appendix 5: CARBON MONOXIDE (CO) ALARM ACTIVATION in remote plant rooms **(Plant room is out-with the main school building).**

If the storage area and the biomass boiler room are located in an integral part of the building then the Building Manager and or the Duty Holder must follow Appendix 6: CARBON MONOXIDE (CO) ALARM ACTIVATION in integral boiler rooms, kitchens or classrooms **(where plant rooms, kitchen and classrooms are within the school building).**

6. Liquefied Petroleum Gas (LPG) for heating and cooking appliances

6.1 GENERAL REQUIREMENTS

Due to its different properties to Natural Gas only persons deemed competent in the area of Liquefied Petroleum Gases (LPG) will be allowed to work on these types of appliances. East Dunbartonshire Council appoints competent gas safe registered engineers and or contractors with relevant LPG qualifications identified on the individual's gas safe licence card kept on their person to safely install, commission, service, maintain gas appliances, installation of pipework, fittings, chimneys and ventilation requirements where necessary.

Where LPG cylinders and bulk storage vessels (See Figure 10 & 11) are used they have to be kept in a safe and secure location outside and regular checks for leakage need to be made by competent persons. The storage area should be fenced, gated to prevent unauthorised access, safeguard from vehicular movement and kept free of combustible materials. They must be installed on level firm ground with safety signage erected to warn people of the potential danger for instance Danger LPG Highly Flammable, No naked lights.

The gas supplier's emergency contact details should be located on the cylinders and bulk storage vessels alike. The suppliers can provide specific safety information about separation distances between the vessels and any boundary or buildings. They also provide industry standards codes of practice including safety data sheets which should be utilised to manage risk.

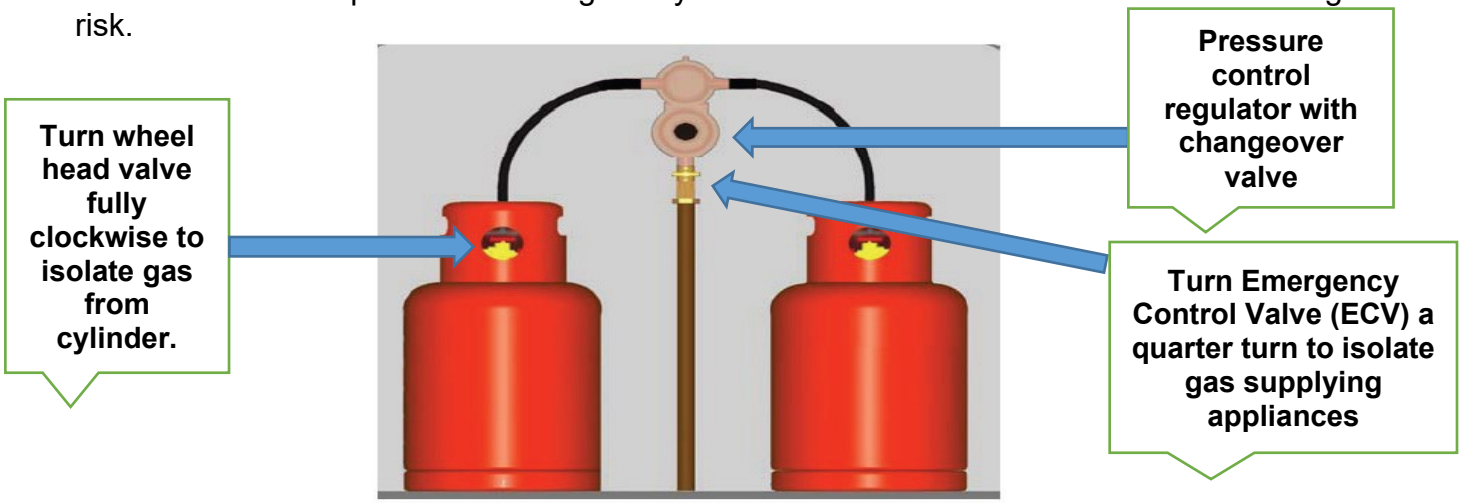


Figure 10: Small Two Cylinder LPG Supply with Automatic Changeover Valve

Figure 10 shows two-cylinder changeovers are used in order to ensure that there is a constant supply of LPG to a house or business.

Where a pressure control regulator is connected to cylinders by flexible hoses, the regulator inlet connection has to always be above the level of the cylinder valve(s) ensuring that the hose slopes downwards towards the cylinder (see Figure 10).

A label should be located close to the emergency control valves with clear instructions of what to do and how to isolate the gas in an emergency situation. For instance, the wheel head valves on cylinders should be turned fully clockwise to isolate the gas and the type of emergency control valve illustrated in Figure 11 should be a quarter turn to isolate the gas supply.

