

The Gas Industry Unsafe Situations Procedure

Fourth Edition

Guidance for dealing with unsafe situations and non-compliance with current standards and procedures in domestic and non-domestic premises supplied with natural gas or liquefied petroleum gas



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Contents	Page
FOREWORD	7
1. PURPOSE	8
2. OVERALL SCOPE	8
3. GENERAL INTRODUCTION	9
3.1 New installations	9
3.2 Existing installations	9
3.3 Unsafe situations and their effect on limited scope (ACS) gas operatives	10
3.4 CORGI declared legislation and normative document status tree	11
4. STATUTORY REQUIREMENTS	11
4.1 The Gas Safety (Installation and Use) Regulations (GSIUR) 1998	11
4.1.1 Non-domestic installations	14
4.2 The Gas Safety (Management) Regulations 1996	15
4.3 The Gas Safety (Rights Of Entry) Regulations 1996	15
4.4 RIDDOR-Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995	17
4.5 The Health and Safety at Work Etc. Act (HSWA) 1974	17
5. GAS INCIDENTS	17
5.1 Attending a gas related incident site	17
5.2 Attending a site after a gas related incident	17

PART 1

6. DEALING WITH UNSAFE SITUATIONS 18

6.1 Introduction 18

6.2 Scope 18

6.3 Immediately Dangerous (ID) appliances/
installations 18

6.4 At Risk (AR) appliances/installations 19

6.5 'Concern For Safety' labelling procedure
for ESP operatives 20

7. EXAMPLES OF UNSAFE SITUATIONS 21

8. REPORTING OF DANGEROUS GAS FITTINGS 21

8.1 General principles 21

8.2 What to report under RIDDOR 22

8.3 When to report under RIDDOR 22

8.4 How to report under RIDDOR 22

8.5 Matters of concern not reportable under
RIDDOR 22

Part 2

9. DEALING WITH NOT TO CURRENT STANDARDS (NCS) SITUATIONS 23

9.1 Introduction 23

9.2 Scope 23

9.3 General 23

9.4 Notification criteria 24

9.5 Methods of notification 24

9.6 Dealing with multiple NCS situations for
open-flued appliances 24

Part 3 – Tables

10. TABLES - GIVING GUIDANCE ON PARTICULAR SITUATIONS AND HOW TO CATEGORISE THEM 26

10.1 Introduction 26

10.2 Scope 26

Guide to the column descriptions in Tables 1, 2 and 3 27

Table 1 – Examples of unsafe and notifiable NCS situations 28

Table 2 – Additional examples of specific unsafe and notifiable NCS situations for LPG installations 49

Table 3 – Additional examples of specific unsafe and notifiable NCS situations for non-domestic installations 53

Appendices

Appendix 1 Guidance for non-domestic situations in factories only 58

– Figure 3 Wall-faced flue termination 58

– Figure 4 Wall adjacent flue termination 59

Appendix 2 – Flow chart – Dealing with unsafe situations in domestic premises 60

Appendix 3 – Glossary of terms and definitions 62

Appendix 4– Normative references 68

Appendix 5 – Explaining the problem to the responsible person 70

Appendix 6 – CORGI*direct* merchandise for unsafe situations 71

Gas Industry Unsafe Situations Procedure

FOREWORD

Following a comprehensive review of the Gas Industry Unsafe Situations Procedure and after seeking and considering industry wide comment, this revised procedure has been prepared and **comes into effect on 1st August 2005**.

The revised procedure concentrates on gas safety issues and therefore, for this reason, certain non-gas areas covering defects on water and electricity that were included in previous editions have been omitted. The exclusion of non-gas safety defects does not in any way seek to minimise the importance of contraventions of non-gas industry legislation/standards, but seeks to highlight the need for industry procedures to be produced for other fuels and utilities.

Summarised below are some of the other major changes/improvements that have taken place:

- The introduction of electronic formats;
- A new approach to the lack of ventilation;
- The need to measure ventilation before deciding whether it is satisfactory or not;
- Tightening up on wall adjacent flue terminations;
- In the Tables sections, many more examples of unsafe situations, in domestic, non-domestic and LPG installations;
- The addition of Not to Current Standards (NCS) situations into the Tables sections.

Since the 1st edition of this procedure was published in 1998, the Gas Industry Unsafe Situations Procedure has been a useful tool for competent CORGI registered gas operatives, by helping to identify unsafe situations and provide 'best practice' guidance on how certain unsafe situations should be classified and made safe. However, it should be recognised that this procedure cannot identify every situation that a gas operative may encounter and as a competent person, on occasions, all gas operatives will need to use their competence, skills and experience to decide on a right course of action to take that will ensure a safe gas installation.

From an analysis of carbon monoxide (CO) incidents undertaken by Advantica Technologies Ltd, on behalf of the Health & Safety Executive (HSE) since 1998, it has been established that most CO incidents are caused by more than one single problem. Poor combustion caused by a lack of maintenance is often a contributory factor, which is exacerbated by unsatisfactory flueing and ventilation provisions.

Although the importance of regular maintenance cannot be overstated, CO incidents are reduced when action is taken to identify and rectify installation defects, particularly those involving flueing and ventilation.

Gas Industry Unsafe Situations Procedure

The good news is that CO incidents are reducing every year and it is recognised that competent CORGI registered gas operatives play an important role in achieving this, by raising standards in gas safety. This revised procedure will help continue the good work, protecting both gas operatives and their customers.

John Byrne Technical Services Manager (CORGI)

1. PURPOSE

This procedure has been drawn up by the gas industry in order to assist competent gas operatives to meet their legal duties and correctly classify unsafe gas installations in accordance with the Gas Safety (Installation & Use) Regulations (GSIUR). It also provides guidance on how to recognise and deal with non-compliance with current industry standards and procedures.

The Health and Safety Executive (HSE) supports the industry-led initiative to revise this procedure, which will support the industry in maintaining a consistent approach to assessing gas installations.

2. OVERALL SCOPE

The information provided in this procedure is relevant to all existing gas installations and appliances for all family gases including LPG/Air, installed in both domestic and non-domestic properties, excluding industrial process equipment. Based on assessed risk, it aims to provide sound engineering guidance on how competent gas operatives should deal with various situations, which currently affect or may in the future affect safety.

This document deals with situations that arise out of duties under GSIUR. However, gas operatives must be aware that under their general duty of care, other legislation such as Building Regulations/Standards will also be relevant and the principles of this procedure can be applied to electric shock, water and steam pressure risks, for example. (See Appendix 4 for examples in the list of Normative References).

Part 1 – deals with those situations that are identified as being unsafe or have a potential to be unsafe.

Part 2 – deals with situations which are not regarded as unsafe; however, they do fail to comply with current industry best practice.

The principles of this procedure can be applied to LPG/Air mixtures and the situations described under natural gas will be relevant.

Part 3 – contains Tables giving guidance on particular situations and how to categorise them.

Gas Industry Unsafe Situations Procedure

3. GENERAL INTRODUCTION

All appliances and other gas fittings must be installed in accordance with the GSIUR, Building Regulations/Standards, 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, appropriate to the geographical region in which they apply.

3.1 New installations

When gas operatives carry out new installation work in customer's premises, they are required to ensure that the appliance/installation is installed and fully commissioned in accordance with the GSIUR and manufacturer's instructions. If this cannot be achieved, the appliance/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 to the effect that it must not be used until full and proper commissioning tests have been carried out.

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.

3.2 Existing installations

When assessing whether an existing appliance is installed correctly, where practicable, the gas operative should in the first instance consult the manufacturer's instructions for the appliance and note any special requirements. Where the manufacturer's instructions for the appliance were produced after the current standards were introduced and set special requirements for its installation, it should be assessed against these requirements.

For existing installations that were installed prior to the introduction of the current standards, or where the manufacturer's instructions for the appliance are not available, not applicable in the UK, or call up the British Standards or Codes of Practice, an assessment of the installation against the requirements of the current versions of these standards should be carried out. (See also Sub-clause 3.3 and Part 3 of this procedure).

THE PRIORITY FOR GAS OPERATIVES WHEN ENCOUNTERING AN UNSAFE SITUATION IS TO SAFEGUARD LIFE AND PROPERTY. IT IS ESSENTIAL THAT GAS OPERATIVES ARE ABLE TO IDENTIFY APPLIANCE(S) OR GAS INSTALLATIONS WHICH PRESENT A DANGER.

Dependent upon the apparent risk, existing gas installations found to be unsafe can be classified into two categories:

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

Gas Industry Unsafe Situations Procedure

So that gas operatives can decide whether the degree of non-conformance is such that the gas installation should be deemed Immediately Dangerous (ID) or At Risk (AR), they should follow the procedures found in Part 1 of this procedure and refer to examples of both ID and AR situations set out in Table format in Part 3 of this procedure.

After following this procedure, should an Emergency Service Provider (ESP) be unable to categorise as above, they may use another category – Concern for Safety. This is a category used only by ESPs in relation to a report of fumes (see also Sub-clause 6.5).

When a gas operative finds an unsafe situation, the principal objective should be to identify the cause and rectify the fault. However, where this is not possible/practical, it is necessary to advise the gas user/responsible person that the fault must be corrected immediately or the appliance/installation (or affected part of the installation) disconnected or turned off to make it safe dependant upon its category (see also Clause 6).

In carrying out these actions, the user/responsible person should always be informed of the reasons and advised that they are carried out in the interest of gas safety.

Gas operatives should be aware that under the requirements of the GSIUR, they have a duty to take appropriate action regarding unsafe situations and would themselves be in contravention of the regulations if they failed to act.

Where an installation does not meet the relevant standards, but would not be categorised as either Immediately Dangerous (ID) or At Risk (AR), it may be regarded as:

- Not to Current Standards (NCS)

For these situations, the procedure to follow will be found in Part 2 of this procedure and examples of NCS situations are set out in Table format in Part 3 of this procedure.

3.3 Unsafe situations and their effect on limited scope (ACS) gas operatives

All gas operatives working to the requirements of GSIUR are required to identify unsafe situations and apply these procedures within the limits of their competence (ACS).

Limited scope operatives could for example be those who only install gas meters, to the level of competence outlined in the ACS assessment - MET3LS. This particular assessment requires gas operatives to tightness-test and purge the installation of air and leave the gas meter sealed off at its outlet connection. Because they do not connect downstream of the sealed meter outlet adapter, these operatives would only be expected to apply these procedures within the limits of their competence and to the level identified in MET3LS, e.g. pipework and emergency control valves (ECVs).

