EAST DUNBARTONSHIRE COUNCIL

HEALTH & SAFETY PROCEDURE

GAS INDUSTRY UNSAFE SITUATIONS

SP37

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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.

The primary responsibility for compliance with legal duties rests with the employer. The fact that certain employees, for example “competent engineers”, are allowed to exercise their professional judgement does not allow employers to abrogate their primary responsibilities. The Council must:

- have done everything to ensure, as far as is reasonably practicable, that there are no better protective measures that can be taken other than relying on the exercise of professional judgement;
- have systems and procedures in place to ensure that the exercise of professional judgement by “competent engineers” is subject to appropriate monitoring and review;
- not require “competent engineers” to undertake tasks which would necessitate the exercise of professional judgement that is beyond their competence.

This Procedure is for use by Gas Safe registered businesses/engineers when dealing with unsafe gas situations in domestic and non-domestic premises supplied with Natural Gas or Liquefied Petroleum Gas (LPG).

2. SCOPE

This procedure applies to all East Dunbartonshire Council Gas safe registered engineers including contractors, employees, trade operatives and team/squad leaders to help them fulfil their role and responsibilities to ensure everyone is gas safe.
The information provided in this Procedure is relevant to all commissioned gas equipment (installations and appliances) installed in both domestic and non-domestic premises. Based on assessed risk, it aims to provide guidance to competent gas engineers when dealing with various situations which currently or may in the future affect safety.
The priority for gas engineers when encountering an unsafe situation is to safeguard life and property. It is essential that gas engineers are able to identify gas equipment which presents a danger or potential danger and take prompt corrective actions to eliminate such danger. Gas Engineers must adhere to the Gas Industry Unsafe Situations Procedure GIUSP in order to assist competent engineers in meeting their legal duties in accordance with the GSIUR and associated Approved Code of Practice and Guidance and be able to correctly classify unsafe gas installations.

3. ROLES AND RESPONSIBILITIES

3.1 CHIEF EXECUTIVE

East Dunbartonshire Council (EDC) Chief Executive has ultimate responsibility for health and safety and for making sure that The Gas Safety Policy and associated procedures are managed.

It is important to acknowledge that the Chief Executive's responsibilities are shared, in that the Deputy Chief Executive, Executive Officers and Managers will be responsible and accountable within their areas of responsibility for ensuring The Gas Safety Policy and associated procedures are managed.

3.2 EXECUTIVE OFFICERS & MANAGERS

The Executive Officers and Managers 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 including the Gas Safety Policy and associated procedures.
- Nominated person(s) are supported in implementing the measures of this Management Procedure to comply with relevant Health and Safety legislation.
- Management must ensure all employees and contractors with key responsibilities have been identified and received training regarding the content of this procedure with ongoing refresher training at regular intervals or if changes to legislation occurs.

3.3 HEALTH AND SAFETY TEAM

The EDC Health and Safety Team will advise the management in fulfilling their duties in regard to the implementation of this Management Procedure and associated regulations and guidance.
In particular, the Health and Safety Team shall:

- Advise the Executive Officer, Managers, 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.

3.4 RESPONSIBLE PERSON (S)

(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 on behalf of the Council along with the Health and Safety Manager and in accordance with the 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.

3.5 GAS ENGINEER'S & CONTRACTORS

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 them 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 Health and Safety Procedure SP01 Accident and Incident Reporting. All gas incidents must be reported to the Gas Compliance Officer and to the health and safety team by completing an HS1a form related to accidents and an HS1b form for dangerous occurrences where applicable.

All gas industry unsafe situations must be reported to the responsible person for the building (see Section 4 and Section 9).

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.

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.

4. DEFINITIONS

Immediately Dangerous - appliance and/or installation, which if operated or left connected to a gas supply, is an **immediate danger** to life or property. Examples of this are combustion products entering the room, or gas escapes.

At Risk - appliance and/or installation where one or more faults exist and which, as a result, if operated, may in the future constitute a danger to life or property.

Turn-off - Prevent operation of appliance or installation through (in order of preference/practicality):

1. Turn off gas isolation valve
2. Removal of electrical fuse (turning down of room thermostats or turning clock to off is not acceptable)
3. Turn off appliance control and affix warning label to the appliance gas control.

Disconnect - Prevent the operation of a gas appliance or gas installation through the physical disconnection of the gas supply from the appliance/installation and sealing off the supply using a plug, or cap, or by spading off.

Commissioning - Initial start-up of an installation to check and adjust for safe and reliable operation.

Responsible Person - In relation to any premises, means the occupier of the premises, or any person with authority for the time being, to take appropriate action in relation to any gas

fitting therein. In situations where there is also a duty holder e.g., rented premises, the Landlord and their representative (managing agent) also attract "Responsible Person" status and will also need to be informed of any unsafe situation identified and the risk classification applied. The responsible person for domestic buildings may be the tenant and in non-domestic buildings the duty holder may be the Building Manager or in an educational establishment will be the Head Teacher and or the Deputy Head Teacher.

Emergency Service Providers ESP (SGN) - or their approved agents respond to and make safe all reported gas emergencies, including gas escapes and carbon monoxide /fumes, as soon as reasonably practicable.

5. LEGAL REQUIREMENTS

This Procedure outlines the appropriate actions which are deemed as best practice by industry that engineers need to take to ensure they comply with the legislation outlined below.

5.1 Health and Safety at Work etc. Act 1974 (HSWA)

There is a duty under this Act, for everyone at work (employers and the self-employed) to ensure, as far as reasonably practicable, that their activities or omissions do not expose others to risk.

5.2 The Gas Safety (Installation and Use) Regulations 1998 (Amendment) 2018 (GSIUR)

GSIUR are concerned with the installation and use of gas fittings in all domestic premises and commercial premises e.g., hospitals, educational establishments, offices, hotels, restaurants, mobile catering units, leisure accommodation vehicles, (including caravan holiday homes and hired touring caravans), inland waterway craft hired out to the public and sleeping accommodation, wherever it is located.

GSIUR do not apply in Factories, Mines, Quarries, Sewage Works and Agricultural premises (except parts used for domestic or residential purposes, or as sleeping accommodation). However, other safety legislation does apply e.g., HSWA. The general principles of GIUSP may be applied in these premises.

The legal definition of "factory" is wide ranging and in addition to manufacturing and/or processing premises, includes printing, fruit and vegetable packing, scrap yards, repair workshops (e.g., for televisions or vehicles), dairies, prison workshops, certain warehouses using mechanical power and power stations etc…

GSIUR place particular requirements on gas engineers relating to matters of gas safety. Under the requirements of these Regulations, engineers have to make judgements on the level of risk. In particular, this relates to Regulations 26(9), 34(3) and 34(4). The ACOP and L56 guidance document - Safety in the installation and use of gas systems and appliances is available from the HSE web site via the following web link: Safety in the installation and use of gas systems and appliances (hse.gov.uk)

GSIUR require any person carrying out any gas work, who becomes aware of an unsafe or dangerous situation, to inform the responsible person.

However, this duty only extends to those issues which are within the competence of the person engaged in work and which it is reasonable to expect the person to notice through visual inspection, for example, when relighting an appliance following the interruption of the gas supply or when observing an appliance in the course of other work. It is not expected

that additional tests and examinations be undertaken on appliances not being worked on by that person.

A gas engineer would be expected to be able to identify apparent unsafe situations from a visual inspection, for further guidance refer to Section 11 and Appendix 1.

GSIUR also make it an offence for a gas user/responsible person or any other person, to use a gas appliance/installation once they have been advised that the appliance/installation constitutes a danger.

5.3 Equipotential Bonding Electrical Safety Issue

Regulation 18(2) of GSIUR places a duty on gas engineers to notify the responsible person that equipotential bonding may need to be connected to gas installations in domestic premises.

Note: Where non-metallic (non-conductive e.g.PE) service pipes/service pipelines enter the building and are then connected to metallic pipes within the building, the metallic pipes within the building do not require protective bonding.

Where required the purpose of equipotential bonding is to ensure the gas installation, other metallic services and parts within the premise remain safe under electrical fault conditions. Where bonding is necessary it should preferably be connected:

- within 600 mm of the outlet of the gas meter, before any branch, or
- where the meter is fitted outside the building, as near to the point of each entry of the pipework, inside the building, before any branch.

Where a gas engineer cannot confirm that adequate bonding arrangements where necessary, exist, HSE guidance is that the responsible person be notified in writing of the requirement for equipotential bonding. This can be achieved by leaving a bonding notice as described in BS 6891, which advises that the bonding be checked/carried out by an electrically competent person.

Figure 1: Example of Equipotential Bonding Notice Card

For further information, refer to Technical Bulletin TB 102.

https://www.gassaferegister.co.uk/sign-in/ - login and visit the Technical Information area.

5.4 Gas Safety (Management) Regulations 1996 (GS(M)R)

GS(M)R place duties on Gas Transporters (GT) to provide a 24/7 gas emergency service on their Networks by employing Emergency Service Providers (ESPs) and operating the National Gas Emergency 0800 111 999 free phone number.

Anyone contacting the National Gas Emergency number will be given safety advice, including how to turn off the supply and ventilate the property.

ESPs must respond to and make safe all reported gas emergencies, including gas escapes and carbon monoxide (CO)/fumes, as soon as reasonably practicable. This will result in any unsafe appliance or installation being made safe pending further investigation by another competent engineer.