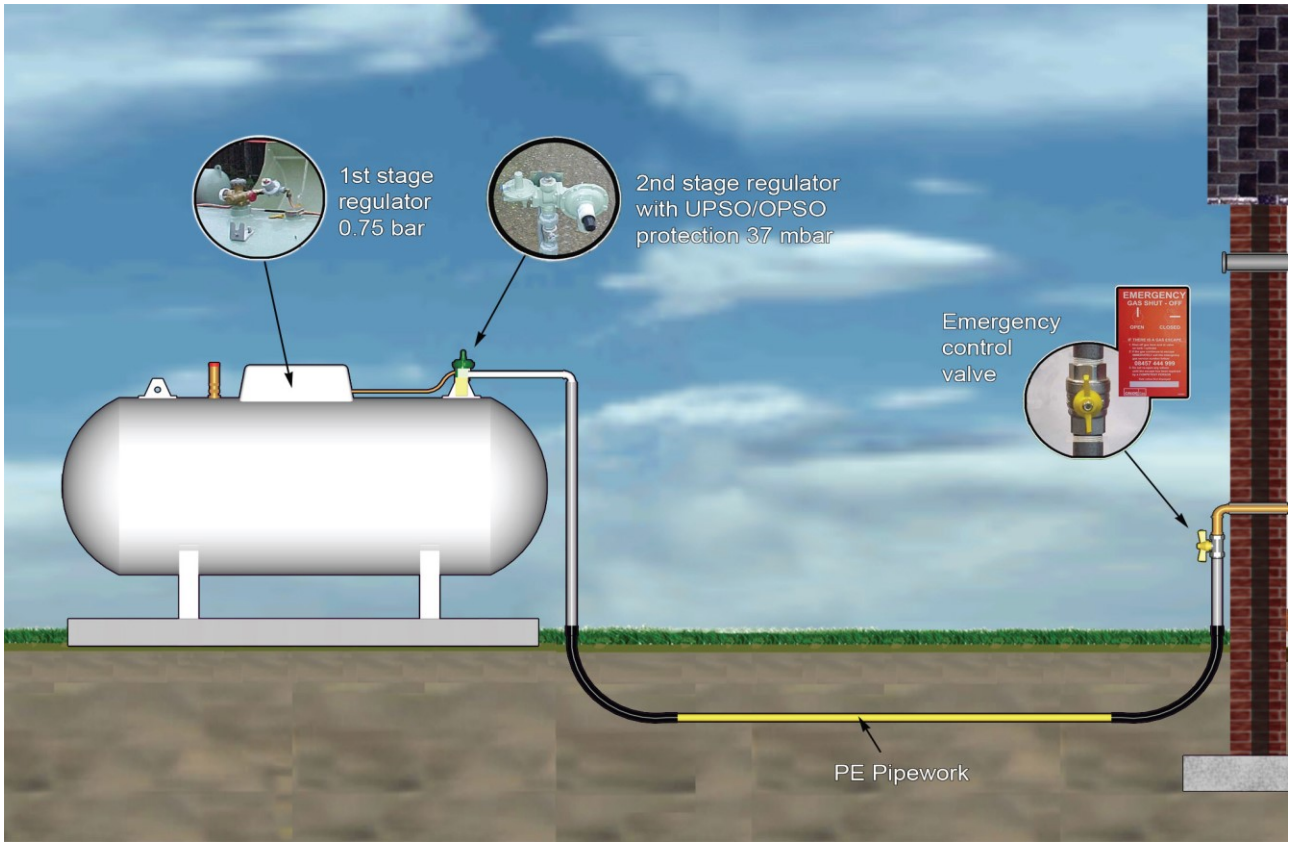


Figure 11: Bulk LPG Storage Vessel

6.2 SAFE USE AND STORAGE OF LPG CYLINDERS

LPG gas cylinders are to be properly restrained where in use, being stored or being transported. Always store and use gas bottles in an upright position. Store gas bottles in a well-ventilated place, make sure gas bottles are stored outside in a secure and safe location. Ensure gas bottles are stored away from sources of heat and ignition. When cylinders are not in use or being transported ensure, blanking caps are used.

No LPG gas cylinders are to be used or stored in basements, cellars or rooms below ground level. Keep them away from building entry/exit points. Do not store or use gas bottles lying down or roll them even if they are empty. Examine cylinders before use for signs of damage. **DO NOT** use damaged cylinders. Return them to the store and inform

your line manager who will arrange for them to be labelled as faulty and to be safely removed by the supplier. All hoses/connectors involved in LPG apparatus must be checked for damage prior to use. Any damage must be repaired immediately or replaced with new. Used/empty cylinders should be returned to the secure storage area after use and your line manager will arrange return to supplier. Never lift the cylinders by the valve, Safe manual handling procedures are to be followed in the unloading, loading, transport and storage of full or empty cylinders at all times.

6.3 EMERGENCY PROCEDURE (GENERAL ADVICE)

- In any emergency situation it is of paramount importance to avoid endangering human life.
- Carefully assess the situation before approaching. **IF SAFE TO DO SO**.
- Ensure there is a safe route of access and escape available.
- Wear the right personal protection equipment including clothing
- Stay upwind of any fire or escaping LPG
- Avoid coming in contact with the LPG, as it can cause severe cold burns and saturate clothing which may subsequently catch fire
- **NOTE:** Any vessel involved in a fire may suddenly rupture. Change in the size or noise of the fire may be an indication, but there may be no warning. **IF IN DOUBT, DO NOT APROACH.**
- If you suspect a leak, contact the supplier, information should be located on the cylinder or vessel for instance if supplied by Calor Gas call their emergency service team on 03457 444 999.
- You must also call the UK national emergency response service on 999 and or 112 immediately if there is any sort of fire.
- **Always Remember Safety First, Do not put yourself or others at risk**.
- All gas safe registered engineers and or appointed contractors who attend site and identifies an unsafe gas situation during a visit, must follow the gas industry unsafe situation procedure where necessary and report all gas incidents to their manager and or team leader as soon as reasonably practicable.
- An HS1a and or HS1b form must be completed where necessary by the engineer in attendance with the support of their line manager/team leader and a copy sent to the Health & Safety Team via email.

6.4 EMERGENCY PROCEDURE (LEAKAGE WITHOUT FIRE)

If an appliance or cylinder is found to be leaking without the gas igniting the action taken should include the following where it is safe to do so:

- Leaks may be identified by smell, noise or frost at the source, by leak detection fluid or a calibrated gas detector
- **NEVER SEARCH FOR LEAKS WITH A NAKED FLAME**
- Do not use electrical switches, extinguish all sources of ignition if safe to do so
- Isolate the leak by turning off all the wheel head valves on the cylinders or vessel and the emergency control valve outside your home.
- If the leak persists, then evacuate the building. If necessary, evacuate any area which is in the path of the gas cloud, eliminating all sources of ignition at the same

time. Or if in any doubt evacuate and keep a safe distance. Calor gas recommend a 60-metre exclusion zone if possible.
- If the vessel is portable move, it to a safe place if possible.
- Open all doors and windows for ventilation
- Contact East Dunbartonshire Council's ERC Team 24hrs Emergency Response Centre (ERC) 0141-574-5773 who will contact the Gas Supplier, relevant service manager, Health & Safety manager and arrange for a LPG qualified gas engineer and or contractor to attend site to investigate and make safe/repair.
- Prevent unauthorised approach to the appliance or cylinder
- Wait for the LPG gas competent person to arrive and deal with the leakage
- Do Not operate fuel burning appliances until instructed to do so by a competent gas safe registered engineer

6.5 EMERGENCY PROCEDURE (LEAKAGE WITH FIRE)

The action taken should include the following:

- Isolate the supply of fuel at the source, wherever possible (Only if safe to do so). **Remember Do Not put yourself or others at risk from harm).**
- Evacuate the building and any neighbouring properties where necessary and keep a safe distance. Calor gas recommend a 60-metre exclusion zone if possible.
- Call the fire brigade immediately by telephoning 999 and or 112 and tell them that LPG is involved
- Prevent unauthorised approach to the appliance or cylinder
- Contact East Dunbartonshire Council's ERC Team 24hrs Emergency Response Centre (ERC) 0141-574-5773 who will contact the Gas Supplier, relevant service manager, Health & Safety manager and arrange for a LPG qualified gas engineer and or contractor to attend site to investigate and make safe/repair.