Gas Industry Unsafe Situations Procedure

Other gas operatives also only install gas meters, but in these cases to the requirements of ACS assessments MET1 and/or MET2. Although only involved in limited meter work, these operatives do undertake work within the property, including tightness-testing and purging the installation of air following the fitting or replacement of a gas meter.

These operatives are not required to undertake GSIUR 26(9) checks when relighting gas appliances immediately following a meter installation/exchange. However, they are expected to identify ID and AR situations through visual checks on those appliances/installations they encounter and NCS situations that are relevant to their level of competence. They should understand what action needs to be taken for each category (see Sub-clause 4.1).

These operatives will have been assessed as competent to deal with unsafe situations, but where they do not have wider gas industry experience, employers of such operatives will need to consider the provision of on-going training and support to assist them in meeting their obligations under GSIUR.

Similar provisions apply for limited scope operatives in the non-domestic environment. For example, activities in this sector would include, Commercial Pipework Installer/Commissioners outlined in the ACS assessment - COCNPI 1LS, who only install/commission gas pipework and would not connect to, or work on, gas appliances and would only be expected to apply these procedures within the limits of their competence (ACS).

3.4 CORGI declared legislation and normative document status tree

The status tree (see Figure 1 on page 12), describes the hierarchy which CORGI applies to the current gas industry legislation and industry codes.

Note: This information is provided for transparency and should not be regarded as a definitive list.

The criteria ranges from the current applicable legislation, which is the high-level requirement and then cascades down through to the specific equipment requirements set by the manufacturer and finally, the relevant Standard or Code of Practice as a minimum safety benchmark.

4. STATUTORY REQUIREMENTS

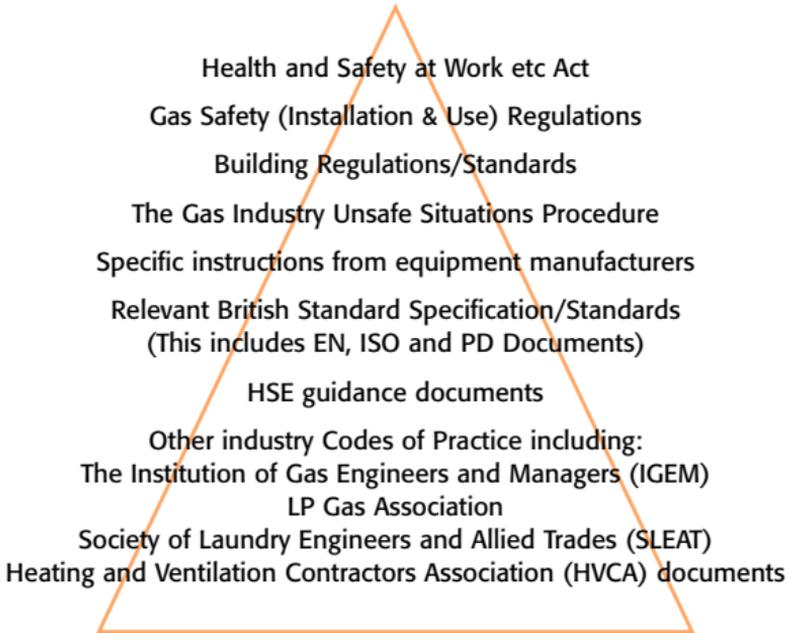
Registered gas installers and individual gas operatives must be familiar with all their obligations under Part 1 of this procedure and in relation to those Regulations outlined below.

4.1 The Gas Safety (Installation and Use) Regulations (GSIUR) 1998

The GSIUR are concerned with the installation and use of gas fittings in all domestic premises, 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.

Gas Industry Unsafe Situations Procedure

Figure 1 CORGI declared legislation and normative document status tree



The Regulations 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 – for example, the Health and Safety at Work etc Act. The general principles of the Gas Industry Unsafe Situations Procedure may be used as a guide to action in these premises.

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

Regulation 3 (1) of GSIUR requires that *"No person shall carry out any work in relation to a gas fitting or gas storage vessel unless he is competent to do so"*.

When any gas work is carried out in relevant premises, gas businesses must be registered with CORGI and their gas operatives must hold a valid certificate of competence for each work activity that they wish to undertake. The certificates must have been issued under either the Nationally Accredited Certification Scheme (ACS) for Individual Gas Fitting Operatives, or Scottish/National Vocational Qualifications (S/NVQ) aligned with the ACS scheme e.g. the City & Guilds 6012 scheme.

The GSIUR, place particular requirements on gas operatives relating to matters of gas safety. Under the requirements of these Regulations, gas operatives have to make judgements on the level of risk. In particular, this relates to Regulations 26(9) and 34(3) and (4).

Gas Industry Unsafe Situations Procedure

Regulation 26(9) requires that *“Where a person performs work on a gas appliance he shall immediately thereafter examine:*

- a) the effectiveness of any flue;*
- b) the supply of combustion air;*
- c) its operating pressure or heat input or, where necessary, both;*
- d) its operation so as to ensure its safe functioning.*

and forthwith take all reasonably practicable steps to notify any defect to the responsible person and where different, the owner of the premises in which the appliance is situated or, where neither is reasonably practicable, in the case of an appliance supplied with liquefied petroleum gas, the supplier of gas to the appliance, or, in any other case, the transporter”.

In addition to the requirement when performing work on an appliance, Regulation 34(3), imposes a general duty requiring that:

“Any person engaged in carrying out work in relation to a gas main, service pipe, service pipework, gas storage vessel or gas fitting who knows or has reason to suspect that any gas appliance cannot be used without constituting a danger to any person shall forthwith take all reasonable steps to inform the responsible person for the premises in which the appliance is situated and where different, the owner of the appliance or, where neither is reasonably practicable, in the case of an appliance supplied with liquefied petroleum gas, the supplier of gas to the appliance, or, in any other case, the transporter”.

Therefore, any person carrying out any work as defined in Regulation 34(3), who becomes aware of an unsafe/dangerous appliance during the course of that work, has a duty to inform the responsible person, whether or not the work is being carried out on that appliance. 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.

The following are examples of situations that a gas operative would be expected to be able to identify from a visual inspection:

- signs of spillage
- evidence of poor/incomplete combustion
- general condition of the appliance installation e.g. physically damaged or insecurely fixed

The GSIUR require that when a gas operative identifies that a gas appliance is unsafe, they must notify the gas user/responsible person as soon as possible. In rented accommodation the landlord or managing agent should also be notified. In guidance, GSIUR recommends that any verbal notification of an unsafe gas installation should be backed up by written notification that the gas installation is unsafe and that continued use in domestic and commercial premises is an offence under GSIUR.

Gas Industry Unsafe Situations Procedure

Regulation 34 also makes 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.

For gas appliances identified as ID, the guidance to GSIUR recommends the following action should then be taken:

1. The gas operative should ask the gas user/responsible person to allow them either to repair or disconnect the gas appliance/gas installation as appropriate. However, the gas operative has no legal power to take such action if the gas user/responsible person refuses.
2. If consent for such action is not given, the gas operative should label the gas appliance as being unsafe and that continued use is an offence; with the agreement of the gas user/responsible person the appliance shut-off device (if one is fitted), should be closed. Irrespective of any action taken by the gas operative, the obligation rests on the responsible person(s) not to use, or allow the use of any unsafe gas installation.
3. Where agreement of the gas user/responsible person cannot be obtained for repair or disconnection of an unsafe gas installation, the gas operative should contact:
 - In England, Scotland and Wales for natural gas – the National Emergency Service Call Centre, on telephone number 0800 111 999;
 - In the case of LPG, the telephone number on the bulk storage vessel or at the meter. For cylinder supplies on caravan parks and hire boats, the site owner/boat operator may also have responsibilities. Advice may be obtained from the gas company identified on the cylinder through their emergency contact details, which should be found in the local telephone directory;
 - In Northern Ireland – Phoenix Natural Gas on 0800 002 001, or in the case of LPG, the gas supplier;
 - In the Isle of Man – Manx Gas Ltd. for all areas (including LPG) on 01624 644444;
 - In the Channel Islands contact either Guernsey Gas Ltd. on 01481 724811, or Jersey Gas Company Ltd. on 01534 755555 as appropriate.

In an emergency situation, a public gas transporter (GT) has powers to enter a property and take action to avert danger to life (and property) under the Gas Safety (Rights of Entry) Regulations 1996. In the case of LPG, a contractual right of entry may exist between the supplier and customer.

This industry procedure is based on the above legal requirements and guidance; this procedure also provides guidance on how to deal with AR situations.

4.1.1 Non-domestic installations

In industrial/commercial premises, the same “Immediately Dangerous” (ID), “At Risk” (AR) and “Not to Current Standards” (NCS) procedures should be followed when applicable.

Gas Industry Unsafe Situations Procedure

There are additional duties that apply in non-domestic premises. Occupiers of non-domestic places of work are subject to wider duties and other regulations under the Health and Safety at Work etc. Act (HSWA). These duties require employers and the self-employed to assess any risk and to take appropriate action required to ensure safety.

With reference to Part 3 of this procedure, in addition to the general examples given in Tables 1 and 2, also see Table 3 for specific non-domestic issues.

EXCEPT IN EXTREME CIRCUMSTANCES, ACTION SHOULD NOT BE TAKEN, WITHOUT FIRST CONSULTING WITH THE RESPONSIBLE PERSON FOR THE PREMISES, E.G. THE PLANT ENGINEER, SITE MANAGER, OR IN THE CASE OF RENTED PREMISES, THE MANAGING AGENT'S FACILITIES MANAGER.

The responsible person should take the responsibility for the decision to shut down the installation or process where safety is being compromised. If asked to isolate appliances or pipework, the gas operative should record the time and date and obtain the name and signature of the person who agreed such action. This is essential where issues of process safety are involved, e.g. the cooling down of a furnace.

4.2 The Gas Safety (Management) Regulations 1996

These Regulations only affect gas operatives employed to carry out emergency work as emergency service providers (ESPs) for public gas transporters (GTs) who deal with calls made to the constantly manned National Emergency Service Call Centre. The regulations require BG plc to set up and operate this service. At present, Transco act as Emergency Service Providers for all GTs.

The Regulations require ESPs (i.e. National Grid Transco (Transco)), to respond not only to calls concerning suspected natural gas escapes, (not LPG), but also any calls concerning "fumes" that could be an indication of spillage of products of combustion from appliances. In the latter case, Transco's operatives will do no more than inspect appliances visually and either disconnect any that they consider to be ID, isolate any considered to be AR, or simply say that they have a "concern for safety" (see Sub-clause 6.5). When appropriate, the circumstances may need to be reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). In each case, the appliance will be labelled, saying that the appliance should not be used until it has been examined and tested by a CORGI registered installer. When the installers are able to inspect the appliance and it is considered to be a dangerous gas fitting, the circumstances may need to be reported under RIDDOR (see Sub-clause 8.2).