Suppliers of LPG have similar duties to those described above. These are covered by GSIUR.

5.5 Gas Safety (Rights of Entry) Regulations 1996

These regulations apply to GTs, who have rights to enter premises in respect of suspected escapes of gas or dangerous appliances without the consent of the owner or occupier.

These rights can only be exercised where the GT has reasonable cause to believe that there is a danger to life or property and immediate entry to the premises is necessary to make safe.

On entering premises, the GT may disconnect and seal off appliances/fittings or the entire gas installation if considered necessary “for the purpose of averting danger to life or property”.

5.6 Non-Domestic premises within HSWA 1974 (OUTSIDE SCOPE OF GSIUR)

For non-domestic premises that are outside the scope of GSIUR, the safety principles outlined in this Procedure can be used to classify the level of risk and determine the safe course of action to take.

Engineers shall consult with the responsible person on site although this may be waived in extreme circumstances i.e., where a delay to consult with the responsible person would immediately endanger life or property. The responsible person shall exercise their professional judgement, through risk assessment, to determine the safe course of action to be taken.

Where deviation from the actions advised in this Procedure is being considered by the responsible person, they should complete a documented risk assessment to determine a safe course of action following the identification of an unsafe situation. The responsible person should draw upon expert knowledge of any specific process, safety controls, industry standards, manufacturer’s guidance or company procedures that are available, taking into account the process and business risk from the actions proposed. In all cases, it is essential that the engineer keeps accurate documented records of tests and/or checks completed.

The risk assessment may conclude that a gas appliance/installation may remain in use provided that additional safety measures have been put in place.

Note: *There are some industrial processes that would present an immediate health and safety risk if shut down in an uncontrolled manner. For example, some furnaces require gradual shutdown and cooling over a number of days to ensure the furnace does not collapse and some glass producing processes utilise tanks of molten tin to float the cooling glass. An immediate shut-down of an industrial process or large gas installation, could*

produce its own risks from gas pressure loss in the system that may require complex testing and purging procedures to re-instate.

6. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

There is a requirement under RIDDOR for certain types of injuries and dangerous gas fittings to be reported to the HSE. The purpose of this requirement is to allow HSE to monitor and investigate incidents and share lessons learned in the interests of public safety.

Attention: Gas Safe registered businesses are required (by RIDDOR) to carry out this reporting.

6.1 What is a RIDDOR 11 (1) report and what type of incident is reportable?

RIDDOR Regulation 11(1) applies when someone has died or suffered a major injury in connection with gas, often as a result of carbon monoxide (CO) poisoning, or fire and explosion incidents. The incident is RIDDOR 11(1) reportable.

For CO exposure, the relevant major injury conditions are:

a. An injury requiring resuscitation or admittance to hospital for more than 24 hours.
b. Loss of consciousness caused by exposure to CO.
c. Acute illness* requiring medical treatment** resulting from the inhalation of CO.

*Acute illness means illness which:

i. Progresses rapidly to a crisis after the onset of symptoms; and
ii. Has severe symptoms.

** Incidents where people have taken themselves to hospital or been taken to another medical facility (e.g., a 'walk-in-centre') are not reportable.

6.2 What to report under RIDDOR 11(2)?

RIDDOR Regulation 11(2) requires registered gas businesses to notify the HSE of installations which by reason of 'design, construction, manner of installation, modification or servicing', pose a risk of death, or major injury to gas users. For example, the immediate threat to gas users from gas leakage, inadequate combustion of gas, or inadequate removal of products of combustion.

Reports are required where faulty workmanship is the cause. There is no requirement to report fittings that are dangerous due to a lack of maintenance and/or servicing alone. This requirement allows HSE to identify dangers arising from bad design or workmanship.

In general, these will be 'ID' situations; examples that should be reported are listed below. However, it should not be regarded as an exhaustive list:

a. Instances where the use of unsatisfactory fittings or poor workmanship result in a gas escape outside the tolerance of a tightness test;
b. Uncapped, open-ended pipes connected to the gas supply;
c. Appliances that are spilling products of combustion, or show signs of having done so, e.g., staining around draught diverters on open-flued appliances or above gas fires, with no evidence that the cause has been rectified;
d. Defective flues or chimneys that are not clearing flue gases;
e. Appliances that should be flued, but are not;
f. Appliances that are not suitable for use with the gas supplied, e.g., natural gas appliances being used with LPG;

g. Appliances that have had a safety device, such as a flame supervision device (FSD), made inoperative;
h. Appliances that are connected to the gas supply by a connection made of unsatisfactory material, such as garden hose;
i. Appliances that are dangerous through faulty servicing.

6.3 When to report under RIDDOR?

A report must be made:

- RIDDOR 11 (1) —as soon as basic information is known, normally via an initial phone report within 2 hours of attending the incident and followed up with a full report within 14 days;
- RIDDOR 11 (2) — within 14 days of discovery.

6.4 How to report under RIDDOR?

Under RIDDOR, EDC as a registered gas business or their gas engineers are required to notify the HSE of certain unsafe gas situations. For more detailed information please refer to Health and Safety Procedure SP01 Accident and Incident Reporting.

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).

7. Gas Incidents

A gas incident is defined as fire, explosion, or exposure to carbon monoxide which has resulted in death, unconsciousness, or persons being taken to hospital, or significant property damage rendering either part, or the whole property uninhabitable.

Incidents can be encountered in one of two ways. The attending engineer shall follow the actions detailed in the relevant clause:

- first person on site (see clause 7.1)
- attending site where it is suspected that a gas incident may have occurred (see clause 7.2)

7.1 First Person on Site

Where engineers encounter a gas incident, 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. The person on site shall immediately contact:

- The emergency services, where necessary
- The gas emergency service provider SGN 0800 111 999 and or the Gas Supplier and record all job reference numbers for audit purposes on forms.
- Your line manager and the approved responsible person(s) appointed by East Dunbartonshire Council i.e. the Gas Compliance Officer and or a member of the Health and Safety Team.

In non-domestic premises outside the scope of GSIUR, the responsible person has to take the decision whether or not to shut down the installation or process. (See clause 5.6).

It is important to record all actions undertaken, as they will assist those parties involved in any subsequent incident investigation.

7.2 Attending a site where it is suspected that a gas incident may have occurred

Engineers attending a site following a suspected gas incident shall establish if an incident (as defined above) has occurred. This can be done by:

- questioning the gas user/responsible person
- checking the installation/site for any relevant warning label(s), notices, or documentation and establishing the reason for their presence.

If working at a site where it is known that there has been a gas incident, the engineer shall not carry out any work other than making the installation safe, without first liaising with the HSE and the Gas Supplier to ensure any investigation into the incident is complete.

8. Applying the GIUSP within the limits of operatives' competencies

All gas engineers working on, or encountering, appliances/installations that are unsafe shall be able to classify unsafe situations as ID or AR, as appropriate ("work" as defined by GSIUR).

Where "work" is not carried out, a visual risk assessment shall be undertaken on those appliances/installations that are encountered for evident safety related defects and this Procedure applied, where appropriate, within the limits of the engineer's competence. If a competent Engineer is unsure of the safety of an appliance/installation, further guidance should be sought immediately. For further guidance on visual risk assessment of appliances or installations, reference should be made to Section 11 of this Procedure.

Competence in safe gas installation work requires engineers to have enough knowledge, practical skill and experience to carry out the job in hand safely, with due regard to good working practice. Competence must be kept up to date, e.g. Through awareness of changes in law, technology and safe working practice.

In applying the classifications used in this procedure, the competent engineer shall be able to justify their rationale based on the situation on site - the examples in this procedure are not exhaustive and/or definitive and the final decision in applying classifications lies with the competent engineer on site following their site-specific risk assessment.

9. Dealing with Unsafe Gas Situations

Note: If a gas engineer/business receives a report of a gas escape or fumes when not on site it requires reporting to the gas emergency service. ESP's (SGN) have specific training and equipment to attend reported escapes/fumes.

This Procedure gives guidance to competent engineers, regarding the categorisation of unsafe situations. It contains the most common examples of situations that an engineer is likely to encounter. However, Appendix 1 is not an exhaustive list and individual circumstances may require different actions to be taken. This includes multiple defects which, on their own or in smaller numbers, would not be deemed safety related but which may be safety related when added together. Engineers are required to exercise engineering judgement within their area of competence and where there is doubt, seek further guidance. In preparing Appendix 1, the following logic has been applied when deciding the category.

This forms the basic approach to any unlisted situation:

- **Immediately Dangerous (ID)** – Is a dangerous appliance/installation, which if left connected to a gas supply is an immediate danger to life or property. Examples of this are combustion products entering the room, and gas escapes.
- **At Risk (AR)** – Is a potentially dangerous appliance/installation where one or more faults exist and which, as a result may in the future constitute a danger to life or property. An example of this is inadequate ventilation.

9.1 Immediately Dangerous (ID) Appliances/Installations

An ID appliance/installation is one which is an immediate danger to life or property.

Broadly, these will be appliances/installations that fail tightness tests, appliances that fail spillage tests or appliances which have serious flueing and/or ventilation and/or combustion deficiencies.

Some ID situations will meet the criteria of RIDDOR and will require reporting (see section 6).