7. LEGAL REQUIREMENTS

7.1 THE HEALTH AND SAFETY AT WORK ETC. ACT 1974 (HSWA)

The Act applies to all persons involved with work activities, including employers, the self-employed, employees, designers, manufacturers, suppliers etc. as well as the owners of premises. It places general duties on (EDC) to ensure, so far as is reasonably practicable, the health, safety and welfare of employees and the health and safety of other persons such as members of the public, students, visitors, tenants or contractors who may be affected by the work activity.

7.2 THE MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS 1999 (MHSWR)

MHSWR impose a duty on (EDC) and the self-employed to make a "suitable and sufficient" assessment of risks to the health and safety of employees and non-employees affected by their work. They also require effective planning and review of protective measures.

Protective and preventative measures are required to be implemented on the basis on the principles specified in regulation 4 of these regulations.

These include:
- avoiding risk;
- evaluating the risks which cannot be avoided;

- combating the risk at source;
- giving collective protective measures priority over individual protective measures and giving appropriate instructions to employees.

Regulations 8 & 9 of the MHSWR requires the establishment of procedures for serious and imminent danger including fire evacuation plans and arrangements for other emergencies.

7.3 REPORTING OF INJURIES, DISEASES AND DANGEROUS OCCURRENCES REGULATIONS 2013 (RIDDOR)

Regulation 11(1) applies where there has been a **gas incident** which has resulted in death or major injury. This normally applies to carbon monoxide poisoning, fire or explosion. As soon as basic information has been gathered the HSE must be notified immediately either by telephone or by using the online system. A full report must be completed **within 14 working days** of your visit.

Regulation 11(2) applies to any other reportable situation again using HSE online system and the form must be completed **within 14 days** of your visit. It is a statutory requirement for gas engineers to follow the (GIUSP) when they encounter dangerous gas appliances including pipework and report unsafe situations to the HSE.

EDC EMPLOYEES MUST REFER TO HEALTH AND SAFETY PROCEDURE SP01 ACCIDENT AND INCIDENT REPORTING. ONLY THE APPOINTED (GAS SAFE REGISTERED) RESPONSIBLE PERSON(S) AND THE HEALTH AND SAFETY TEAM MAY REPORT RIDDOR REPORTABLE INCIDENTS TO THE HSE.

7.4 GAS SAFETY (MANAGEMENT) REGULATIONS 1996 (GSMR)

GSMR place specific duties on gas transporters (GTs), or their emergency service providers (ESPs), for dealing with gas escapes from pipes on their networks. Their primary duty is to make the situation safe. They are responsible not only for dealing with escapes from their own pipes, but also for dealing with leaks from gas fittings supplied with gas from pipes on their network.

Action on discovery of gas leaking on consumer's premises is limited to turning off the gas supply at the emergency control valve and advising the consumer to repair the source of the leak by engaging a Gas Safe registered engineer to attend site and repair the leak, if appropriate. In (GSMR), the term "gas escapes" includes leaks or emissions of carbon monoxide (CO) from gas fittings.

7.5 GAS SAFETY (RIGHTS OF ENTRY) REGULATIONS 1996 (GSRER)

Under regulations 4 and 5 of the (GSRER), Authorised Officers (AOs) of the Emergency Service Provider (ESP) have extensive powers to enter premises in respect of suspected escapes of gas or dangerous appliances. These rights can be exercised without either notice or the consent of the owner or occupiers where an (AO) has reasonable cause to believe that circumstances exist which are likely to endanger life or property, and that immediate entry to premises is necessary to verify the existence of those circumstances or to ascertain their cause or to affect a remedy.

7.6 GAS SAFETY (INSTALLATION AND USE) REGULATIONS 1998 (GSIUR) AMENDED 2018

Regulation 9 **Emergency Controls** – This regulation requires an emergency control to be provided when gas is first supplied to premises. Where this control is not adjacent to a meter, a notice must be posted adjacent to the control describing the procedure in the event of a gas escape.

Regulation 15 **Meters** – emergency notices requires that an emergency notice is posted at a primary meter giving the procedure to be adopted in the event of a gas escape. A notice showing the position of the emergency control valve is also required in certain cases.

Regulation 36 **Duties of landlords** – place duties on landlords to complete annual safety checks with an effective maintenance programme on gas appliances, flues, gas pipework, inspection of detectors and that all records are kept for inspection.

Regulation 37 **Escape of gas** – Details action to be taken by gas suppliers and people responsible for premises in the event of an escape of natural gas, which is also covered by the Gas Safety (Management) Regulations 1996. This extends to the emission of carbon monoxide from an appliance.

If the responsible person for any premises knows or has reason to suspect that gas is escaping into those premises, they shall immediately take all reasonable steps to cause the supply of gas to be shut off at such place as may be necessary to prevent further escape of gas.

If gas continues to escape into those premises after the supply of gas has been shut off or when a smell of gas persists, the responsible person for the premises discovering such escape or smell shall immediately give notice of the escape or smell to the supplier of the gas.

8. 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 three 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 Service Managers and Team Leaders must ensure that local procedures are updated to reflect any changes to the management procedure.