4.3 The Gas Safety (Rights Of Entry) Regulations 1996

These Regulations apply to natural gas and make provision for an officer authorised by a GT to take immediate action if he/she has reasonable cause to suspect that gas conveyed by the GT is escaping, or may escape, in any premises (domestic and non-domestic including factories), or that gas so conveyed, which has escaped, has entered, or may enter, any premises, including escapes of products of combustion, within their gas transportation network.

Gas Industry Unsafe Situations Procedure

If the criterion applies, the Regulations allow for any officer authorised by the GT, upon production of a duly authenticated document showing his/her authority, to enter premises to carry out any work necessary to prevent the escape and take any other steps necessary to avert danger to life.

At this time, Transco provides the gas emergency service for natural gas in England, Scotland and Wales.

Once appliances are disconnected, it is an offence to reconnect them without the permission of the GT, (unless this is carried out by a competent person as part of the process to effect the repair).

Where an Immediately Dangerous (ID) situation is encountered and the responsible person refuses to allow the gas operative to take appropriate action, these rights and powers can be called on by contacting:

- In England, Scotland and Wales - the National Emergency Service Call Centre, on telephone number 0800 111 999;
- In Northern Ireland - Phoenix Natural Gas on 0800 002 001;
- In the Isle of Man - Manx Gas Ltd. for all areas (including LPG) on 01624 644444;
- In the Channel Islands, the 24 hour emergency gas telephone numbers are 01481 724811 – Guernsey Gas Ltd. – and 01534 755555 – Jersey Gas Company Ltd. – as appropriate.

The gas emergency service provider (ESP) through their GT, will then take the necessary action, which in exceptional circumstances, where access to the equipment is refused, could lead to the obtaining of a warrant to exercise their rights of entry and disconnection powers.

For LPG installations, the Rights of Entry Regulations do not generally apply and therefore, the gas operative should contact the gas supplier who may have a contractual right of entry and has duties under GSIUR to respond to situations where gas is escaping. The LPG supplier is usually the company providing gas by filling the storage vessel or refillable cylinders, but on caravan parks and sites, this may be the park owner/landlord. Details should be found on a notice near the LPG storage vessel/meter, the emergency control valve (ECV), or printed on the cylinder.

Whilst LPG suppliers have duties to attend gas escapes, where these involve suspected emissions of carbon monoxide (CO) from a gas appliance, their duty is limited to giving advice on how to prevent the escape/emission and the need for examination and where necessary repair by a competent person.

GAS OPERATIVES WORKING IN A CUSTOMER'S PREMISES DO SO BY INVITATION OF THE CUSTOMER AND ACTIONS THEY MAY WISH TO TAKE MUST BE WITH THE GAS USER/RESPONSIBLE PERSON'S PERMISSION.

Gas Industry Unsafe Situations Procedure

4.4 RIDDOR – Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

Under these Regulations, CORGI registered businesses or their gas operatives, are required to notify the Health and Safety Executive (HSE) of certain unsafe situations (see also Sub-clause 8.4).

Note: The reporting requirements under RIDDOR do not apply in the Channel Islands.

4.5 The Health and Safety at Work Etc. Act (HSWA) 1974

There is a duty under this Act, for employers and the self employed to ensure, so far as is reasonably practicable, that others are not exposed to health and safety risks arising from their work activities. Although this will principally concern the way in which the work is carried out, it may extend to the condition in which the installation is left.

5. GAS INCIDENTS

5.1 Attending a gas related incident site

Where gas operatives are called to, or encounter, a gas related incident, it is extremely important that the incident scene is not disturbed. They should immediately contact the appropriate ESP for natural gas or the supplier for LPG (see Sub-clause 4.3 and Part 3 – Table 1 of this procedure for contact details) and inform them of the incident. With the least possible disturbance to the incident scene and where possible and safe to do so, the installation should be made safe e.g. by turning off the gas supply at the appropriate ECV and if necessary, ventilating the premises. In cases of fire and explosion, or where an ID situation is evident, the gas installation must be disconnected and sealed.

In industrial/commercial premises, the responsible person should take the decision to shut down the installation or process. This is essential where issues of process safety are involved, e.g. the cooling down of a furnace.

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

5.2 Attending a site after a gas related incident

If asked to work at a site where you know there has been a gas incident, do not carry out any work other than making safe, without first liaising with the HSE, to ensure any investigations are complete.

PART 1

6. DEALING WITH UNSAFE SITUATIONS

6.1 Introduction

Gas operatives may identify gas installations in customer's premises that they consider to be unsafe. This Part explains how to deal with the unsafe situation and details the documentation that should be completed and provided to the gas user/responsible person.

Note: In the interests of possible future civil litigation, it is advisable to keep records for 6 years.

6.2 Scope

This Part describes the actions that gas operatives should take, when an "Immediately Dangerous" (ID), "At Risk" (AR), or "Concern for Safety" situation is identified in customers' premises.

It deals with how to explain the situation to the gas user/responsible person. It also details the procedure that should be followed and documentation to be completed and provided to the gas user/responsible person where situations are identified as being unsafe, or have a potential to be unsafe.

6.3 Immediately Dangerous (ID) appliances/installations

An Immediately Dangerous (ID) appliance/installation is one, which if operated or left connected to a gas supply, is an immediate danger to life or property. Broadly, these will be installations that fail tightness tests, appliances that fail spillage tests or appliances which have serious flueing and/or ventilation, or combustion deficiencies, when measured against the appliance manufacturer's instructions, British Standards or other relevant standards/guidance documents.

Where possible and with the responsible person's agreement, every endeavour should be made to RECTIFY the situation(s) and make the appliance/installation safe to use at the time of the visit, or where this is not possible, the following actions MUST be taken:

- a) Explain to the user/responsible person that the appliance/installation is, in your opinion, Immediately Dangerous (ID) and must be disconnected from the gas supply until the situation has been rectified and that further use would contravene the GSIUR;

Note: Appendix 5 contains scripts that maybe useful to help when called upon to explain a particular situation to the gas user/responsible person.

- b) Attach a suitably worded DO NOT USE warning label to the appliance/installation in a prominent position;
- c) Complete a WARNING NOTICE and ask the responsible person to sign it as a record of receipt. Give a copy to the gas user/responsible person and keep a copy for your file;

Note: To enable CORGI registered gas operatives to comply with the requirements of the Gas Industry Unsafe Situations Procedure, suitable forms and labels are available from CORGI direct. For further details see Appendix 6.

Gas Industry Unsafe Situations Procedure

- d) Either:
- i) With the permission of the responsible person, immediately disconnect and seal the gas supply to the appliance or installation with an appropriate fitting, or;
 - ii) If the responsible person refuses to allow disconnection, endeavour to turn off the appliance/installation and make immediate contact with the Gas Emergency Service Call Centre, or for LPG, the gas supplier (see Sub-clause 4.3 and Part 3 – Table 1 of this procedure) and explain the course of action taken. Obtain a job reference number from the Gas Emergency Service Call Centre operator and the time of the contact for record purposes (see Note 2 below).
- e) Clearly indicate on the Warning Notice form that an Immediately Dangerous situation exists and note the type of fault and action taken;
- f) If the responsible person refuses to sign the Warning Notice, it is recommended that this detail is recorded on the Warning Notice;
- g) If the user is not the owner of the appliance/installation, a copy of the Warning Notice should also be provided to the owner, landlord or managing agent.

Note 1: A gas operative may use any system that delivers the same level of safety identified in a - g above, e.g. the use of a combined Do Not Use Warning Label/Warning Notice. This may be particularly relevant to those using electronic recording systems.

Note 2: The Gas Emergency Service Call Centre is likely to require the following information from any person making a request for a disconnection under the Gas Safety (Rights Of Entry) Regulations:

- confirmation that it is an **Immediately Dangerous/Rights Of Entry** disconnection request;
- the name of the person reporting, the CORGI registration number of the business and the operative's individual CORGI 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 operatives, for their own records, should in return ask for and document the ESP's reference number for the call.

6.4 At Risk (AR) appliances/installations

An At Risk (AR) appliance/installation is one where one or more recognised faults exist and which, as a result, if operated, **may in the future constitute a danger** to life or property.

Gas Industry Unsafe Situations Procedure

Where possible and with the gas user/responsible person's agreement, endeavour to **RECTIFY** the situation and make the appliance/installation safe to use at the time of the visit, or if this is not possible:

- a) Explain to the user/responsible person that the appliance/installation is, in your opinion, **At Risk (AR)** and that it should not be used. Continued use in these circumstances would be at the user/responsible person's own responsibility and may be in breach of the law;

Note: Appendix 5 contains scripts that maybe useful to help when called upon to explain a particular situation to the gas user/responsible person.

- b) Attach a suitably worded DO NOT USE warning label to the appliance/installation in a prominent position;
- c) Complete a WARNING NOTICE and ask the responsible person to sign it as a record of receipt. Give a copy to the gas user/responsible person and keep a copy for your file;

Note: To enable CORGI registered gas operatives to comply with the requirements of the Gas Industry Unsafe Situations Procedure, suitable forms and labels are available from CORGI direct. For further details see Appendix 6.

- d) With the gas user/responsible person's permission, **TURN OFF** the appliance/installation. If permission to turn off is refused, the responsible person's attention should be drawn to the fact that it may be an offence to continue to use a gas appliance/installation once informed that it has a potential to be dangerous;
- e) If the responsible person refuses to sign the Warning Notice, it is recommended that this detail be recorded on the Warning Notice;
- f) If the user is not the owner of the appliance/installation, a copy of the Warning Notice should also be provided to the owner, landlord or managing agent.

NO FURTHER ACTION IS REQUIRED.

Note: A gas operative may use any system that delivers the same level of safety identified in a - f above, e.g. the use of a combined Do Not Use Label/Warning Notice. This may be particularly relevant to those using electronic recording systems.

6.5 'Concern For Safety' labelling procedure for ESP operatives

An ESP has a defined and limited scope of activities. When called to a reported gas escape, a tightness-test will be carried out to confirm the integrity of the gas installation downstream of the ECV.