With the gas user/responsible person's agreement, the engineer shall make every endeavour to rectify the situation(s) and make the appliance/installation safe to use at the time of the visit. Where this is not possible, the following actions shall be taken:

a) Explain to the gas user/responsible person:

- that the appliance/installation is Immediately Dangerous
- why the appliance/installation is Immediately Dangerous
- that the appliance/installation **MUST NOT BE USED**
- that the appliance/installation must be disconnected from the gas supply until the situation has been rectified and that further use would contravene the law e.g., GSIUR Regulation 34.

b) With the permission of the gas user/responsible person, immediately disconnect and seal the gas supply to the appliance/installation with an appropriate fitting.

If the gas user/responsible person refuses to allow disconnection, endeavour to turn off the appliance/installation and:

- for natural gas, make immediate contact with the Gas Emergency Contact Centre (SGN) 0800 111 999 and obtain a job reference number from the operator and the time of the contact for record purposes.
- for LPG, make immediate contact with the Gas Supplier and obtain a job reference number from the operator and the time of the contact for record purposes.

In both cases explain the course of action taken and the reason why the situation is considered to be Immediately Dangerous.

Note*: Where reasonably practicable the engineer ought to remain on site/in the vicinity to liaise with the ESP to explain the risks. As the situation is classified immediately dangerous the ESP will attend within an hour.*

c) Where the gas user/responsible person is not present, it is recommended that the appliance/installation be disconnected and sealed from the gas supply with an appropriate fitting. However, in non-domestic premises see clause 5.6

d) Attach a **"DANGER DO NOT USE"** label to the appliance/installation in a prominent position. Where an appliance is concealed, fit an additional **"DANGER DO NOT**

USE" label in a prominent position e.g., on a compartment door (an example of a **"DANGER DO NOT USE"** label is shown in Figure 2).

FIGURE 2 - EXAMPLE OF "DANGER DO NOT USE" LABEL
Recommended minimum size A7 (105 mm X 74 mm)

e) Complete a **"warning notice"** which shall emphasise the words **"DANGER DO NOT USE"**. Regardless of the format used obtain a signature from the gas user/responsible person as both a record of receipt and understanding. Before leaving site a copy shall be issued to the gas user/responsible person and keep a copy for your records. If no one is present, leave a copy on site to alert any future user to the danger (see clause f) if the user is not the owner/responsible person.

f) Clearly indicate on the **"warning notice"** the type of fault and action taken and any remedial action required:

- if the gas user/responsible person refuses to sign the **"warning notice"**, record this detail
- if the gas user/responsible person is not the owner of the appliance/installation, also provide details of the unsafe situation in writing to the owner, e.g. landlord or managing agent.

Note: *The Gas Emergency Contact Centre is likely to require the following information from any person making a request for a disconnection:*

- *confirmation that it is an Immediately Dangerous situation*
- *the name of the person reporting, the Gas Safe Register registration number of the business and the engineer's individual Identification number*
- *the name of the responsible person for the property*
- *the address at which the Immediately Dangerous situation exists*
- *details of the Immediately Dangerous situation*
- *the type of appliance/installation*
- *the location within the property*

Gas engineers, for their own records, are to ask for and document the Gas Emergency Contact Centre's reference number for the call.

9.2 At Risk (AR) Appliances/Installations

An AR appliance/installation is one which is potentially dangerous i.e., where one or more faults exist and which, as a result, may in the future constitute a danger to life or property.

In general, the appliance/installation should be turned off with the responsible person's permission to make the situation safe and a **"Danger Do Not Use"** label attached.

However, there are some exceptions were turning off the appliance/installation will not make the situation safer and shall be referred to a responsible person/organisation for resolution e.g., built over PE gas service pipes and LPG bulk storage vessels incorrectly sited. These exceptions do **NOT** require a **"Danger Do Not Use"** label to be attached and are detailed in Appendix 1 using Italic typeface.

When an At Risk situation is encountered there are two distinct courses of action to be taken by the engineer dependant on whether their actions on site can immediately improve the safety of the situation, they are:

- Where the risk can be removed by turning off the gas (follow clause 9.3 and any specific information given in Appendix 1)
- Where it is not possible to make the situation safer by turning off the gas at the time, refer the matter to a responsible person/organisation for resolution (follow clause 9.4. and any specific information given in Appendix 1).

9.3 At Risk (AR) Appliances/Installations that shall be turned off to remove the risk and a "Danger Do Not Use" label attached

With the gas user/responsible person's agreement, the engineer shall make every endeavour to rectify the situation(s) and make the appliance/installation safe to use at the time of the visit. Where this is not possible, the following actions shall be taken:

a) Explain to the gas user/responsible person:

- that the appliance/installation is At Risk
- why the appliance/installation is At Risk
- that the appliance/installation could become dangerous at any time during use
- not to use the appliance/installation until the situation has been rectified.

b) With the permission of the gas user/responsible person, immediately TURN OFF the gas supply to prevent the operation of the appliance and/or installation.

TURN OFF in the following order

1. Turn off gas isolation valve – only where this is not possible move to option 2.
2. Remove electrical fuse (turning down of room thermostats or turning clock to off is not acceptable) – only where this is not possible move to option 3.
3. Turn off appliance control and affix warning label to the appliance gas control.

c) Where the gas user/responsible person is not present, it is recommended that the gas supply to the appliance/installation is turned off. However, in nondomestic premises see clause 5.6.

d) Attach a **"DANGER DO NOT USE"** label to the appliance/installation in a prominent position. Where an appliance is concealed, attach an additional **"DANGER DO NOT USE"** label in a prominent position e.g., on a compartment door.

e) Complete a **"warning notice"** which shall emphasise the words **"DANGER DO NOT USE"**. Regardless of the format used obtain a signature from the gas user/responsible person as both a record of receipt and understanding. Before leaving site, a copy shall be issued to the gas user/responsible person and keep a copy for your records. If no one is present leave a copy on site to alert any future user to the danger (see clause f), if the user is not the owner/responsible person.

f) Clearly indicate on the **"warning notice"** the type of fault, action taken, and any remedial action required.
g) If the gas user/responsible person refuses to allow the installation/appliance to be turned off or sign the **"warning notice"** or they are not present, record the details.
h) If the gas user/responsible person is not the owner of the appliance/installation, also provide details of the unsafe situation in writing to the owner, e.g., landlord or managing agent.

9.4 At Risk installations were turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT required

In a limited number of cases, turning off the installation will not remove the risk. Appendix 1 includes examples of these situations and are detailed using Italic typeface.

In such instances, the engineer shall take the following actions:

a) Explain to the gas user/responsible person why the installation is At Risk and why turning off will not reduce the risk.
b) Do not attach a **"DANGER DO NOT USE"** label.
c) Complete a **"warning notice"** which shall emphasise who the gas user/responsible person should contact for further investigation. Ask the gas user/responsible person to sign it as a record of receipt. Give or leave a copy with the gas user/responsible person and keep a copy for your records.
d) Clearly indicate on the **"warning notice"** the type of fault.
e) If the gas user/responsible person refuses to sign the **"warning notice"** or they are not present, record this detail.
f) If the gas user/responsible person is not the owner of the appliance/installation, also provide details of the unsafe situation in writing to the owner, e.g., landlord or managing agent.

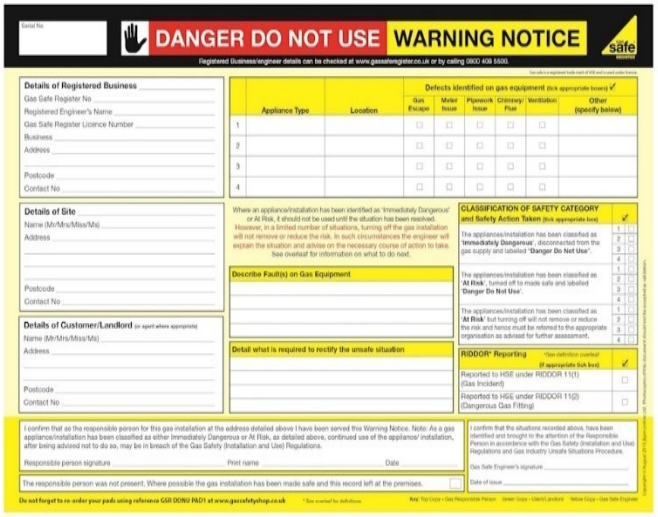

DANGER DO NOT USE WARNING NOTICE

Figure 3: Example of a "warning notice"

9.5 Not to Current Standards ("NCS")

Under The Gas Industry Unsafe Situations Procedure, there is no longer a requirement to record Not to Current Standards ("NCS") situations, however it may be good practice to bring any such situations to the attention of the gas user/responsible person and offer advice on a resolution.

9.6 Additional guidance for ESP (SGN) engineers attending reports of fumes

When an ESP engineer (or LPG Supplier's emergency response engineer) is called to a report of fumes, a visual inspection of the gas appliances in the property shall be carried out. Where no obvious unsafe situations are identified, a **"Danger Do Not Use"** label shall be attached to all appliances and with the user's permission, all appliances shall be turned off.

ESPs have their own procedures for dealing with CO alarms activated due to reasons other than the presence of CO e.g., end of life or battery failure.

The warning notice shall state:

"Appliances have been visually inspected by an emergency service engineer who cannot confirm that they are safe to use. The appliances should not be used until they have been checked by a Gas Safe registered business".

10. New Gas Installations

When operatives carry out new installation work in customer's premises, they are required to ensure that the appliance and/or installation is installed and fully commissioned in accordance with GSIUR and manufacturer's instructions. If this cannot be achieved, the appliance and/or installation must not be left connected to the gas supply. If an appliance cannot be fully commissioned, the gas supply must be disconnected from the appliance and sealed with an appropriate fitting.