9. REFERENCES

HSE Guidance and Regulation

- Health and Safety at Work etc. 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
- The Gas Industry Unsafe Situations Procedure
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
- Construction (Design and Management) Regulations 2015
- Dangerous Substances and Explosive Atmospheres Regulations 2002
- Pressure Systems Safety Regulations 2000

- Pipelines Safety Regulations 1996
- Control of Substances Hazardous to Health Regulations 2002
- Confined Spaces Regulations 1997
- The Provision and Use of Work Equipment 1998
- The Institution of Gas Engineers and Managers (IGEM) Standards
- Gas Safe Technical Bulletins
- British Standards (BSI)
- Approved Codes of Practice (L56) The Gas Safety (Installation and Use) (Amendment) Regulations 2018

East Dunbartonshire Council: Health and Safety Policy/Procedures

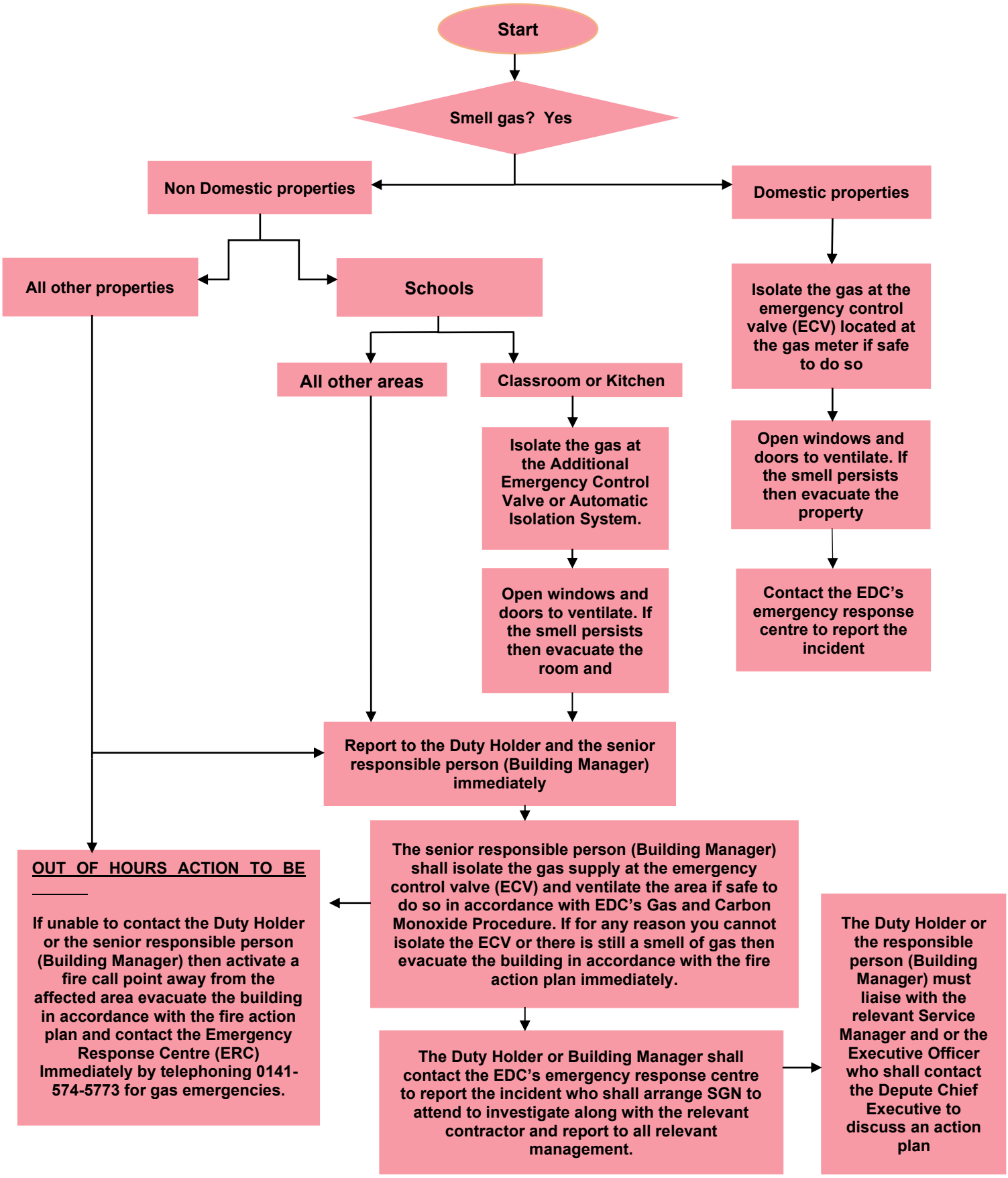
- HSP01 Health and Safety Policy
- HSP02 Gas Safety Policy
- HSP04 Management of Asbestos
- HSP05 Management of Contractors
- SP01 Accident and Incident Reporting
- SP29 Duty Holder
- SP37 Gas Industry Unsafe Situations
- SP41 Natural Gas Appliances Scope of Works
- SP46 Quality Reviews for Gas Engineers
- SP47 Gas and Fuelled Appliance Service Access Process