When called to a reported smell of fumes, a visual inspection of the gas appliances in the property will be carried out. This should enable the ESP operative to identify whether there is an **Immediately Dangerous (ID)** or an **At Risk (AR)** situation within the property. If, after the visual inspection, the ESP operative sees no obvious signs of either an ID or AR situation, there may still be a concern for safety. The **Concern For Safety** label, used by an ESP, allows the ESP operative to identify, where possible, the area of concern to the gas user. With the gas user/responsible person's permission, the ESP operative will turn off the appliance and attach the **Concern For Safety** label.

Gas Industry Unsafe Situations Procedure

This label states:

“This appliance has been visually inspected by an emergency service engineer who cannot confirm that it is safe to use. This appliance should not be used until it has been tested by a CORGI registered gas installer.”

The ESP operative will advise the gas user/responsible person of the concern and complete a written **Safety Notice** – a copy of which is left with the gas user. The ESP operative will advise the gas user to contact a CORGI registered installer. **The CORGI registered installer should recognise/understand that the attaching of this label does not declare the appliance unsafe for use.** The CORGI registered installer should carry out a thorough examination of the appliance(s) and form a judgement to determine whether it is safe for further use.

7. EXAMPLES OF UNSAFE SITUATIONS

Tables 1, 2 and 3 in Part 3 of this procedure, contain some examples of the types of situations which are considered to be **Immediately Dangerous (ID)** or **At Risk (AR)**. For ID and AR situations, the Tables indicate where Regulations, etc. may have been infringed relevant to the situation and the action necessary by the gas operative on site. For further guidance, see Appendix 2 of the Health and Safety Commission publication Approved Code of Practice (ACoP) entitled – ‘Safety in the installation and use of gas systems and appliances’ – (L56).

Note: The lists in the Tables in Part 3 of this procedure, should not be taken as exhaustive, but may be useful to help to explain a difficult situation to the gas user/responsible person.

Tables 1, 2 and 3 in Part 3 of this procedure also contain examples of **Not to Current Standards (NCS)** situations and the action necessary by the gas operative on site (see Part 2 of this procedure for further guidance).

8. REPORTING OF DANGEROUS GAS FITTINGS

8.1 General principles

There is a requirement under RIDDOR for certain types of Dangerous Gas Fittings to be reported to the HSE. The purpose of this requirement is to allow HSE to monitor and investigate incidents and give appropriate publicity to them in the interests of public safety.

RIDDOR Regulation 6(2) requires gas businesses to notify the HSE of installations which by reason of '**design, construction, manner of installation, modification or servicing**' pose an immediate threat to gas users from gas leakage, inadequate combustion of gas or inadequate removal of products of combustion, but only relates to where faulty workmanship is the cause. There is no requirement to report fittings that are dangerous due lack of maintenance/servicing alone.

This requirement allows HSE to identify dangers arising from bad design or workmanship.

Attention: CORGI Registered Gas Installers are required (by RIDDOR) to carry out this reporting.

Gas Industry Unsafe Situations Procedure

Note: The reporting requirements under RIDDOR do not apply in the Channel Islands.

8.2 What to report under RIDDOR

Only those installations that as a result of design, construction, manner of installation, modification or servicing, pose a **risk of death, or major injury to gas users** should be reported. 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-failure/supervision device, 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.

8.3 When to report under RIDDOR

A report must be made within 14 days of discovery.

8.4 How to report under RIDDOR

Reports should be made directly to the HSE using the FREEPHONE telephone number 0845 300 9923, Fax 0845 300 9924, Email: riddor@natbrit.com or by post to The Incident Contact Centre, Caerphilly Business Park, Caerphilly, CF83 3GG. See the HSE website (www.riddor.gov.uk) for further details.

8.5 Matters of concern not reportable under RIDDOR

Some gas fittings may not have been installed in accordance with the requirements of gas safety legislation in force at the time the work was carried out. Unless they are found to be dangerous, they are not reportable to HSE. Nevertheless, there are some types of 'illegal' installations that call into question the competence of the original installer; if gas installers wish to report these installations to HSE, they can do this by letter, email, or telephone to their local HSE office. These would include:

- A. All illegally installed non-room-sealed appliances in bathrooms and shower rooms (those known to have been installed after 24th November 1984), or in bedrooms (after 1st January 1996).
- B. Appliances in rented accommodation that have not been safely maintained.

Gas Industry Unsafe Situations Procedure

Note 1: Organisations that report frequently to HSE, may wish to devise a simple proforma to use.

Note 2: In the previous (3rd) edition of the GIUSP, there was a requirement to report items A and B under RIDDOR. However, the HSE have changed their position on this requirement and whilst they are still interested in receiving this information, they accept that there is no legal requirement on the part of the gas operative to do so.

Part 2

9. DEALING WITH NOT TO CURRENT STANDARDS (NCS) SITUATIONS

9.1 Introduction

Standards for gas installation work are regularly reviewed and improved following research, incident experience or changes in technology.

Gas installations are required to meet those standards and legislation applicable at the time of installation. If, following changes in standards and legislation, those installations are considered safe for continued use, with few exceptions, there is no requirement for the gas user/responsible person to upgrade them. Nevertheless, gas operatives should assess existing installations against current standards/requirements and providing the installation is operating safely, make a judgement about what advice to give the gas user/responsible person.

9.2 Scope

This Part deals with the particular actions that need to be taken when a “**Not to Current Standards**” (NCS) situation is identified. It considers the circumstances in which there are multiple NCS situations that may escalate to “At Risk” (AR). It does not include those situations that fall outside of the requirements of GSIUR.

This Part also provides guidance on how to explain the situation to the gas user/responsible person. It also details the procedure that should be followed and documentation to be completed and provided to the gas user/responsible person where NCS situations are identified.

9.3 General

It should be recognised, that due to changes in industry standards, many existing installations do not meet current standards; this, in itself, will not necessarily deem an installation as unsafe to use. It is possible that older installations were installed in accordance with the manufacturer’s instructions and standards at the time of installation. However, industry standards have changed to improve gas safety and reflect the experience gained from research and incident investigation. This means that gas operatives will be required to make an assessment of the risks posed taking into account all information available.

An existing installation that is not in accordance with the current Regulations, Standards and Specifications or Codes of Practice etc. should be considered as **NCS**, providing that it can only be used without constituting a danger to anyone and is not likely to do so.

THE APPLIANCE MAY BE LEFT IN OPERATION

Gas Industry Unsafe Situations Procedure

9.4 Notification criteria

The category NCS covers many different circumstances. Those within the Scope of this procedure can be broadly categorised as:

1. One or more flueing and/or ventilation NCS situations as listed in Sub-clause 9.6.
2. NCS situations that contravene the current GSIUR.
3. Other NCS situations where industry standards have changed since the original installation, but the appliance is operating safely.

Categories 1 and 2 above must be notified to the gas user/responsible person, where they relate to a gas appliance. In other cases, gas operatives should use their judgement in deciding to report, dependant upon the usefulness of the information.

Note: Appendix 5 contains scripts that may be useful to help when called upon to explain a particular situation to the gas user/responsible person.

9.5 Methods of notification

When notifying, particularly for categories 1 and 2 in Sub-clause 9.4, it is recommended that this is done in writing using an appropriate Advice Notice and a copy retained for future reference that the gas user/responsible person is asked to sign as a record of receipt.

Note 1: If the gas user is not the owner of the appliance/installation, a copy of the Advice Notice should also be provided to the owner, landlord or managing agent.

Note 2: A gas operative may use any system that delivers the same level of security to that described above. This may be particularly relevant to those using electronic recording systems.

Note 3: To enable CORGI registered gas operatives to comply with the requirements of the Gas Industry Unsafe Situations Procedure, suitable forms and labels are available from CORGI direct. For further details see Appendix 6.

Note 4: In the interests of possible future civil litigation, any records should be kept for 6 years.

Important: If verbal advice only is given, it is recommended that this is recorded on the gas operative's work sheet or job ticket.

9.6 Dealing with multiple NCS situations for open-flued appliances

Individual flueing and ventilation NCS situations are highly unlikely to lead directly to the development of an unsafe situation, but experience has shown that when they occur in combination, it is more likely that an unsafe situation will result.

Gas Industry Unsafe Situations Procedure

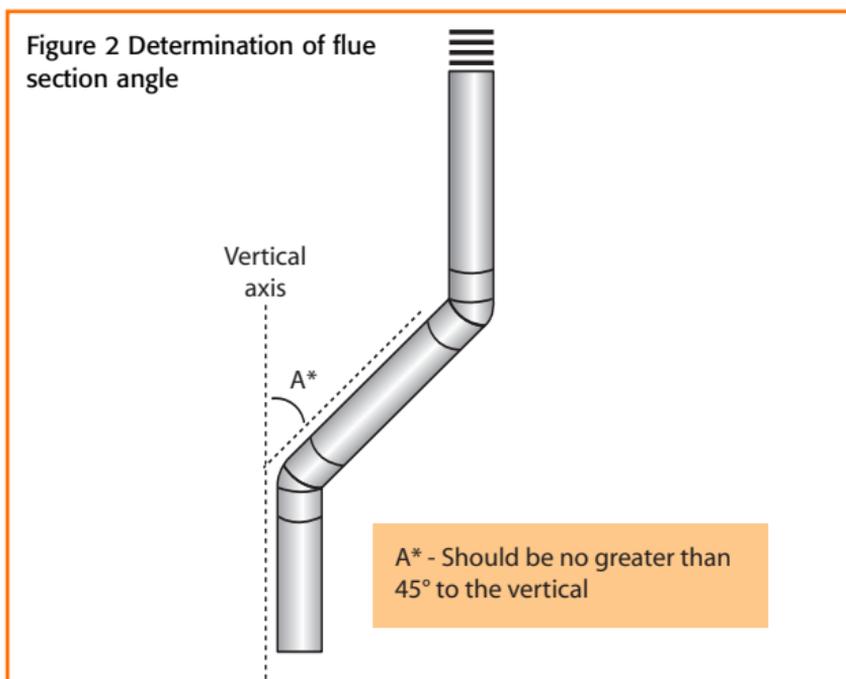
The list below outlines the situations which, **in combinations of two or more on the same installation**, may reduce the margin of safety to the extent that there is a greater risk of it becoming unsafe and it may be appropriate to consider it to be **At Risk (AR)**. For guidance on dealing with AR situations, reference should be made to Sub-clause 6.4 in Part 1 of this procedure.

However, there are many existing installations which complied with the standards applicable at the time of installation and that have operated satisfactorily for many years, but do not conform to the latest standards. In determining whether to classify the situation as **AR**, gas operatives should consider all information that may assist in their assessment of the risks posed, (such as previous history, the level of 'built-in' appliance safety, e.g. atmospheric sensing devices (ASDs)).