It should be labelled with an **"Uncommissioned Appliance Label"** to the effect that it must not be used until full and proper commissioning tests have been carried out.

Figure 4: Example of an "Uncommissioned Appliance Label"

Note: For gas appliances, the manufacturer's instructions supplied with the appliance will normally specify that it is to be installed in accordance with the Industry Standards or relevant Codes of Practice applicable at the time of type testing of the appliance (CE Marking). However, the manufacturer's instructions may recommend special requirements specific to the appliance type and model and where they do, these should be followed.
Note: *All appliances and other gas fittings must be installed, serviced and maintained in accordance with The Gas Safety (Installation and Use) Regulations (GSIUR), Building*

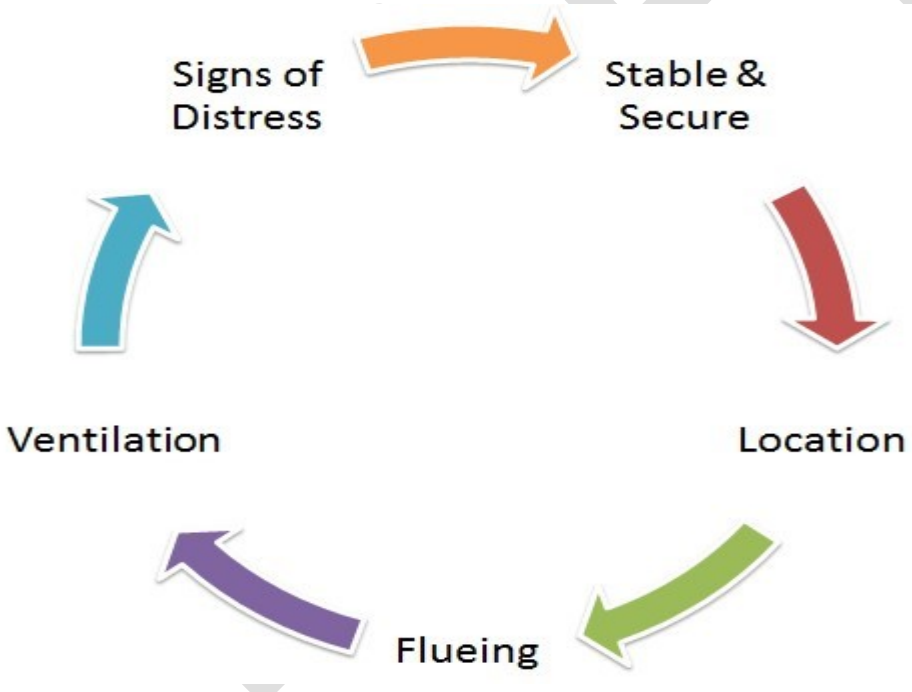
Regulations or Building Standards (as appropriate), the Electricity at Work Regulations, the Water Supply (Water Fittings) Regulations and with due regard to the manufacturer's installation instructions, British Standards and other industry guidance (e.g. The Institution of Gas Engineers and Managers (IGEM) Standards), appropriate to the geographical region in which they apply.

11. Visual Risk Assessment

When gas operatives carry out a visual risk assessment of a gas appliance(s) they have a minimum responsibility to ensure that the appliance(s) does not constitute a danger. The trigger points outlined below must only be used in situations where no gas work has been undertaken but the appliance(s) has been encountered either directly whilst other gas work has been carried out, or as part of a "check and relight" procedure following the interruption of the gas supply (e.g., following a gas tightness test) and there is a need to re-establish the gas supply.

Note: *Where gas work has been carried out on a particular appliance(s) the checks required by Regulation 26(9) of GSIUR must also be completed.*

11.1 Visual Risk Assessment (No interruption of the gas supply has occurred)



This shows the 5 main trigger points that will need to be considered when carrying out a visual risk assessment of an existing gas appliance(s), where no other gas work on that particular appliance(s) has been undertaken, *(e.g., whilst servicing a central heating boiler, a gas cooker is installed in the same room. A visual assessment of the gas cooker should be undertaken).*

The trigger points outlined above may be carried out in any order as necessary where applicable.

Location

Question — Is the gas appliance installed in a suitable room and/or space with regard to the requirements of GSIUR, for example, an open-flued appliance installed in a bathroom or shower room, or a flueless appliance installed in an undersized room?

Flueing

Question — If the gas appliance is flued (either open-flued or room-sealed), is there provision for adequate methods for the removal of the products of combustion to atmosphere?

Ventilation

Question — where appropriate, is there provision for the supply of adequate ventilation for the appliance to operate safely (e.g., is there evidence of purpose-provided ventilation for an open flued boiler)?

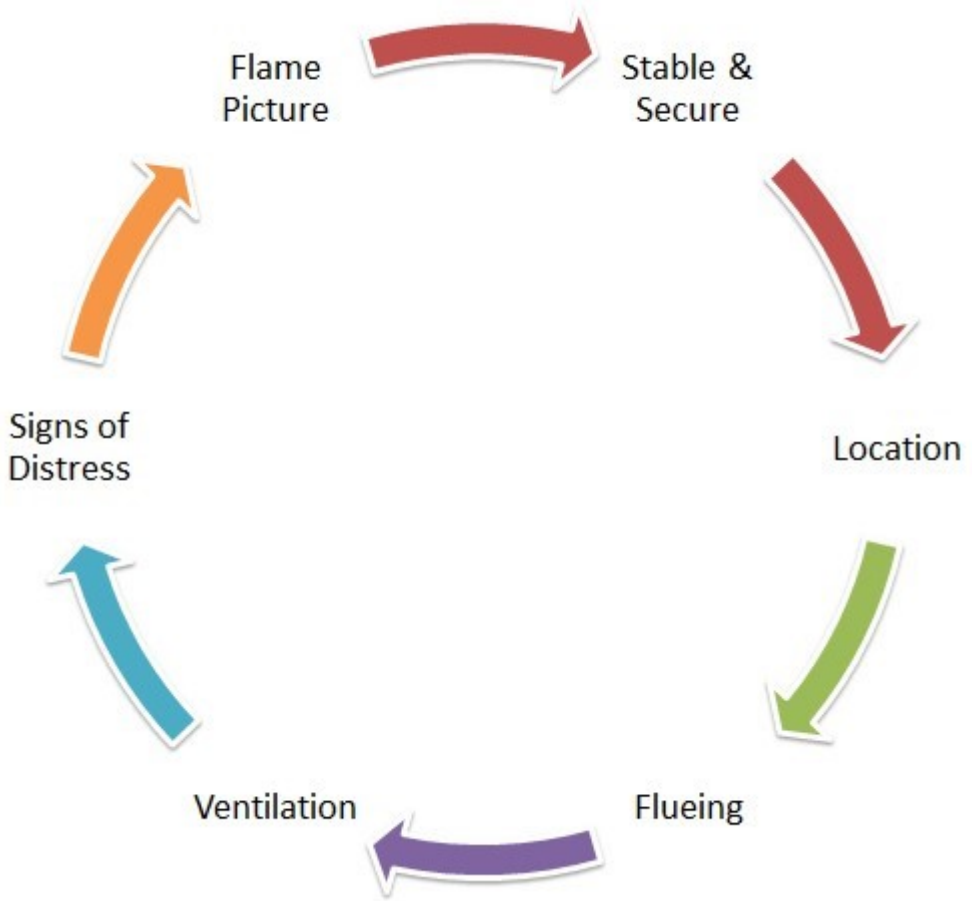
Signs of Distress

Question — Are there any signs of distress on the gas appliance and/or the surrounding area (e.g., check for signs of discolouration and heat damage such as scorching or finished surfaces becoming detached from worktops, etc.)?

Stable and Secure

Question — is the appliance installation both stable and secure?
It should be assessed to ensure that under normal conditions, the appliance will remain fixed and/or installed in a manner that will not result in the appliance becoming unstable (e.g., freestanding appliances with damaged or missing supports).

11.2 Visual Risk Assessment (Following temporary interruption of gas supply)



The main trigger points above that will need to be considered when carrying out a visual risk assessment of an existing gas appliance(s) where the gas supply has been temporarily interrupted, for example, if there has been a replacement gas meter installed.

The addition is of an assessment of an appropriate flame picture for the appliance type (e.g., live fuel effect gas fires and decorative fuel effect gas appliances are designed to produce a luminous flame).

11.3 Results of the Visual Risk Assessment

The results of a visual risk assessment should be recorded on your manual paperwork. Where, as a result of the assessment, an unsafe situation has been identified or is suspected, this procedure **must** be implemented, and the appropriate actions taken, and relevant warning notices and labels completed and issued.

12. 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.

This 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.