East Dunbartonshire Council: Health and Safety Forms

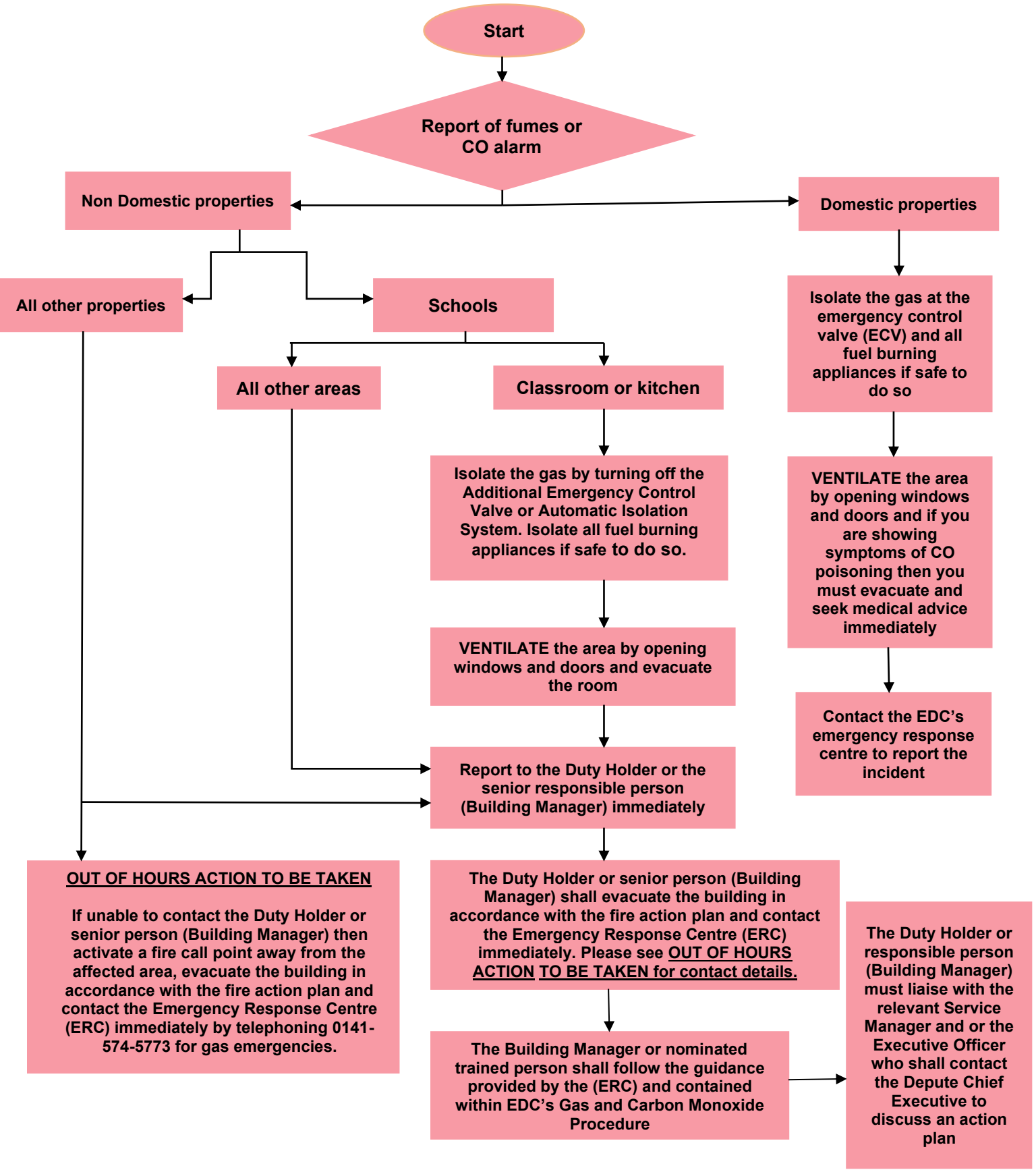
- HS1a for Accidents/Violent Incident/Fire Alert
- HS1b forms for Near Miss incidents/ Dangerous Occurrence
- DO4 Gas and Fumes Escape Form
- D08 Natural Gas Emergency Escape Flow Chart for EDC Service Users
- D09 Carbon Monoxide Emergency Escape Flow Chart for EDC Service Users
- D10 CARBON MONOXIDE (CO) ALARM ACTIVATION in integral boiler rooms Procedure
- D11 CARBON MONOXIDE (CO) ALARM ACTIVATION in remote plant rooms
- D12 Report of a smell of Natural Gas and or Escape Emergency Procedure
- D14 Gas Appliances Maintenance and Service Log Sheet for Educational Classrooms
- D15 Gas Emergency Instructions for Classrooms & Kitchen Staff
- D16 Isolation of Gas Supply for Teaching and FM Staff in Classrooms and Kitchens
- P06 EDC Domestic Gas Engineer Quality Review Forms

10. APPENDIX

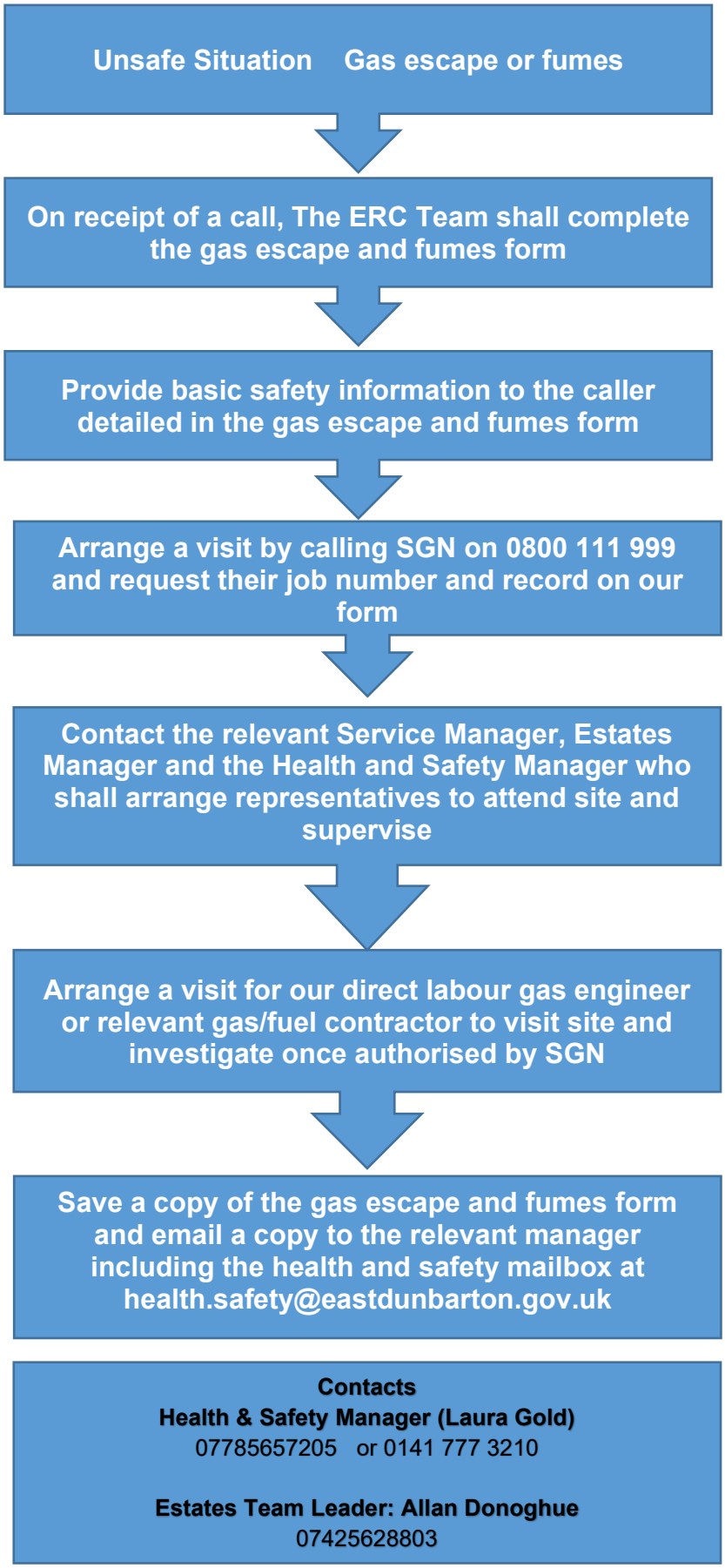
Appendix 1: Natural Gas Emergency Escape Flow Chart for EDC Service Users