Wherever possible, the installation should be brought up to current requirements. However, if this is not practicable, then following the risk assessment principle, any action that reduces the risk to an NCS category may be adopted. For example, it may be possible to rectify one or more of the NCS situations so that the **AR** category is no longer appropriate.

Flues

- Less than 600mm vertical rise to first bend (unless manufacturers' instructions allow);
- Flue sections that are more than 45 degrees from the vertical (see Figure 2);
- Flue terminations in high pressure zones i.e. not to the specifications described in relevant industry standards;
- Unsuitable flue termination design;
- Undersized flue that is operating satisfactorily;
- Long exposed un-insulated flue routes.



Gas Industry Unsafe Situations Procedure

Ventilation

For ventilation situations, check the Table Sections in Part 3 of this procedure for a full interpretation of the appropriate category.

- Undersized purpose-provided air supply in a room or internal space;
- Correctly sized, but incorrectly configured compartment air supply.

Note: It is important that any factors that are considered to reduce the risk to enable the installation to be considered as simply NCS are accurately recorded, in order to support the decisions made.

Part 3

10. TABLES – GIVING GUIDANCE ON PARTICULAR SITUATIONS AND HOW TO CATEGORISE THEM

10.1 Introduction

The following Tables give guidance to competent gas operatives, regarding the categorisation of both Unsafe (ID and AR Situations) and NCS Situations. They contain the most common examples of situations that a gas operative is likely to encounter. However, they are not exhaustive and therefore, gas operatives should use the information in the Tables as a guide to derive the category of unlisted situations.

Individual circumstances may require different actions to be taken and in all cases, gas operatives should exercise sound engineering judgement within their area of competence and where there is doubt, seek further guidance.

IF IN DOUBT, ALWAYS TAKE A COURSE OF ACTION WHICH ENSURES SAFETY.

10.2 Scope

- Table 1 applies to both domestic and non-domestic situations for all gas types, unless otherwise specified;
- Table 2 contains additional examples specific to LPG installations;
- Table 3 contains additional examples specific to non-domestic installations.

Guidance to the column descriptions in Tables 1, 2 and 3

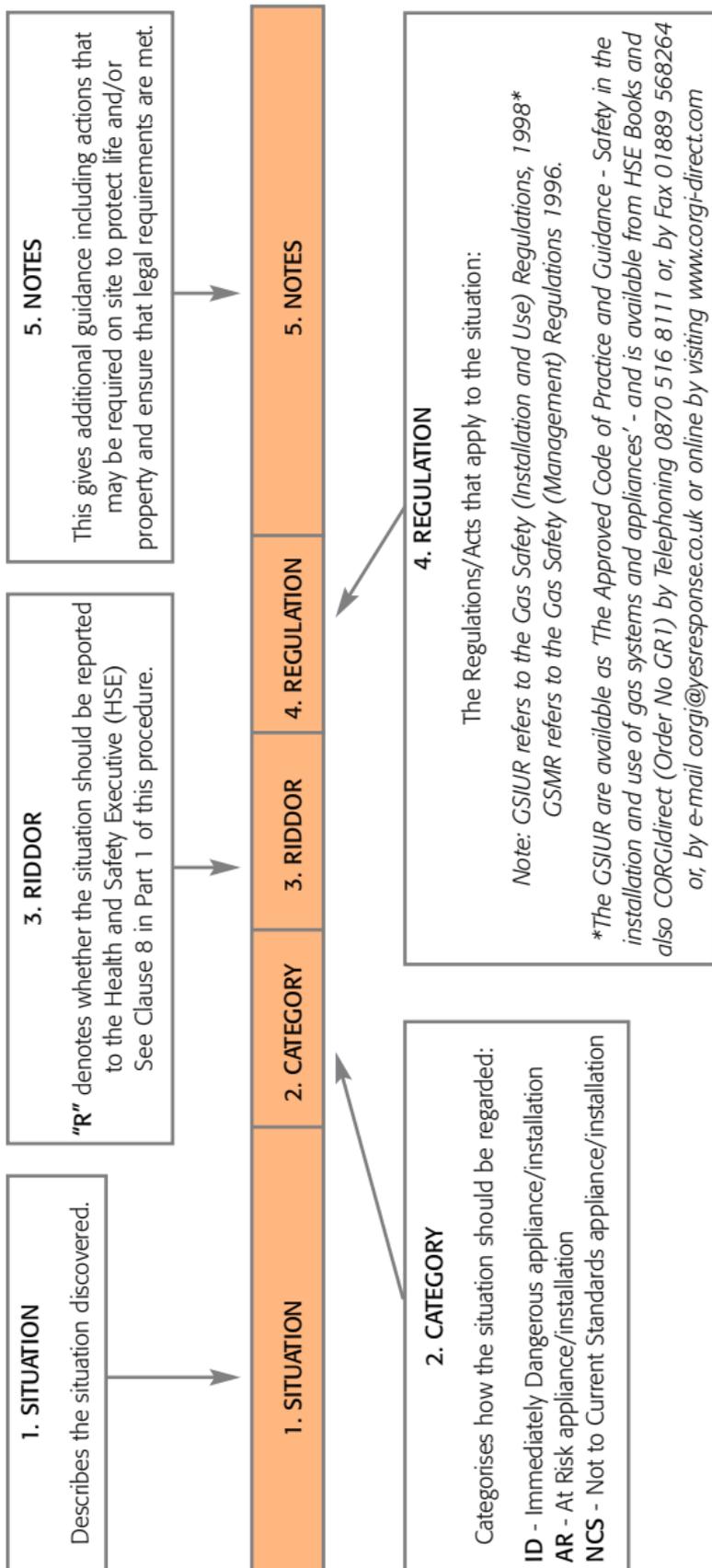


Table 1 EXAMPLES OF UNSAFE AND NOTIFIABLE NCS SITUATIONS

This Table is intended to give guidance to competent gas operatives regarding the categorisation of unsafe and notifiable NCS situations.

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
GAS ESCAPES				
From primary meter with sealed outlet	ID	R*	GSIUR	See ** below for natural gas.
From bulk storage vessel or cylinder installation	ID		GSIUR	See *** below for LPG.
Downstream of ECV (including primary meter and installation)				
(1) Outside tolerance of tightness test.	ID	R*	GSIUR	
(2) Within tolerance of tightness test, where there is a detectable smell of gas.	ID	R*	GSIUR	
Fire/Explosion	ID	R#	GSIUR GSMR	When making the gas installation safe, take care to cause minimal disturbance to the installation pending investigation. (See also Clause 5 of this procedure).
Key # Reportable by the public gas transporter (GT) (NG) or supplier (LPG) if cause of death or major injury; * Where due to the use of unsatisfactory fittings or workmanship; ** In England, Scotland and Wales - the National Emergency Service Call Centre, on Tel No: 0800 111 9999; ** In Northern Ireland - Phoenix Natural Gas, on Tel No: 0800 002 001, or in the case of LPG, the gas supplier; ** In the Isle of Man - Manx Gas Ltd, for all areas (including LPG), on Tel No: 01624 644444; ** In the Channel Islands contact Guernsey Gas Ltd, on Tel No: 01481 724811, or Jersey Gas Company Ltd, on Tel No: 01534 755555 as appropriate; *** In the case of LPG, the telephone number on the bulk storage vessel or at the meter. For cylinder supplies on caravan parks and hire boats, the site owner/boat operator may also have responsibilities. Advice may be obtained from the gas company identified on the cylinder through their emergency contact details, which should be found in the local telephone directory.				

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
METERS/PRESSURE REGULATION - NATURAL GAS (FOR LPG SEE TABLE 2)				
No pressure regulator installed at primary meter	ID	R	GSIUR	Inform the Gas Emergency Service Call Centre (See** on page 28). <i>Note: Where LPG/Air is in use, there may be no requirement for a meter regulator (in this case, check with the gas supplier).</i>
Medium pressure regulator relief valve discharging	ID		GSIUR	Inform ESP.
"Let-by" of any ECV, which forms part of the tightness-test	AR		GSIUR	For primary ECVs inform the Gas Emergency Service Call Centre (See** on page 28). Where there is a detectable smell of gas, this must be treated as a gas escape (ID).
Blocked medium pressure vent pipe, or inappropriately installed vent pipe i.e. pipe end submerged.	AR		GSIUR	Inform ESP.
Meter/regulator showing significant signs of damage from, for example: <ul style="list-style-type: none"> • corrosive atmosphere, • mechanical damage, or • contact with electrical equipment 	AR		GSIUR	For primary meters/regulators, inform the Gas Emergency Service Call Centre (See** on page 28). For secondary meters, inform the responsible person. <i>Note: Be aware of the dangers of touching components of the installation, which may be electrically live.</i>

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
METERS/PRESSURE REGULATION - NATURAL GAS (FOR LPG SEE TABLE 2)				
Medium Pressure (or higher) meter installation located within a domestic premise.	AR		GSIUR	Inform ESP of domestic situations. <i>Note: There may be instances where this situation is acceptable in non-domestic premises.</i>
No equipotential cross-bond connection provided at meter or connection sited in wrong position.	NCS		GSIUR	Inform the responsible person that bonding should be carried out by an electrically competent person.
Meter regulator not sealed.	NCS		GSIUR	Inform ESP.
Incorrect gas pressure to the inlet of the appliance caused by: a. Installation pipework b. Meter regulator or Network capacity	See Note opposite		GSIUR GSMR	In the case of b, inform the ESP Assess the risk to appliances, classify accordingly and advise the gas user/responsible person as follows: <ul style="list-style-type: none"> • For low pressure, providing that the appliance manufacturer's minimum specified burner pressure is available to all appliances, the NCS category is appropriate. This should be determined when all the appliances are in operation at full rate. • If the incorrect pressure affects the safe operation of any appliance e.g. combustion/flame stability, then escalate the classification to ID/AR as appropriate, for the affected appliance(s).