13. 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
- 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 & Safety Policy/Procedures

- HSP01 Health and Safety at Work Policy
- HSP02 Gas Safety Policy
- HSP04 Management of Asbestos
- HSP05 Management of Contractors
- SP01 Accident and Incident Reporting
- SP16 Gas and Carbon Monoxide Emergency Procedure
- SP29 Duty Holder
- 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
- P06 EDC Domestic Gas Engineer Quality Review Forms

Appendix 1: Table 1 Giving guidance on particular situations and how to categorise them

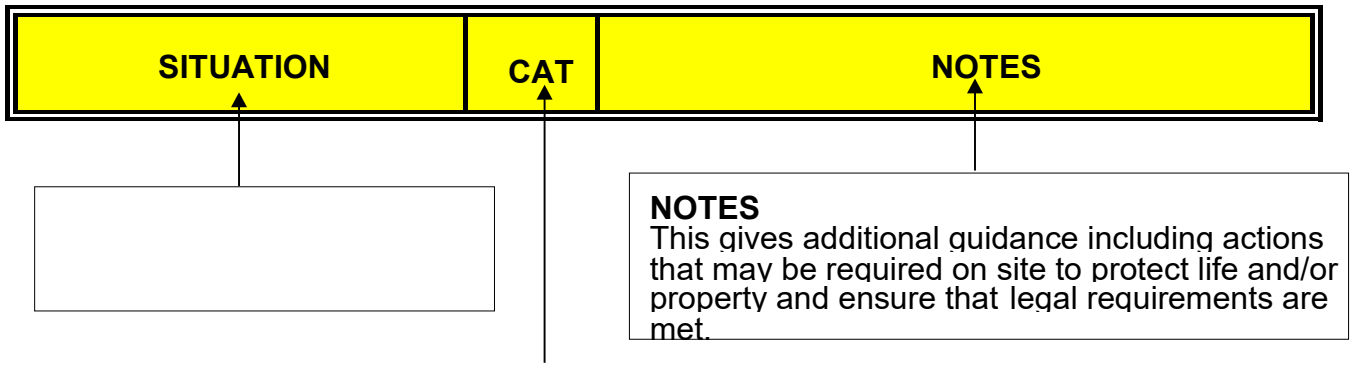
INTRODUCTION

Table 1 contains examples of the types of situations which are ID or AR.

It contains the most common examples of situations that an engineer is likely to encounter.

Table 1 is not exhaustive and individual circumstances may require different actions to be taken. Therefore, engineers shall exercise engineering judgement and be able to justify their classification rationale based on the situation on site. Actions should be within their area of competence and where there is doubt, seek further guidance.

Guide to the column descriptions used in Table 1



CATEGORY
Categories in which unsafe situations exist:

ID – **Immediately Dangerous** Appliance/installation (See Sub-Section 9.1 for required actions)

AR – **At Risk** Appliance/installation, for most of which action can be taken to make the situation safe, while recognising some situations, where turning off the appliance/installation will not remove or reduce the risk but must be referred to a responsible person/organisation for resolution. Situations where turning off will not remove, or reduce the risk are detailed in(See Sub-Section 9.4 for required actions)

When considering whether an unsafe situation is RIDDOR reportable the following criteria need to be met: EDC employees must follow the guidance in SP01 Accident and Incident Reporting Procedure.

1. The situation is as a result of the design, construction, manner of installation, modification or incorrect servicing of the fitting (often referred to as poor workmanship/design), AND

2. It is dangerous to such an extent it is likely to, or has caused: death, unconsciousness, taking to hospital of a person.

	SITUATION	CAT	NOTES
1. GAS ESCAPES AND FUMES			
1.1	From bulk storage vessel or cylinder installation.	ID	Contact the Gas Emergency Contact Centre/LPG Supplier (see Table 2).
1.2	Gas installation; 1. Fails a tightness test. 2. Passes a tightness test but there is a smell of gas.	 ID ID	EDC employees and service users will contact the Emergency Response Centre (ERC) on 0141 574 5773 for gas emergencies who will contact either SGN and or the gas supplier if LPG as well as the relevant fuel contractor. Note: All EDC employees with key roles and responsibilities related to gas emergencies should refer to SP16 Natural Gas and Carbon Monoxide Emergency Procedure for more information.
1.3	Fire and/or explosion caused by gas escapes.	ID	EDC employees and service users will contact the Emergency Response Centre (ERC) on 0141 574 5773 for gas emergencies who will contact either SGN and or the gas supplier if LPG as well as the relevant fuel contractor. Note: All EDC employees with key roles and responsibilities related to gas emergencies should refer to SP16 Natural Gas and Carbon Monoxide Emergency Procedure for more information.

1.4	Reports of fumes or CO detector alarm activation ➤caused by spillage, leakage or re-entry of products of combustion➤. 1. Flued appliances: • Evidence of spillage or leakage of products of combustion (with no evidence the issue has been corrected) • Where an alarm has activated or ill health symptoms experienced ➤and the flue termination is located in position that could allow products of combustion to enter the property➤ • Confirmed re-entry of products of combustion giving rise to ambient CO levels in the building of 10 ppm or greater. 2. Flueless appliances: • Evidence of poor combustion occurring.	ID ID	EDC employees and service users will contact the Emergency Response Centre (ERC) on 0141 574 5773 for gas emergencies who will contact either SGN and or the gas supplier if LPG as well as the relevant fuel contractor. Note: All EDC employees with key roles and responsibilities related to gas emergencies should refer to SP16 Natural Gas and Carbon Monoxide Emergency Procedure for more information. ➤Greater guidance around the actions when attending such reports can be found in IGEM G/11 Supplement 1. ➤ If anyone appears to be unwell with symptoms that might be caused by exposure to CO, advise that immediate medical attention is sought and make the gas installation safe. Even if there is no evidence of ill health, or measured CO levels are below 10 ppm, further investigation is required to confirm the gas appliance is safe. *Note 1: CO can be generated from sources other than gas appliances e.g. solid fuel and oil-fired appliances, or internal combustion engines. Discuss the safest course of action with the gas user/responsible person and advise them to contact a competent installer via the appropriate advisory body given below.* *Note 2: Also consider additional sources of fumes. These may include migration from other properties, damaged appliance seals and leakage from condensate drains.*

- CO is from an oil-fired appliance, contact OFTEC on 0845 658 5080, or www.oftec.co.uk for further advice
- CO is from a solid fuel burning appliance, contact The Solid Fuel Association on 0845 601 4406, or www.solidfuel.co.uk for further advice
- CO is from a source other than an appliance, e.g., a landfill site, contact the local authority Environmental Health department for further advice.

If drainage is the suspected source, contact the local water undertaking.

1.5	Where no work is being undertaken on an appliance but there are visual signs of spillage or leakage of products of combustion from the appliance and/or chimney/flue (and there is no evidence that the problem has been corrected).	ID	
SITUATION		**CAT**	**NOTES**
2. METER INSTALLATION AND PRESSURE REGULATION ***Note: To report meter tampering or theft of Natural Gas call 0800 023 2777 or by contacting*** **www.stayenergysafe.co.uk**			
2.1	Pressure regulator not installed at primary meter, or the regulator installation is not suitable for the supply.	ID	Advise the responsible person to contact the Gas Supplier (identified from customer bills). *Note: Where a 1st family gas e.g., LPG/Air is in use, there may be no requirement for a meter regulator (in this case, check with the Gas Supplier).*
2.2	Incorrect gas pressure at the outlet of the primary meter installation which affects the safe operation of any appliance e.g., combustion and/or flame stability.	ID	Notify the Gas Emergency Contact Centre – 0800 111 999
2.3	LPG installation with high or low operating pressure affecting the safe function of a gas appliance caused by: 1. Pressure regulator fault 2. Vessel off-take capacity exceeded 3. Service pipework undersized or blocked	ID	Inform the Gas Supplier (see contact list in Table 2).

2.4	Medium or higher pressure fed regulator relief valve and/or vent pipe: 1. discharging continually while gas is being used by consumer 2. blocked on an NG installation of capacity not exceeding 6 m^3/h or on an LPG installation of any capacity 3. discharging in an unsafe location 4. terminating in an unsafe location but not discharging.	ID ID ID AR	For situations 1 and 2, notify the Gas Emergency Contact Centre (see contact list in Table 2). For situations 3 and 4, advise the responsible person to contact the Gas Supplier (identified from customer bills). For a blocked relief valve/vent on a larger NG installation, these include a slam-shut valve that will shut off the gas supply in the event of a fault when the vent is blocked, so they are not unsafe. Some domestic sized installations do not include a slam-shut valve. In any event always attempt to clear any blockage, otherwise notify the gas supplier. For situations 3 and 4 unsafe vent termination locations are those that do not comply with the appropriate Standard.
2.5	Meter and/or regulator showing significant signs of damage from, for example: 1. Corrosive atmosphere 2. Mechanical damage 3. Contact with electrical equipment.	AR	For primary meters and/or regulators, advise the responsible person to contact the Gas Supplier (identified from customer bills). For secondary meters, inform the "Responsible Person".
2.6	Pre-payment primary or Smart meter operating in pre-payment mode, supplying a secondary meter or separate individual premises within the building.	AR	Contact the Gas Supplier or responsible person to have pre-payment meter changed to a credit meter.
2.7	LPG Regulator located within a building and fitted with a limited capacity relief device not piped directly to a safe position outside the building.	AR	Safe position means away from sources of ignition and points of re-entry.