Appendix 2: Carbon Monoxide Emergency Escape Flow Chart for EDC Service Users



Appendix 3: Emergency Response Centre Flow Chart



Appendix 4: Gas and Fumes Escape Form

Record the Following:			
Name of Caller:		Job title:	
Address (including Postcode):		Manager's name:	
Telephone Number:		Mobile Number:	
Location of gas/fumes escape:			
Is the escape controlled or uncontrolled?	Controlled: ☐	Uncontrolled: ☐	
Has anyone been taken to hospital? Yes ☐ No ☐	If answered yes ensure that the site is made safe if safe to do so. Contact the Health and safety team immediately and inform SGN and the contractors. **The scene must not be disturbed pending investigation by the HSE.**		

Report received by:			
Name:		Job Role:	
Date of call:		Time of call:	

Action taken:				
Passed to SGN:	Date:		Time:	
SGN Reference Number:				
Contractor Details			Date:	Time:

Advise the caller to do the following;	**Please tick or cross the box:**
Do isolate the gas supply at the gas meter (ECV) if safe to do so. Unless in a basement or cellar**. Do isolate fuel burning appliances if safe to do so**	☐
Do ventilate property (open doors and windows) if safe to do so.	☐
Do extinguish all naked flames, if safe to do so.	☐
Do not smoke or strike matches	☐
Do keep away from the affected area **and or** evacuate the building	☐
Do Not enter a basement or cellar if there is a smell of gas or report of fumes	☐
Do Not enter wood pellet storage areas.	☐
Do Not enter Biomass boiler rooms if CO alarm reactivates	☐
Do Not operate electrical switches (On or Off)	☐
Do Not enter the building unless instructed to do so by (SGN)	☐
Do Not operate fuel burning appliances until instructed to do so by a competent engineer.	☐

Appendix 5 CARBON MONOXIDE (CO) ALARM ACTIVATION in remote plant rooms
(Plant room is out-with the main school building)

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IF THE CO ALARM ACTIVATES, THE BUILDING MANAGER MUST FOLLOW THE PROCESS

The Building Manager (BM) to immediately inform the Head Teacher/Deputy Head Teacher (HT/DHT) (or on-site designate) of the alarm activation and that he/she is going to enter the boiler house for shut down off all fuel burning appliances

Before entering the BM will phone the ERC team who will contact the Estates Team Leader and The Health & Safety Manager who will arrange for a team member to visit and supervise. ERC will also contact the relevant fuel contractor and SGN **(if gas services are present on site)** to investigate.

After the phone call, BM will enter the boiler house, opening the door and standing BEHIND the door to allow oxygen and fresh air in the room before entering. NEVER STAND IN FRONT OF THE OPEN DOOR. Shut off the emergency shut off button located at the front door.

BM to SHUT DOWN all fuel burning appliances (turn off boilers and other appliances such as kitchen/shut off valve.) and VENTILATE the area where the alarm has activated letting CO out and fresh air in (boiler room, kitchen etc.), leaving doors and windows wide open.

BM to SILENCE THE ALARM by pushing the test/hush button and immediately step outside the boiler room or kitchen area. Fuel appliances not to be used again until they have been checked by the relevant fuel contractor. WAIT **4 MINUTES** IN CASE THE **ALARM REACTIVATES**, which means there is still CO present in the atmosphere. **NOW** ESCALATE PROCESS BELOW.
If the **alarm does NOT reactivate** after 4 minutes, wait for SGN **(if gas services are present on site**), H&S and Estates representative along with the relevant Fuel contractor to complete all checks and tests. School does not need to be evacuated

ESCALATION OF PROCEDURE IF ALARM REACTIVATES

IF THE ALARM REACTIVATES, after **4 minutes** of silencing it and the area has been fully ventilated and appliances turned off, BM must LEAVE THE PLANT ROOM IMMEDIATELY and inform the HT/DHT/DUTY HOLDER (or on-site designate) who should implement the FIRE EVACUATION PLAN. ACTIVATE THE FIRE ALARM CALL POINT AWAY FROM THE AFFECTED AREA. **Please make sure the alarm is disconnected from the Alarm Receiving Centre (ARC) to avoid the fire service turning up** (just as you would do during the weekly fire alarm test). Do not leave the fire alarm deactivated or disconnected.

Emergency Response Centre (ERC) **0141-574-5773 for gas emergencies.** **Health & Safety Manager (Laura Gold)** 07785657205 or 0141 777 3210 **Estates Team Leader: Allan Donoghue** 07425628803	**Estates Representatives** Milngavie/Bearsden 07831802075 / 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency SGN** **0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

Appendix 5 CARBON MONOXIDE (CO) ALARM ACTIVATION in remote plant rooms
(Plant room is out-with the main school building)

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IF THE CO ALARM ACTIVATES, THE DUTY HOLDER/HEAD TEACHER (DH/HT) MUST FOLLOW THE PROCESS BELOW:

HT/DH to immediately contact Health & Safety and thereafter the Chief Education officer. In the event that you cannot reach Health & Safety you should alert the Chief Education Officer of this.

The Estates Maintenance Team member to confirm with Health and Safety that SGN **(If gas services are present on site)** and the relevant fuel contractor have been phoned and is attending site.

Health & Safety will immediately attend the site along with a member from the Estates Maintenance Team, SGN (**If gas services are present on site**) and the relevant fuel contractor

School **TO CONTINUE AS NORMAL.** In the event that the school will be without heating and hot water for an extended period, the **Duty Holder** must liaise with the **Chief Education Officer / Depute Chief Executive** to discuss further action.