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
METERS/PRESSURE REGULATION - NATURAL GAS (FOR LPG SEE TABLE 2)				
Medium pressure fed meter installation without a meter inlet valve* (MIV) fitted. *Also known as a test valve.	NCS		GSIUR	Inform the Gas Transporter (GT) if known, otherwise inform the ESP.
Where required, no gas supply line diagram fixed at primary meter position.	NCS		GSIUR	This requirement applies to installations with secondary meters.
METER BOX/COMPARTMENT				
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.	AR		GSIUR	Advise gas user/responsible person that pipework must be sleeved and sealed and/or meter box repaired or replaced.
Medium pressure pipework entering a property from within the meter box.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
REPORTS OF "FUMES"				
CO detector alarm sounds or "fumes" reported: 1. Flued appliances: Spillage/leakage of products of combustion occurring, or signs of occurrence (with no evidence that the problem has been corrected)	ID	R*	GSIUR	In both cases: <ul style="list-style-type: none"> observe adjacent appliance(s) for satisfactory flame picture examine and test for spillage/leakage as appropriate visually check all other appliances in the property for safety. Consider CO migration from another property e.g. in flats etc. <p>Once satisfied that the gas appliances are safe, they may be put back into operation.</p> <p><i>Note: CO can be generated from sources other than gas appliances e.g. solid fuel and oil burning appliances, or internal combustion engines.</i></p>
2. Flueless appliances: Evidence of poor combustion occurring	ID	R*	GSIUR	
INSTALLATION PIPEWORK				
Pipework with an open end, connected to a gas supply.	ID	R	GSIUR	Seal the pipework with an appropriate gas fitting.

* Where due to the use of unsatisfactory fittings or workmanship.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
INSTALLATION PIPEWORK - Continued				
Pipework/fittings of inappropriate material for purpose and liable to damage. For example, plastic water pipe or hose pipe.	ID	R	GSIUR	While this may not pose an immediate threat to life or property, there is a high risk of accidental damage occurring which could cause a serious incident
Pipework suitable for gas/gas type used in inappropriate location/situation.	AR	R	GSIUR	For example, PE pipework incorrectly installed within a building, or PE pipework exposed above ground level without suitable protection.
In emergency situations, where there is no access to Emergency Control Valve (ECV) or no handle on the ECV.	ID		GSIUR	Advise the gas user/responsible person that access is required at all times to isolate the gas supply in the event of an emergency situation. It is accepted that without access, the ECV cannot be turned off, but all appliances must be turned off and reported immediately to the ESP, or in the case of LPG the gas supplier. For non-emergency situations, treat as AR and also report to the ESP or in the case of LPG the gas supplier.
No Additional Emergency Control Valve (AECV) provided at the point of entry into the property where there is no adequate access to the ECV.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
INSTALLATION PIPEWORK - Continued				
Pipework showing signs of corrosion or damage likely to affect safety.	AR		GSIUR	Pipework that is not suitably protected against corrosion and positioned where it may suffer damage from corrosion, but not showing any visible signs of corrosion/damage, would normally be treated as NCS.
Pipework significantly undersized preventing the appliance operating at the manufacturer's intended minimum gas heat input rating or affecting the safe operation of any appliance.	AR		GSIUR	Undersized installations, which do not affect the safety of any appliance operation, or prevent any appliance(s) from operating at its minimum intended gas heat input rating, are normally treated as NCS. See also entry under - METERS/PRESSURE REGULATION - NATURAL GAS
Restricted access to any Emergency Control Valve (ECV).	AR		GSIUR	Advise the gas user/responsible person that access is required at all times to isolate the gas supply in the event of an emergency situation. It is accepted that without access the ECV cannot be turned off, however, in this situation all appliances must be turned off.
Gas pipework located within a cavity or void but not within a purpose designed duct in accordance with appropriate standards.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
INSTALLATION PIPEWORK - Continued				
Gas pipework located within unventilated ducts/voids or located within the cavity of a cavity wall (not passing through by the shortest route).	AR		GSIUR	Gas installation pipework (including fittings) located within a cavity wall, is considered to be at a higher risk than pipework passing through a non-sleeved cavity wall by the shortest route, which is categorised as NCS.
Pipework passing through any walls (including cavity walls), which are not sleeved and appropriately sealed.	NCS		GSIUR	
Inadequately supported pipework	NCS		GSIUR	
AIR SUPPLY (VENTILATION)				
Open-flued and flueless appliances requiring a purpose provided permanent combustion air supply where NONE is provided.	AR		GSIUR	Ventilation provided via a redundant flue or chimney, is not regarded as purpose provided ventilation and may affect the safe operation of open-flued appliances. For factory situations, with the exception of the above, all sources of ventilation may be considered.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
AIR SUPPLY (VENTILATION) - Continued				
Open-flued appliance installed in a compartment requiring purpose-provided high and low-level permanent air supply; providing less than 90% of the requirement for each ventilator position.	AR		GSIUR	Both high and low level ventilation are required. Research has shown that correct sizing, position and configuration of air vents is essential to prevent vitiation occurring within the compartment. An air supply that is less than 10% undersized is unlikely to have a detrimental effect on the safe operation of the appliance.
Open-flued and flueless appliances in rooms and internal spaces requiring a purpose-provided permanent combustion air supply: <ul style="list-style-type: none"> • 0% to 39% of requirement 	AR		GSIUR	The category for 40% to 89% only applies to existing installations. Until 1st June 2008, such installations can be regarded as NCS , providing that the installation is otherwise operating safely. The gas user/responsible person should be advised in writing that this is only a temporary situation that needs to be brought up to current industry standards before 1st June 2008.
<ul style="list-style-type: none"> • 40% to 89% of requirement (See NOTES opposite) • 90% to 100% of requirement 	AR		GSIUR	From 1st June 2008, all installations providing less than 90% of the ventilation requirement will be regarded as AR.
	None			90% to 100% of requirement is accepted under Standards.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
AIR SUPPLY (VENTILATION) - Continued				
Air supply ventilators, which incorporate gauzes or fly screens or are closable.	AR		GSIUR	Pest control mesh may be found on purpose provided ventilation found in commercial catering establishments or leisure accommodation vehicles which may not be a risk if clean and complying with relevant Standards/procedures.
Room-sealed appliances where manufacturer's requirements for compartment ventilation are undersized or not provided.	AR		GSIUR	Where there are NO signs of distress due to overheating, this should be regarded as NCS. <i>Note: Some modern appliances may not require compartment ventilation. Refer to manufacturer's instructions for guidance.</i>
Flueless appliances including cookers, installed in a room of inadequate volume irrespective of ventilation provision. For flueless water heaters, see also Water Heaters section of this Table.	AR		GSIUR	Reference should be made to appliance manufacturer's instructions for particular room volume requirements.

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
AIR SUPPLY (VENTILATION) - Continued				
Compartment ventilation for open-flued appliances, cross ventilated i.e. from different sources (other than balanced compartments).	NCS		GSIUR	Gross ventilation can impact on the safety of the appliance, therefore, the performance of the appliance should be checked.
<p><i>Note: Where more than one flueing and/or ventilation NCS situation is identified, the gas operative must assess the safety of the gas installation and decide whether the deficiencies are so serious to warrant the gas installation being treated as AR. See Part 2 of this procedure for further details. (See also the FLUES (OPEN-FLUES) NCS situations in this Table.</i></p>				
FLUES (OPEN-FLUES)				
Products of combustion (POC) leaking into buildings including flues terminating in loft spaces.	ID	R*	GSIUR	
Spillage occurring, or signs of spillage (with no evidence that the problem has been corrected).	ID	R*	GSIUR	Particular attention should be taken regarding compartment installations.

* Where due to the use of unsatisfactory fittings or workmanship.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
FLUES (OPEN-FLUES) - Continued				
Where the clearances around an open-flued appliance do not comply with the manufacturer's minimum requirements:				Where the clearances do not comply with the manufacturer's minimum requirements but there are gaps greater than 5mm around the appliance, provided that the appliance is otherwise operating safely and there are no signs of distress, the installation should be regarded as NCS.
1. Appliance showing signs of distress	ID	R	GSIUR	
2. Appliances not showing signs of distress	AR		GSIUR	
3. Open-flued appliance down-draught diverter is found to be completely enclosed.	AR		GSIUR	
Incomplete or damaged flue or inadequate fixings/sealing	AR		GSIUR	Examples would include missing down-draught diverter, missing flue terminal and inadequate support.
Appliance connected to an unlined masonry (brick) chimney, which needs to be lined due to poor chimney condition e.g. failed flue flow check (indicating a porous chimney only), where products of combustion are not entering the building.	AR		GSIUR	

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
FLUES (OPEN-FLUES) - Continued				
Two or more appliances connected to one flue either:				To rectify the situation:
1. Appliance with no flame supervision device fitted	AR		GSIUR	<ul style="list-style-type: none"> • disconnect and attach "Do Not Use" Warning labels to all incorrectly installed appliances
2. Appliances in separate rooms ventilated from different sides of the building	AR		GSIUR	<ul style="list-style-type: none"> • seal the flue connections of each disconnected appliance
3. Where the flue is not designed for the purpose.	AR		GSIUR	<ul style="list-style-type: none"> • re-test for spillage
Natural draught wall-faced flue termination	AR		GSIUR	Not acceptable for ANY natural draught open-flued appliance installation. See Appendix 1 - Figure 3.
Natural draught wall adjacent flue termination	AR		GSIUR	Not acceptable for ANY natural draught DOMESTIC open-flued appliance. See Appendix 1 - Figure 4. For non-domestic installations, see Table 3.
Manual damper in place and not secured in the open position (domestic appliances).	AR		GSIUR	

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
FLUES (OPEN-FLUES) - Continued				
Automatic flue damper not interlocked to appliance gas supply.	AR		GSIUR	
Open-flues operating satisfactorily, but with less than 600mm vertical rise to the first bend (unless permitted by manufacturer's instructions).	NCS		GSIUR	It is important that all of these NCS situations are reported to the gas user/responsible person. Where more than one flueing and/or ventilation NCS situation is identified, the gas operative must assess the safety of the gas installation and decide whether the deficiencies are so serious to warrant the gas installation being treated as AR.
90° bends or horizontal runs.	NCS		GSIUR	See Part 2 of this procedure for further details.
Unsatisfactory flue termination positions.	NCS		GSIUR	
Incorrect use of flue material e.g. exposed flue liner.	NCS		GSIUR	(See also the AIR SUPPLY (VENTILATION) NCS situations in this Table)
Undersized flue pipe serving appliance with no evidence of adverse operation.	NCS		GSIUR	
Unsuitable flue terminals.	NCS		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
FLUES (ROOM-SEALED)				
Flue terminating into an internal space e.g conservatory	ID	R	GSIUR	
Fan assisted positive pressure type appliances with ineffectively sealed cases.	ID	R*	GSIUR	See industry guidance on checking the seals of fan assisted positive pressure room-sealed appliances online at the CORGI Website www.corgi-group.com and the current version of the Essential Gas Safety Manual - Domestic (See Appendix 6 for further details).
Flue terminations in semi enclosed areas. Following an assessment:				Examples include, covered passageways (ginnells), carports not opened on two sides and lightwells.
<ul style="list-style-type: none"> It is found that undiluted combustion products are entering the property. There is a risk that undiluted combustion products may enter the building. 	ID	R	GSIUR	See industry guidance on how to classify flues terminating in covered passageways or ginnells online at the CORGI Website www.corgi-group.com
	AR		GSIUR	

* Where due to the use of unsatisfactory fittings or workmanship.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
FLUES (ROOM-SEALED)				
Flue termination positions which are not in accordance with the manufacturer's installation instructions/Standards or terminating where they may cause a nuisance i.e. discharging over boundaries or public access areas.	NCS		GSIUR	Compliance with the dimensional requirements set by appliance manufacturers for flue termination positions should not be a gas operative's only consideration in choosing a suitable flue termination location.
APPLIANCES (GENERAL)				
Appliances, which should be flued, but are not flued.	ID	R	GSIUR	
Appliances, which are unsafe due to inadequate maintenance.	ID		GSIUR	
Flued appliances that are spilling or leaking combustion products into a room or internal space.	ID	R*	GSIUR	As well as appliances spilling combustion products due to flueing and/or ventilation deficiencies, this will also include those circumstances where appliance combustion/heat exchangers are leaking combustion products or sight glass/window or case seals are faulty or missing.