2.8	Pathway for gas to enter property from meter box e.g., damaged box or installation pipework within the meter box entering the property without a sleeve, or the sleeve is not sealed.	AR	Where practical, seal any unsealed sleeve, or alternatively advise the gas user/responsible person that pipework has to be sleeved and sealed and/or meter box repaired or replaced.
2.9	Medium pressure (or higher) fed meter installation located within a domestic premise.	AR	In all cases inform the relevant Gas Transporter, or Gas Supplier, as appropriate, who will send a competent person to site to undertake further investigation. For further guidance, see Gas Safe Register Technical Bulletin 003.
2.10	Installation pipework and/or equipotential bonding cable entering property from within a meter box via rear exit meter box spigot route where the gas service/service pipework is medium pressure fed (e.g. BS 6400-2 (NG) BS 6400-3 (LPG).	AR	For further guidance see Gas Safe Register Technical Bulletin 004.
SITUATION		**CAT**	**NOTES**
3. PIPEWORK			
3.1	Pipework with an open end, connected to a gas supply.	ID	Seal all open ends with an appropriate gas fitting.
3.2	Pipework and/or fittings of inappropriate material for purpose e.g., plastic water pipe or hose pipe.	ID	It is accepted that situations such as this pose a very high risk of a serious incident occurring.
3.3	In an emergency situation (e.g., gas escaping), where there is restricted access, or there is not a handle fitted to the ECV.	ID	Turn off all appliances and notify the Gas Emergency Contact Centre 0800 111 999 In the case of LPG, notify the Gas Supplier. EDC employees and service users will contact the Emergency Response Centre (ERC) on 0141 574 5773 for gas emergencies who will contact either SGN and or the gas supplier if LPG as well as the relevant fuel contractor.
3.4	Undersized pipework proved to be affecting the safe operation of any appliance.	ID	e.g., incomplete combustion.

3.5	In a non-emergency situation, where there is restricted access, or there is not a handle fitted to the ECV.	AR	Notify the responsible person that access to, and a means to operate the ECV is required by law. For situations where no handle is present notify the Gas Emergency Contact Centre. In this case, where the situation is classified as At Risk, *turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be attached.*
3.6	No AECV at point of entry to property where one is required and where there is no adequate access to ECV.	AR	Notify the responsible person that an AECV is required and in its absence access to the ECV is required by law.
3.7	"Let-by" of ECV without a smell of gas.	AR	Notify the Gas Emergency Contact Centre 0800 111 999 or in the case of LPG notify the Gas Supplier. Make safe as described in the IGEM/UP/1 series of procedures.
3.8	"Let-by" of AECV without a smell of gas.	AR	Maintain or replace AECV.
3.9	Let-by of an MIV (test valve) on a medium pressure fed meter installation which forms part of a tightness test.	AR	Inform the Gas Supplier. In this case where the situation is classified as At Risk, *turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be attached.*
3.10	Pipework suitable for gas used in an inappropriate location and/or situation: 1. Installation pipework 2. Service/service pipework.	 AR AR	For example, PE pipework installed within a building, or PE pipework exposed above ground level without suitable protection. ➤For buildings over 18 m high see IGEM/G/5. ➤ For situation 2 regarding service/service pipework, see *Gas Safe Register Technical Bulletin TB 003.* In this case where the situation is classified as At Risk, *turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be attached.*

3.11	1. Pipework showing significant signs of damage from, e.g., corrosion or mechanical damage, inadequate support. 2. Pipework where the position or lack of support makes damage and/or accidental release highly foreseeable.	AR	For downstream installation pipework, and for LPG upstream "service pipework" where there is an upstream isolation valve accessible to the gas engineer (for example the tank valve where a LPG supply serves a single premises) inform the Responsible Person. Pipework should be supported to the appropriate standard. For Natural Gas upstream "service pipe", *turning off will NOT remove the Risk and a "Danger Do Not Use" label should NOT be attached*. Contact the Gas Emergency Contact Centre 0800 111 999. For LPG upstream "service pipework" where there is no upstream isolation valve accessible to the gas engineer (for example where a LPG network serves multiple premises)*, turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be attached.* Contact the Gas Supplier.
3.12	LPG hose insecure, or shows signs of wear, distress or damage e.g., chafing, cuts, splits etc.	AR	Where insecure, secure the LPG hose using suitable clips at both ends. *Note: Worm drive clips may be acceptable for some hoses. For further guidance, see Gas Safe Register Technical Bulletin 011.*
3.13	Gas pipework located within a cavity wall or void but not within a purpose-designed duct in accordance with appropriate standards.	AR	This does not include un-sleeved pipework which passes directly across a cavity by the shortest possible route, although situation 3.11 in these tables, should also be considered. *Note: See also TB 136 for Permali meter boxes.*
3.14	Automatic isolation valve (AIV) fitted in supply to appliances without at least one of the following: 1. An automatic downstream integrity system check will occur when the AIV activates, or 2. Every appliance has an automatic flame safeguard, or	AR	At least one of the methods has to be available to prevent un-ignited gas being passed through the appliance.

	3. An effective written "safe system of work" procedure is in place for reinstating the gas supply to the appliances		
3.15	PE service pipework (LPG) operating above 75 mbar without OPSO protection.	AR	Inform the Gas Supplier. *Note: Low pressure pipework operates at up to 75 mbar.*
3.16	1. Commercial unprotected buried metallic LPG service pipework which is overdue replacement. 2. Domestic unprotected buried metallic LPG service pipework which is overdue replacement and is "special risk".	AR	Unprotected means not protected by plastic coating or cathodic protection systems. Overdue replacement means the date for its replacement has passed (under the LPG metallic pipework replacement programme). This date can be obtained from the LPG supplier. Further details are available from HSE Guidance Note INDG428 available via the following link: http://www.hse.gov.uk/pubns/indg428.pdf "The Supplier can confirm whether the premises are "Special risk" domestic premises and further information is available from the Liquid Gas UK guidance / questionnaire available via the following link: https://www.liquidgasuk.org/advice/pipework-safety-check
3.17	Built over PE service/service pipework entering a domestic premise.	AR	For further guidance, see Gas Safe Register Technical Bulletin 003. In the case of pressures exceeding 75 mbar classify as At Risk, turn off (where permission is given) and inform emergency service provider or LPG supplier. In the case of a low pressure fed installation (up to 75 mbar), where the situation is classified as At Risk, *turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used*.
3.18	Service pipework (LPG) at point of entry to the premise is fitted without an ECV.	AR	1. If supplying a single customer, if possible and with permission from the gas customer, turn off at the tank isolation valve. 2. If a centralised gas storage, inform the Gas Supplier (LPG) and obtain advice.

3.19	Equipotential earth bonding not installed, or inadequate e.g., not secure. (Electrical issue – see section 5.3 of this Procedure).	(See right)	Leave a bonding notice informing the responsible person that equipotential bonding work should be checked/carried out by an electrically competent person. For further guidance, see *Gas Safe Register Technical Bulletin 102.*
SITUATION		**CAT**	**NOTES**
4. AIR SUPPLY (VENTILATION)			
4.1	Open-flued or flueless appliances in a room or internal space requiring purpose-provided permanent combustion air supply where the supply is less than required.	AR	For existing installations, 90% or more of each ventilator requirement is considered acceptable provided the appliance is otherwise operating safely and correctly. For non-domestic situations, seek guidance from the appliance manufacturer or appropriate industry standard such as BS 6644 or IGEM/UP/10. Ventilation provided via a redundant chimney/flue is not regarded as purpose provided ventilation and may affect the safe operation of open-flued appliances.
4.2	Open-flued appliance installed in a compartment requiring purpose-provided permanent high and low-level air supply where: 1. Air supply is at one level only, or 2. Air supply is less than required.	AR	For existing installations, 90% or more of both high and low ventilator requirement is considered acceptable provided the appliance is otherwise operating safely and correctly. For non-domestic situations, seek guidance from the appliance manufacturer or appropriate industry standard such as BS 6644 or IGEM/UP/10. Ventilation provided via a redundant chimney/flue is not regarded as purpose provided ventilation and may affect the safe operation of open-flued appliances.
4.3	Air supply ventilators for open-flued or flueless appliance, which incorporate gauzes or fly screens or are closable.	AR	Pest control mesh may be found on purpose provided ventilation found in catering establishments or leisure accommodation vehicles which may not be a risk if clean and complying with relevant Standards/Procedures.
4.4	Flueless cookers, installed in a bed/sitting room of volume less than 20 m^3 irrespective of ventilation provision.	AR	
4.5	Flueless appliances installed in a room of inadequate volume irrespective of ventilation provision.	AR	This excludes cookers (see Table 1 Situation 4.4) Refer to relevant Standards and appliance manufacturer's instructions for particular room volume requirements.