ESCALATION OF PROCEDURE IF CO ALARM REACTIVATES

HT/DH to evacuate the school ONLY IF ESCALATED PROCEDURE takes place and second alarm sounds. Please use fire alarm or other means, however, fire alarm must not automatically call the Fire Service. Use same procedure as when doing weekly fire alarm tests or contact the alarm receiving centre (ARC) to notify it is a CO alarm and not a fire.

Staff and pupils must remain at designated evacuation points (or other such locations as directed by the DH/HT until the school is declared safe by the relevant fuel contractor or H&S, or until such times as a decision is taken to close the school by CEO or DCE.

Estates Team Leader: Allan Donoghue 07425 628803 **Chief Education Officer:** **Greg Bremner 07464652050** **Health & Safety Manager (Laura Gold)** **07785657205 or 0141 777 3210**	**Estates Representatives** Milngavie/Bearsden 07831802075 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency** **SGN** **0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

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Appendix 6

CARBON MONOXIDE (CO) ALARM ACTIVATION in integral boiler rooms, kitchens, or classrooms (where plant rooms, kitchen and classrooms are within the school building)

IF THE CO ALARM ACTIVATES, THE BUILDING MANAGER MUST FOLLOW THE PROCESS BELOW:

The Building Manager (BM) to immediately inform the Head Teacher/Deputy Head Teacher (HT/DHT) (or on-site designate) of the alarm activation and that he/she is going to enter the boiler house, classrooms or kitchens to shut down all fuel burning appliances

Before entering the BM will phone the ERC team who will contact the Estates Team Leader and The Health & Safety Manager who will arrange for a team member to visit and supervise. ERC will also contact the relevant fuel contractor and SGN (**if gas services are present on site**) to attend and investigate.

After phone call the BM will enter the boiler house, opening the door and standing BEHIND the door to allow oxygen and fresh air in the room before entering. NEVER STAND IN FRONT OF THE OPEN DOOR. Shut off the emergency stop button located at the front door.

BM to SHUT DOWN all fuel burning appliances (turn off boilers and other appliances in classrooms and kitchen) Turn off all emergency control valves or emergency stop button in classrooms or kitchen areas) and VENTILATE the area where the alarm has activated letting CO out and fresh air in (boiler room, classroom kitchen etc.), leaving doors and windows wide open.

The HT/DHT/DUTY HOLDER (or on-site designate) should now implement the FIRE EVACUATION PLAN.
ACTIVATE THE FIRE ALARM CALL POINT AWAY FROM THE AFFECTED AREA. **Please make sure the alarm is disconnected from the Alarm Receiving Centre (ARC) to avoid the fire service turning up** (just as you would do during the weekly fire alarm test). Do not leave the fire alarm deactivated or disconnected.

BM to SILENCE THE ALARM by pushing the test/hush button and immediately step outside the boiler room, classroom or kitchen area. Fuel appliances not to be used again until they have been checked by a competent engineer.

Emergency Response Centre (ERC) **0141-574-5773 for gas emergencies.** **Health & Safety Manager (Laura Gold)** 07785657205 or 0141 777 3210 **Estates Team Leader: Allan Donoghue** 07425628803	**Estates Representatives** Milngavie/Bearsden 07831802075 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency SGN** **0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

Appendix 6
CARBON MONOXIDE (CO) ALARM ACTIVATION in integral boiler rooms, kitchens, or classrooms (where plant rooms, kitchen and classrooms are within the school building)

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IF THE CO ALARM ACTIVATES, THE DUTY HOLDER/HEAD TEACHER (DH/HT) MUST FOLLOW THE PROCESS BELOW:

HT/DHT to evacuate the school in line with the FIRE EVACUATION PLAN, activate a fire alarm call point away from the affected area. Please make sure the alarm is disconnected from the Alarm Receiving Centre (ARC) to avoid the fire service turning up (as you would do during the weekly fire alarm test). Do not leave the fire alarm deactivated or disconnected.

HT/DHT to immediately contact Health & Safety and thereafter the Chief Education officer. In the event that you cannot reach Health & Safety you should alert the Chief Education Officer of this.

The Estates Maintenance Team member to confirm with Health and Safety that SGN **(if gas services are present on site)** and the relevant fuel contractor have been phoned and is attending site.

Health & Safety will immediately attend site along with a member from the Estates Maintenance Team, SGN (**if gas services are present on site**) and the relevant fuel contractor

Staff and pupils must remain at designated evacuation points (or other such locations as directed by the DH/HT until the school is declared safe by the relevant fuel contractor or H&S, or until such times as a decision is taken to close the school by CEO or DCE

Estates Team Leader: Allan Donoghue 07425 628803 **Chief Education Officer:** **Greg Bremner 07464652050** **Health & Safety Manager (Laura Gold)** **07785657205 or 0141 777 3210**	**Estates Representatives** Milngavie/Bearsden 07831802075 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency** **SGN** **0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

Appendix 7
Report of a Smell of Natural Gas and or Escape Emergency Procedure

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IN THE EVENT OF A NATURAL GAS ESCAPE, THE BUILDING MANAGER MUST FOLLOW THE PROCESS BELOW:

persists evacuate the room immediately. **If in doubt err on the side of safety and evacuate the building.**

The HT/DHT/DUTY HOLDER (or on-site designate) should now implement the FIRE EVACUATION PLAN. ACTIVATE THE FIRE ALARM CALL POINT AWAY FROM THE AFFECTED AREA. Please make sure the alarm is disconnected from the Alarm Receiving Centre (ARC) to avoid the fire service turning up (just as you would do during the weekly fire alarm test). Do not leave the fire alarm deactivated or disconnected.

should be activated immediately.

Please make sure the alarm is disconnected from the Alarm Receiving Centre

Estates Team Leader: Allan Donoghue 07425 628803 **Chief Education Officer: Greg Bremner 07464652050** **Health & Safety Manager (Laura Gold) 07785657205 or 0141 777 3210**	**Estates Representatives** Milngavie/Bearsden 07831802075 or 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency SGN 0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

Appendix 7
Report of a Smell of Natural Gas and or Escape Emergency Procedure

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IN THE EVENT OF A GAS ESCAPE, THE DUTY HOLDER/HEAD TEACHER (DH/HT) MUST FOLLOW THE PROCESS BELOW:

If after isolation of the gas supply and the area is ventilated and the smell of gas persists then the HT/DHT must evacuate the school in line with the FIRE EVACUATION PLAN, activate a fire alarm call point away from the affected area. Please make sure the alarm is disconnected from the Alarm Receiving Centre (ARC) to avoid the fire service turning up (as you would do during the weekly fire alarm test). Do not leave the fire alarm deactivated or disconnected.