* Where due to the use of unsatisfactory fittings or workmanship.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
APPLIANCES (GENERAL) - Continued				
Not suitable for use with the gas supplied.	ID	R	GSIUR	Refer the responsible person to the installer of the appliance.
Gas controls and safety devices that affect the safe operation of a gas appliance, which are inoperative, failing to danger or are disabled.	ID	R*	GSIUR	Examples of devices include flame supervision devices (FSDs), regulators, spillage monitoring devices (TTBs, ASDs), air pressure switches etc. <i>Note: For Non-domestic situations, see Table 3.</i>
Evidence of distress to adjacent combustible materials.	AR		GSIUR	
Flueless or non-room-sealed appliance in bathroom or shower room	AR		GSIUR	Appliances installed before November 1984, which are otherwise safe and working satisfactorily should normally be regarded to be NCS. These include cookers etc. installed in a room containing a bath or shower e.g. bed-sitting rooms.
Flueless or non-room-sealed space heating or water heating appliance(s) over 14kW heat input (gross), or under 14kW heat input (gross) without a built-in atmosphere sensing device, installed after 1 st January 1996 in bedrooms or bed-sitting rooms.	AR		GSIUR	Appliances installed before 1st January 1996, which are otherwise safe and working satisfactorily should normally be regarded to be NCS.

* Where due to the use of unsatisfactory fittings or workmanship.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
APPLIANCES (GENERAL) - Continued				
In rented accommodation, appliances installed in a room or rooms, which has later been converted into bedrooms after 31 st October 1998, where the appliances do not comply with the current requirements for gas appliances in bedrooms.	AR		GSIUR	Rooms converted before 31 st October 1998, which are otherwise safe and working satisfactorily should normally be regarded to be NCS. Short term use of living rooms etc. as bedrooms due to ill health may be treated as NCS, but with additional measures recommended, e.g. CO alarms. For further information go to www.hse.gov.uk/gas/index.htm
Flexible gas connection to a flued domestic appliance.	AR		GSIUR	This requirement does not apply to gas-fired tumble dryers installed to the requirements of BS 7624.
Appliance which is found to be not secure/stable so that it is potentially unsafe.	AR		GSIUR	
Appliance installed onto a sealed heating system: <ul style="list-style-type: none"> • without pressure relief controls • with pressure relief controls, but without overheat temperature protection. 	AR NCS		GSIUR	Any appliance not approved for installation onto a sealed system should be regarded as AR.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
WATER HEATERS				
Flueless or open-flued instantaneous water heating appliances without a built-in atmosphere-sensing device (ASD) installed after 31st October 1998.	AR		GSIUR	Appliances installed before 31st October 1998, which are otherwise safe and working satisfactorily, should normally be regarded to be NCS.
Flueless instantaneous water heating appliances with a built-in ASD installed at any time, in a room or internal space of inadequate volume.	AR		GSIUR	Appliances with a built-in ASD installed before 1st August 2005, which are otherwise safe and working satisfactorily, may be classified as NCS.
Flueless water heating appliances without a five minute warning label fitted.	NCS		GSIUR	
GAS FIRES/FIREPLACES				
Builder's opening inadequately sealed.	AR		GSIUR	There should be no gaps within the builder's opening other than the fireplace opening and the flue itself.
No closure plate fitted (where required), or inadequately sealed.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
GAS FIRES/FIREPLACES - Continued				
Gas fire fitted to letterbox opening or with inadequate catchment space.	AR		GSIUR	
Gas fire fitted on carpet - burner less than 225mm above carpet with damage evident.	AR		GSIUR	Where no damage is evident, the installation should normally be regarded as NCS.
Gas fire with a re-painted case, showing heat damage not caused by spillage.	AR			Gas fires with re-painted cases and no signs of heat damage evident should normally be regarded as NCS.
Combustible materials located within builder's opening and showing signs of heat damage or scorching.	AR		GSIUR	Where combustible material is found to be located within a builder's opening and shows no signs of distress, this should normally be regarded as NCS.
GAS FIRE/BACK BOILER UNITS				
Builder's opening that is not sealed i.e. around flue liner, water and/or gas pipework.	AR		GSIUR	Seal all unsealed openings, i.e. around flue liner, water and/or gas pipework. Where the flue liner/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 working satisfactorily, it may be regarded as NCS.

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
WARM AIR HEATERS				
Unsealed Plenum or ducting in appliance compartment affecting the safe operation of the appliance.	ID	R	GSIUR	Where an unsealed plenum is encountered, which does not affect the safe operation of the appliance, the installation should be regarded as AR.
Open-flued warm air heater with fan-assisted warm air circulation installed in a compartment without a positive return air connection.	AR		GSIUR	Where a domestic open-flued warm air heater with fanned warm air circulation without a positive return air arrangement is encountered, then it may be possible to fit a return air duct, otherwise the appliance manufacturer should be consulted. In many cases, particularly with older appliances, this will not be possible and the gas user/responsible person should be advised to replace the appliance. Where the appliance manufacturer is unknown, contact the CORGI Technical Helpline on 0870 401 2400 for further guidance.
Open-flued warm air heater with fan-assisted warm air circulation with inadequate provision for return air path.	AR		GSIUR	<i>Note: for Non-domestic situations, see Table 3.</i>

TABLE 2 - ADDITIONAL EXAMPLES OF SPECIFIC UNSAFE AND NOTIFIABLE NCS SITUATIONS FOR LPG INSTALLATIONS

This Table is intended to give guidance to competent gas operatives regarding the categorisation of unsafe and notifiable NCS situations specific to installations using LPG.

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
LIQUEFIED PETROLEUM GAS (LPG)				
Vapour off-take cylinders with no regulator fitted.	ID	R	GSIUR	
PE service pipework subjected to first stage (high) pressure without over-pressure shut-off (OPSO) protection.	AR		GSIUR	Inform the gas supplier.
Bulk storage vessel installation without under-pressure shut-off (UPSO)/OPSO protection.	AR		GSIUR	Inform the gas supplier.
Four or more cylinders connected to an automatic change over device without OPSO protection.	AR		GSIUR	Inform the gas (cylinder) supplier/filler.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
LIQUEFIED PETROLEUM GAS (LPG) - Continued				
LPG cylinders sited/stored within a dwelling/high-rise building/boat cabin/LAV (Leisure Accommodation Vehicle) that do not meet safety and installation criteria.	AR		GSIUR	<p>Propane cylinders are not permitted within these locations.</p> <p>Butane cylinders may be stored for use in a permanent dwelling, provided they are no more than 15kg total capacity per unit dwelling and located within 0.5h fire rated compartments with adequate ventilation direct to outside air. (See BS 5482-1).</p> <p>Butane cylinders should not be used in high-rise un-strengthened large panel system-built flats, or any traditionally built high-rise flat above five storeys in height. Inform the owner of the building.</p>
Marine LPG cylinder location or locker that is not vapour tight to the craft interior, is accessible from inside the craft interior and does not provide for adequate drainage facilities for LPG to vent directly overboard, or for adequate ventilation direct from outside the vessel.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
LIQUEFIED PETROLEUM GAS (LPG) - Continued				
Appliance with automatic ignition, installed in a room below ground level, unless open to above ground level on at least one side.	AR		GSIUR	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.
Leisure accommodation vehicles (LAVs) (e.g. static caravan holiday homes) and residential park homes, with the base area filled in, blocking the underfloor ventilation system.	AR		GSIUR	Ventilation of the underfloor void is needed to provide air for appliance combustion within the living space and additional ventilation at low level for the void/base area to disperse any leakage of LPG.
Bulk storage vessel(s) or cylinder supplies located where they may cause a danger to persons, plant or property.	AR		GSIUR	Inform the gas supplier/filler.
<i>Note: Any unwanted LPG cylinders should be disposed of safely by returning them to the cylinder owner (gas supplier) where known, or local authority.</i>				

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
LIQUEFIED PETROLEUM GAS (LPG) - Continued				
Meter/regulating equipment inappropriate for gas type, damaged, tampered with or in poor condition.	AR		GSIUR	Inform the gas supplier/filler and where appropriate the responsible person. <i>Note: Regulators over 10 years old should be classified as NCS.</i>
2 nd stage regulator installed in an external enclosure without adequate means to discharge to external air in the event of regulator failure.	AR		GSIUR	Re-site the regulator where practicable or install an adequate vent pipe capable of discharging excess pressure to open air away from ignition sources.
Pressure levels above low pressure, located within a domestic premise.	AR		GSIUR	Inform the gas supplier/filler. <i>Note: There may be instances where this situation is acceptable in non-domestic premises.</i>
LPG hose insecure or shows signs of wear, stress, damage, chafing, cuts, splits etc. or is of a type not suitable for LPG.	AR		GSIUR	The LPG hose should be secured using suitable clips at both ends.
Regulator seal broken or tampered with.	NCS		GSIUR	Inform the gas supplier/filler.

TABLE 3 - ADDITIONAL EXAMPLES OF SPECIFIC UNSAFE AND NOTIFIABLE NCS SITUATIONS FOR NON-DOMESTIC INSTALLATIONS

This Table is intended to give guidance to competent gas operatives regarding the categorisation of unsafe and notifiable NCS situations specific to non-domestic installations.