4.6	Incorrectly configured mechanical ventilation systems.	AR	e.g., mechanical extract ventilation with natural draught inlet provision. This does not apply to commercial catering (see Table 1 Situation 15).
4.7	Any mechanical ventilation system for the purpose of providing combustion ventilation not interlocked to the appliance gas supply.	AR	Refer to relevant Standards and appliance manufacturer's instructions for particular mechanical ventilation requirements. This does not apply to commercial catering (see Table 1 Situation 15).
4.9	Installation pipework located within an unventilated duct or void.	AR	
4.10	Unventilated meter installation on nondomestic premises. ➤See also 4.10a➤	AR	➤The ventilation for certain meter installations may be met where they are located in➤ habitable areas where the ventilation requirements meet the specified requirements within the relevant Building Regulations and second tier documents for the geographical area. ➤If the meter installation is located in any form of enclosure in that area that enclosure shall be ventilated to the appropriate standard. ➤
4.10a	➤Unventilated meter room/enclosure containing multiple meter installations e.g., meter banks in flats➤	AR	➤*Turning off the individual ECV will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.* Inform the Gas User/responsible person for the property where you are working. Due to the wider risks posed by multiple meter installations, the importance of notifying the building owner and the gas supplier shall be emphasised on the warning notice. Meter room/enclosure ventilation requirements are detailed in the appropriate Standards, e.g., IGEM/G/5. ➤
4.11	LPG service pipework located within an unventilated duct or void.	AR	Inform the Gas Supplier. *Turning off the ECV will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.*
SITUATION		**CAT**	**NOTES**
5. CHIMNEY/FLUES (OPEN-FLUES)			

5.1	Where the clearances around an open-flued appliance do not comply with the manufacturer's minimum requirements: 1. Appliance showing signs of distress. 2. Appliances not showing signs of distress.	ID AR	Where the appliance is otherwise operating safely and manufacturer's instructions are not available to specify minimum clearances, a clearance of at least 5 mm all around the appliance is typically adequate in domestic situations.
5.2	Appliance down draught diverter is found to be completely enclosed or missing.	AR	
5.3	Incomplete or damaged chimney/flue or inadequate fixings and/or sealing, but where combustion products do not enter the building.	AR	Examples include missing chimney/flue terminal, inadequate support, missing gas fire closure plate, or a porous chimney/flue external to the building.
5.4	Where two or more appliances are connected to one chimney/flue: 1. If one of the appliances has no flame supervision device fitted. 2. If the appliances are in separate rooms ventilated from different sides of the building. 3. If the chimney/flue is not designed for the purpose.	AR	
5.5	Natural draught, wall–adjacent, or wall-faced termination.	AR	Not acceptable for ANY natural draught open-flued appliance installation.
5.6	Manual damper in place and not secured in the open position (domestic appliances).	AR	
5.7	Automatic chimney/flue damper not interlocked to appliance gas supply.	AR	

5.8	Existing open chimney/flue system installation terminating in a prohibited zone.	AR	
5.9	Existing open chimney/flue system installation with one or more defects likely to affect the safe and effective performance of the chimney/flue system.	AR	Examples of installation defects likely to affect open chimney/flue performance include, but are not limited to: • Inadequate vertical rise to first bend • Inadequately supported • 90° bends or horizontal runs • Non-compliant termination positions • Incorrect use of chimney/flue material e.g. exposed chimney/flue liner • Inadequately sized chimney/flue pipe • Unsuitable terminal fitted. Where one or more such defect(s) is/are identified, the engineer shall assess the safety of the gas installation and decide whether the deficiencies are so serious to warrant the installation being classified as AR.
5.10	Mechanically assisted flue/chimney system not interlocked to the appliance gas supply.	AR	See also Situation 15 - CATERING.

5.11	Fan dilution systems (plant/boiler room at fan dilution discharge): 1. CO_2 concentrations above 1% or 2. CO concentrations in excess of 50 ppm.	AR	

	SITUATION	CAT	NOTES
6. CHIMNEY/FLUES (ROOM SEALED)			
6.1	Chimney/flue terminating into an internal space e.g., conservatory.	ID	
6.2	Leakage of products of combustion from room-sealed chimney system e.g., evidence of products of combustion; leakage from the chimney/flue system; appliance or condensate air break.	ID	Where the affected property is one of a number of similar properties in a block or complex, include the approximate number of properties in the development in the summary of the report. Also classify as ID signs of distress to material enclosing a concealed chimney/flue system with no evidence of subsequent corrective remedial work.
6.3	Chimney/flue terminating into a semi enclosed area e.g., covered passageway or ginnel. Following an assessment in accordance with guidance given in TB 007: 1. It is found that combustion products are entering the building. 2. There is a risk that combustion products may enter the building.	ID AR	Chimney/flue termination positions in semi-concealed locations are considered to constitute an elevated level of risk. For industry guidance on how to classify chimney/flues terminating in covered passageways, or ginnels, see *Gas Safe Register Technical Bulletin 007.*
6.4	Incorrect use of a "flue gas management kit" to extend a fan assisted room sealed chimney/flue duct outlet to outside, where the air intake is enclosed within a building.	AR	E.g., where a conservatory has enclosed the original chimney/flue terminal position.
6.5	No means of examining a room-sealed concealed chimney/flue system in accordance with industry guidance to confirm the effectiveness of the chimney/flue system i.e., the lack of appropriate inspection hatches etc.	AR	Risk assess room sealed boilers served by a concealed chimney/flue system without appropriate means to undertake examination in accordance with the industry guidance to ensure that no immediately dangerous situation exists, see *Gas Safe Register Technical Bulletin 008*.

6.6	Room-sealed chimney/flue systems which are damaged, insecure, inadequately supported and/or using incorrect jointing methods to such an extent that may cause it to become unsafe and/or a breach of integrity is likely.	AR	Evidence that the chimney/flue system is inadequately supported and/or incorrectly jointed. This includes inadequate clipping, missing clips, screws or sagging, allowing movement of the chimney/flue to such an extent that may cause it to become unsafe and/or a breach of integrity is likely.
SITUATION		**CAT**	**NOTES**
7. APPLIANCES (GENERAL)			
7.1	Appliance, which should be flued, but is not flued.	ID	
7.2	Breach of a room sealed appliance's integrity caused by missing or damaged seals: 1. Flue gas analysis sample point cap missing/damaged (regardless of evidence of leakage of products of combustion). 2. Air inlet sample point cap missing/damaged (no evidence of leakage of products of combustion). 3. Grommets forming part of the combustion circuit missing/damaged (no evidence of leakage of products of combustion).	ID AR AR	Evidence of distress, leakage of condensate or products of combustion, or CO alarm activation, in any situation, shall be treated as ID. Where there is no evidence of distress, leakage of condensate or products of combustion, or CO alarm activation, the situation is not RIDDOR reportable.
7.3	Appliance not suitable for use with the gas supplied.	ID	Refer the Responsible Person to the installer of the appliance. Also report to Gas Safe Register.

7.4	Appliance gas controls and safety devices that affect the safe operation of an appliance, which are inoperative, failing to danger, or are disabled.	ID	Examples of devices include flame supervision devices (FSDs), regulators, spillage monitoring devices (e.g., TTBs, ASDs), air pressure switches and high limit thermostats etc.
7.5	Flueless or non-room-sealed appliance in room containing a bath or shower.	ID	This includes cookers etc., installed in a room containing a bath or shower.
7.6	Failure to achieve satisfactory combustion readings when using an electronic portable combustion gas analyser: 1. Flueless appliance 2. Flued appliance.	ID AR	Combustion readings may include one or more of CO, CO_2, and CO/CO_2 combustion ratios. See specific appliance manufacturer's installation instructions, or BS 7967. ➤Where CO_2 readings are unsatisfactory but are not adversely affecting the CO reading, contact the manufacturer for advice. ➤
7.7	Flueless or flued appliance with visual signs of incomplete combustion at a main burner and/or within the heat exchanger: 1. Flueless appliance 2. Flued appliance	ID AR	For situation 2, if spillage/leakage is evident classify as ID.
7.8	Flueless, or non-room-sealed space heating, or water heating appliance over 14 kW heat input (gross), or under 14 kW heat input (gross) without a built-in atmosphere sensing device, installed in a bedroom or bed-sitting room.	AR	
7.9	Use of an appliance indoors that is designed for outdoor use only.	AR	Use of appliances such as BBQs and patio heaters indoors has resulted in numerous incidents including fatalities. Where permission is obtained, remove appliance to outside. For further information on the safe use of patio heaters, see following link: https://www.liquidgasuk.org/media/DOC5D495CFB4B3A4/Liquid%20Gas%20UK_User%20Info_04_July%2019.pdf

7.10	Evidence of heat damage to an appliance or adjacent combustible material.	AR	Functional checks may be required to determine whether the heat damage is due to the appliance, its manner of installation, or misuse.
7.11	Flexible gas connection to a flued domestic appliance.	AR	This requirement does not apply to gas-fired tumble dryers installed to the requirements of BS 7624.
7.12	Appliance found to be insecure and/or not stable so that it is potentially unsafe.	AR	A stable free-standing cooking appliance using a flexible connection without a stability device secured to the fabric of the building (e.g., stability bracket or chain) would not be classified as AR.
7.13	➤An appliance connected to a sealed heating system with no effective pressure relief. ➤	AR	
7.14	LPG appliance with automatic ignition device or a pilot light, installed in a room below ground level, unless open to ground level on at least one side.	AR	It is acceptable to install such appliances in rooms which are basements with respect to one side of the building, but open to ground level on the opposite side.
SITUATION		**CAT**	**NOTES**
8. WATER HEATERS			
8.1	Flueless or open-flued instantaneous water heating appliance without a built-in atmosphere-sensing device (ASD).	AR	
8.2	Flueless instantaneous water heating appliance installed in a room or internal space of inadequate volume.	AR	
8.3	Flueless water heating appliance supplying hot water outlet(s) not in the same room or space as the appliance.	AR	
8.4	Flueless water heating appliance without a 5 minute warning label.	AR	
SITUATION		**CAT**	**NOTES**

9. SPACE HEATERS (INCLUDING GAS FIRES, DFEs AND CONVECTOR HEATERS)			
9.1	Builder's opening inadequately sealed where combustion products do not enter the building.	AR	There should not be any gaps within the builder's opening other than the fireplace opening and the chimney/flue itself.
9.2	Space heater fitted to "letterbox" opening or with inadequate catchment space where combustion products do not enter the building.	AR	
9.3	No closure plate fitted (where required), or inadequately sealed where combustion products do not enter the building.	AR	
9.4	Space heater fitted over combustible flooring with heat damage to flooring evident.	AR	See also Table 1 Situation 7.10
9.5	Combustible material located within builder's opening and showing signs of heat damage or scorching.	AR	
9.6	Flueless space heater installed in a room or internal space where the air vent is incorrectly positioned.	AR	Refer to manufacturer's installation instructions and BS 5871-4 for correct positioning. For further guidance, see Gas Safe Register Technical Bulletin 088.
SITUATION		**CAT**	**NOTES**
10. OPEN FLUED COMBINED GAS FIRE BACK BOILER/CIRCULATOR UNITS			
10.1	Builder's opening that is not sealed around the chimney/flue liner, cables, water and/or gas pipework.	AR	Seal all unsealed openings, i.e., around chimney/flue liner, cables, water and/or gas pipework. The At Risk category is not applicable where the chimney/flue liner and/or chimney annulus alone is not sealed, and it cannot practicably be sealed, providing there is no evidence of spillage or flame reversal and it is otherwise safe and operating satisfactorily, no further action is necessary. For further guidance, see Gas Safe Register Technical Bulletin 009.