HT/DHT to immediately contact the Emergency Response Centre (ERC) Health & Safety and thereafter the Chief Education officer. In the event that you cannot reach Health & Safety you should alert the Chief Education Officer of this. The ERC team will contact the Estates Team Leader and The Health & Safety Manager who will arrange for a team member to visit and supervise. ERC will also contact the relevant gas contractor and SGN to attend and investigate

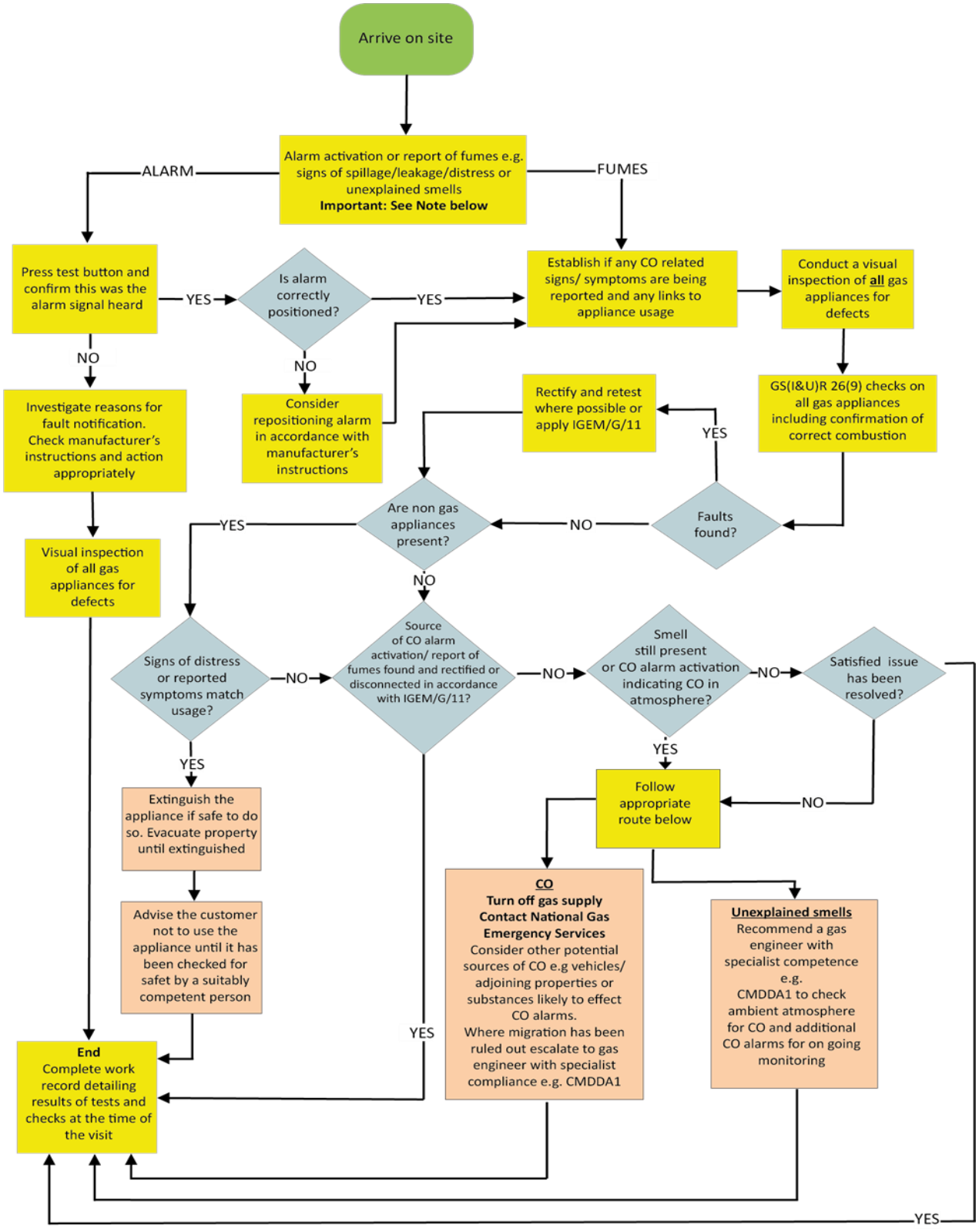
The Estates Maintenance Team member will confirm with Health and Safety that SGN and the Gas engineer have been phoned and is attending site.

Health & Safety will immediately attend site along with a member from the Estates Maintenance Team, SGN and the gas engineer.

Staff and pupils must remain at designated evacuation points (or other such locations as directed by the DH/HT until the school is declared safe by the Gas Safe Engineer or H&S, or until such times as a decision is taken to close the school by CEO or DCE

Estates Team Leader: Allan Donoghue **07425628803** **Chief Education Officer:** **Greg Bremner 07464652050** **Health & Safety Manager (Laura Gold)** **07785657205 or 0141 777 3210**	**Estates Representatives** Milngavie/Bearsden 07831802075 07391381360 Kirkintilloch/ Lenzie/ Twechar 07530078436 Bishopbriggs/Lennoxtown/ Milton of Campsie/ Torrance 07391381361	**National Gas Emergency** **SGN** **0800 111 999** **Gas and Oil Contractors** McKenna Heating Ltd 07717343371 GKL Plumbing & Heating Ltd 07812122934 or 07976206840	**Health & Safety Team** 07919413698 07785657183 07464652048 07391381366 07557439792

Appendix 8 - IGEM/G/11 Supplement 1 - Responding to domestic CO alarm activations/reports of fumes after attendance by the emergency service provider or the Liquefied Petroleum Gas supplier.



Note: If there has been a death, loss of consciousness or someone taken to hospital then contact HSE to establish if a formal investigation by the gas supplier is required, (see Sections 7 & 8 of IGEM/G/11).