	SITUATION	CAT	NOTES
11. WARM AIR HEATERS			
11.1	Unsealed plenum or ducting in appliance compartment affecting the safe operation of the appliance.	ID	Where an unsealed plenum is encountered which does not affect the safe operation of the appliance, classify the installation as AR.
11.2	Open-flued warm air heater with fan-assisted warm air circulation installed in a compartment without a positive return air connection.	AR	Where an open-flued warm air heater with fanned warm air circulation without a positive return air arrangement is encountered, it may be possible to fit a return air duct. Otherwise, consult the appliance manufacturer. In many cases, particularly with older appliances, this will not be possible, in which case advise the gas user/responsible person to replace the appliance.
11.3	Open-flued warm air heater with fan-assisted warm air circulation having an inadequate provision for a return air path.	AR	
	SITUATION	**CAT**	**NOTES**
12. LIQUEFIED PETROLEUM GAS (LPG) BULK STORAGE VESSELS			
12.1	Vessel located within a building.	ID	Inform gas user/responsible person and inform the Gas Supplier. Record on appropriate job documentation.
12.2	Vessel without a pressure relief valve.	ID	
12.3	Vessel installation without an appropriate regulator.	ID	Inform gas user/responsible person and inform the Gas Supplier. Record on appropriate job documentation.
12.4	Bulk-storage vessel(s) installation without required UPSO and OPSO protection.	AR	Inform the Gas Supplier.
12.5	Vessel that has a liquefied gas level greater than 95%.	AR	Contact the Gas Supplier for advice on action to take.

12.6	Vessel too close to fixed ignition source.	AR	Further guidance is provided in *Liquid Gas UK CoP 1 Parts 1, 2 and 4 and can be found using the following hyperlink:* https://www.liquidgasuk.org/shop/codes-of-practice *Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used*.
12.7	Vessel too close to a known un-trapped drain and drain cover is not sealed.	AR	Contact, or advise gas user/responsible person to contact Gas Supplier. Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.
12.8	Vessel without a stable base.	AR	
12.9	Large quantities of combustible materials too close to above ground vessel(s).	AR	
12.10	Vessel susceptible to vehicle collision not appropriately protected from vehicle impact (e.g., bollards, kerbstone etc.).	AR	
12.11	Vessel valves and/or controls which are accessible by the general public.	AR	Contact, or advise gas user/responsible person to contact Gas Supplier. *Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.*
12.12	Vessel surrounded by excessive vegetation creating a restriction on ventilation and combustion hazard.	AR	Contact, or advise gas user/responsible person to contact Gas Supplier. Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.
12.13	Vessel too close to building that is not acting as a fire wall.	AR	Buildings acting as a fire wall should be imperforate and of 60 minutes fire construction. Further guidance is provided in Liquid Gas UK CoP 1 Parts 1 and 2. Advise gas user/responsible person to contact Gas Supplier. Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.

12.14	Above-ground vessel positioned too close to overhead electrical power lines or cables.	AR	For electrical power lines or cables operating at a voltage of less than 1.0 kV, the vessel(s) should be sited at least 1.5 m from a plane drawn vertically downwards from the power lines or cables. For electrical power lines or cables operating at a voltage of 1.0 kV or greater the distance should be increased to 10 m. Advise gas user/responsible person to contact Gas Supplier. Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.
12.15	Underground vessel(s) in a roadway or vehicular access.	AR	Turning off will NOT remove the Risk and a "Danger Do Not Use" label is NOT to be used.
	SITUATION	**CAT**	**NOTES**
13. LIQUEFIED PETROLEUM GAS (LPG) CYLINDERS and LPG CARTRIDGES			
13.1	Vapour off-take cylinder with no regulator fitted.	ID	
13.2	LPG cylinder/cartridge(s) stored in a basement.	AR	Advise gas user/responsible person to move the cylinder/cartridge. Inform gas (cylinder) supplier and/or filler if gas user/responsible person refuses to reposition the cylinder/cartridges(s).
13.3	LPG cylinder/cartridge(s) stored in other inappropriate locations.	AR	Refer to Liquid Gas UK CoP 7 for advice on correct storage of LPG cylinder/cartridge(s). Advise gas user/responsible person to move the cylinder(s). Inform gas (cylinder) supplier if gas user/responsible person refuses to reposition the cylinder/cartridges(s).
13.4	LPG cylinder/cartridge(s) stored or used inappropriately.	AR	Refer to Liquid Gas UK CoP 7, IGEM/G/6, BS 5482 and BS EN ISO 10239, as appropriate. Advise gas user/responsible person to stop using cylinder/cartridge(s) inappropriately. Inform gas (cylinder) supplier if gas user/responsible person refuses to stop storing/using the cylinder/cartridges(s).

			Turning off may not remove the Risk, in which case a "Danger Do Not Use" label is NOT to be used.
13.5	Four or more cylinders connected to an automatic change-over device without OPSO protection.	AR	
13.6	LPG cylinder on a boat in a location that: 1. Is not vapour tight to the craft interior 2. Is accessible from inside the craft interior 3. Does not provide for adequate drainage facilities for LPG to vent directly overboard 4. Has inadequate ventilation direct from outside the vessel.	AR	For guidance, see BS EN ISO 10239 and/or PD 54823 as appropriate.
13.7	Cylinder(s) not stable.	AR	
13.8	Cylinder regulator fitted at a height below that of the cylinder outlet valve.	AR	
13.9	Existing single stage LPG regulators without OPSO protection where the regulator is known or suspected to be 10 years old or greater, or where such a single stage regulator without OPSO protection exhibiting evidence of significant environmental degradation.	AR	OPSO regulators are recommended for all LPG installations where available. For Further guidance please refer to CGS 39 available at https://www.liquidgasuk.org/media/DOC5F57A5B15247F/Consumer%20Guidance%20Sheet%2039.pdf
SITUATION		**CAT**	**NOTES**

14. GAS PRESSURE RAISING EQUIPMENT			
14.1	Low pressure protection not fitted, bypassed, or inoperable.	ID	
14.2	Where required, back pressure protection device not fitted, or if fitted not functioning.	ID	
14.3	Equipment in an inappropriate or inadequately ventilated location or incorrectly installed	AR	
	SITUATION	**CAT**	**NOTES**
15. COMMERCIAL CATERING			
15.1	Existing kitchen installation containing gas fired appliance(s) where there are safety concerns with: 1. Fixed ventilation (make up air/air inlet) 2. Mechanical ventilation systems (make up air/air inlet), for example, those with no interlock with the gas supply or those fitted with a manual override 3. Mechanical extraction systems, for example, those with no interlock, those fitted with a manual override or those without the provision for make-up air/air inlet) 4. Atmosphere readings that indicate excessive levels of carbon dioxide (CO_2) or	See Notes	Following a risk assessment as set out in the "Risk Assessment Protocol" for dealing with gas-fired catering appliances outlined in *IGEM/UP/19 - Application of interlock devices and associated systems used with gas appliance installations in commercial catering, a*pply the relevant category and actions (ID, AR, or as defined by *IGEM/UP/19)*. *Note: It may be possible, with permission of the responsible person, to carry out remedial work to reduce risk levels, for example, improve ventilation, service filters/fans etc. or reduce cooking load/isolate appliances.*

	other products of combustion (complete or incomplete) 5. Air quality within the working environment e.g., very hot working environment, high levels of condensation, catering staff complaining about the working environment.		
15.2	Appliance with enclosed burner without a flame supervision device (FSD).	AR	This requirement applies to catering appliances with closed burners that were not originally fitted with flame supervision devices (FSD). For appliances originally fitted with FSDs see Table 1 Situation 7.4.

Region	Gas Type		Contact Details	Telephone Details
England, Scotland and Wales	Natural Gas		Contact the Gas Emergency Contact Centre	0800 111 999
	LPG*	Bulk and metered supplies		See telephone number on the bulk storage vessel or at the meter
		Cylinder supplies	For cylinder supplies on caravan parks and hire boats, the site owner and/or boat operator may also have responsibilities. Advice may be obtained from the gas company identified on the cylinder through their emergency contact details.	See gas supplier emergency contact details in the local telephone directory

TABLE 2 - CONTACT DETAILS OF GAS EMERGENCY SERVICE PROVIDERS