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
PIPEWORK (BOOSTED SUPPLIES)				
Low-pressure protection not fitted, bypassed, or inoperable.	AR			
Non-return valve not fitted or, if fitted not functioning.	AR		GSIUR	Mixing air/gas/chemicals downstream, hospitals/schools/Industrial processes etc.
FLUEING/AIR SUPPLY				
Any form of mechanically assisted flueing/ventilation system not interlocked to the appliance gas supply.	AR		GSIUR	See also COMMERCIAL CATERING in this Table.
FLUEING				
Natural draught open-flued wall adjacent flue termination.	AR		GSIUR	For EXISTING installations in FACTORIES that were installed before 1990 and in the opinion of the gas operative exercising their professional judgement, are judged to be safe and working satisfactorily (see Figure 4 in Appendix 1). Such installations may be regarded to be NCS.

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
WARM AIR HEATERS				
Open-flued warm air heater with fan-assisted warm air circulation installed in a Plant Room, with inadequate provision for a return air path.	AR		GSIUR	For appliances installed in Plant Rooms in non-domestic situations without a positive return air connection, the installation can be regarded as NCS, providing that the ventilation to the Plant Room is sufficient to prevent depressurisation of the room affecting flue performance.
COMMERCIAL CATERING				
Existing kitchen installation with no ventilation system interlock provision.	See Note opposite		GSIUR	The category could be ID, AR or NCS, dependant on a risk assessment as set out in HSE Catering Information Sheet No 23.
Powered extraction ventilation system (canopy) for kitchen without provision for air entry or make-up air.	AR		GSIUR	

Gas Industry Unsafe Situations Procedure

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
COMMERCIAL CATERING - Continued				
Appliance with enclosed burner without a flame supervision device (FSD).	AR		GSIUR	<p>Existing appliances without FSDs that are only operated by trained nominated persons can be regarded as NCS.</p> <p>Historical evidence shows that a high number of incidents have occurred with these types of appliances and the recommendation in HSE Catering Information Sheet No 3 - (dated 1995) and subsequently reinforced in HSE Catering Information Sheet No 23 - (dated January 2004), is that they should be upgraded with manufacturer's kits where practicable or replaced.</p>
Deep fat fryers and other appliances where a high temperature limit thermostat is required, but is failing to operate or is not fitted.	AR		GSIUR	

1. SITUATION	2. CATEGORY	3. RIDDOR	4. REGULATION	5. NOTES
METER INSTALLATIONS				
Non-domestic meter compartment ventilated internally into boiler house or Plant Room.	AR		GSIUR	Ventilation for meter compartments should communicate directly with outside air. Gas operatives should refer to guidance published in ICE/GM/1 and ICE/GM/6 as appropriate.
Where required, no gas supply line diagram fixed at primary meter position.	NCS		GSIUR	
Insufficient ventilation of a non-domestic meter compartment.	NCS		GSIUR	
MISCELLANEOUS ISSUES				
Situation where an appliance could be a potential ignition source within a hazardous area i.e. where a flammable atmosphere may occur.	AR			This applies to all places of work including commercial garages, where particular appliance types and/or electrical control systems are installed in inappropriate locations. Gas operatives should refer to guidance published in IM/28 and other appropriate industry standards.

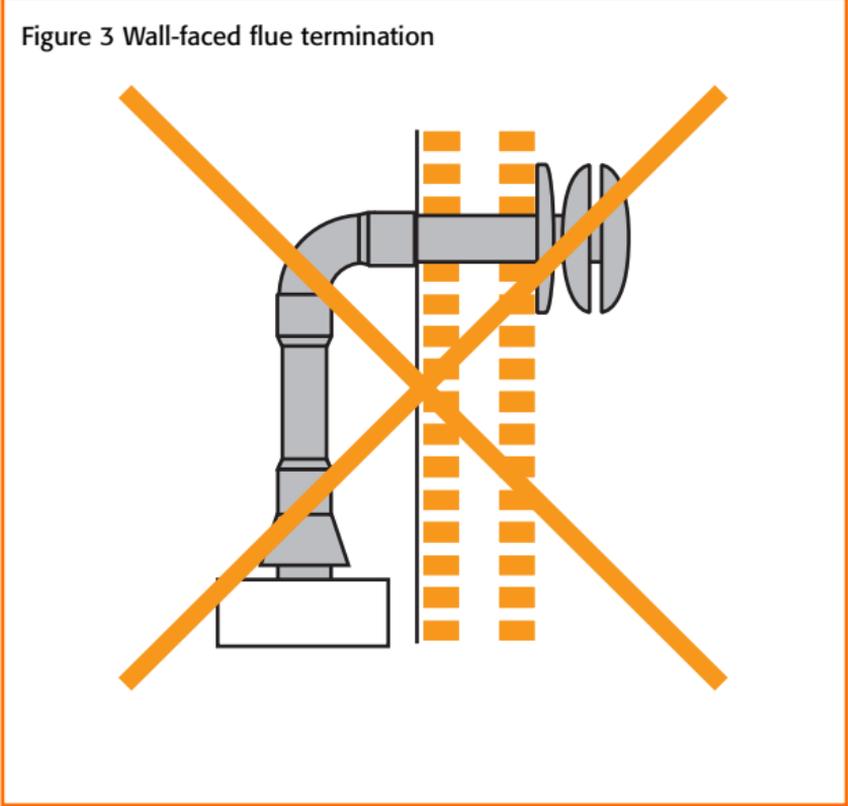
Gas Industry Unsafe Situations Procedure

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Gas Industry Unsafe Situations Procedure

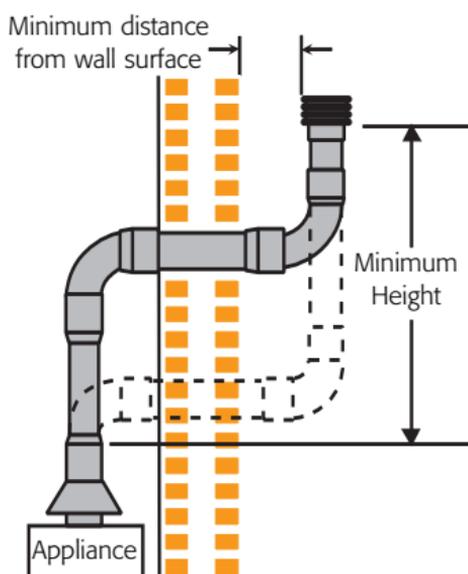
Appendix 1 Guidance for Non-domestic situations in factories only

Note: Neither of these examples are suitable for domestic installations.



All wall-faced terminals are unacceptable and must be classed as AT RISK.

Figure 4 Wall adjacent flue termination



Minimum requirements for Figure 4

Note: Wall adjacent terminations are not permitted for ANY new natural draught installations.

Where they are acceptable for existing installations in **FACTORIES** and are deemed by the gas operative to be working safely, they can be regarded as Not to Current Standards (NCS) providing that the following conditions are met:

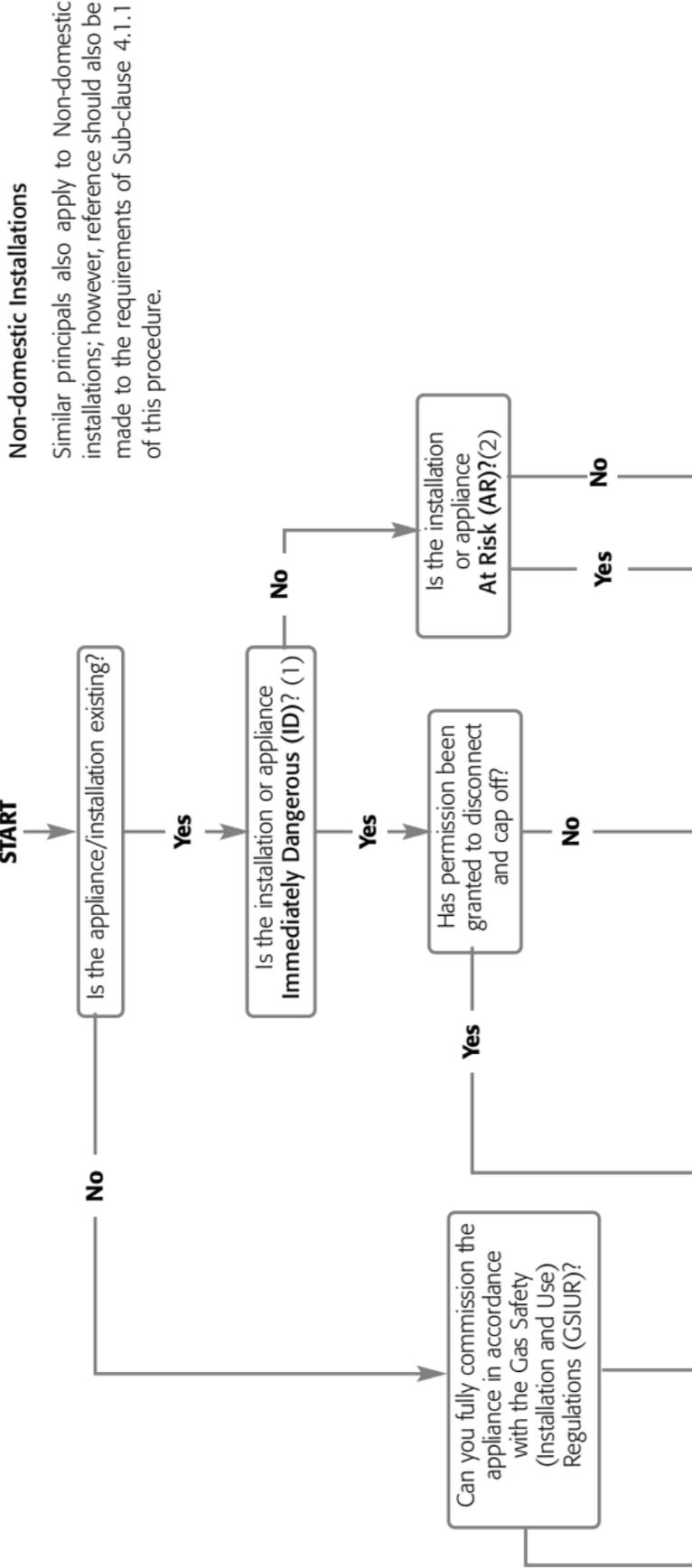
1. The flue must have a minimum height of 1.2m.
2. The flue terminal must be at least 250mm from the wall surface.
3. The configuration is acceptable with up to 1.2m of horizontal flue.
4. The flue terminal must be at least 600mm away from any opening into the building.
5. The flue terminal must not be within 1.0m of the underside of the eaves or a balcony.

If the minimum requirements cannot be met, the installation must be treated as AT RISK.

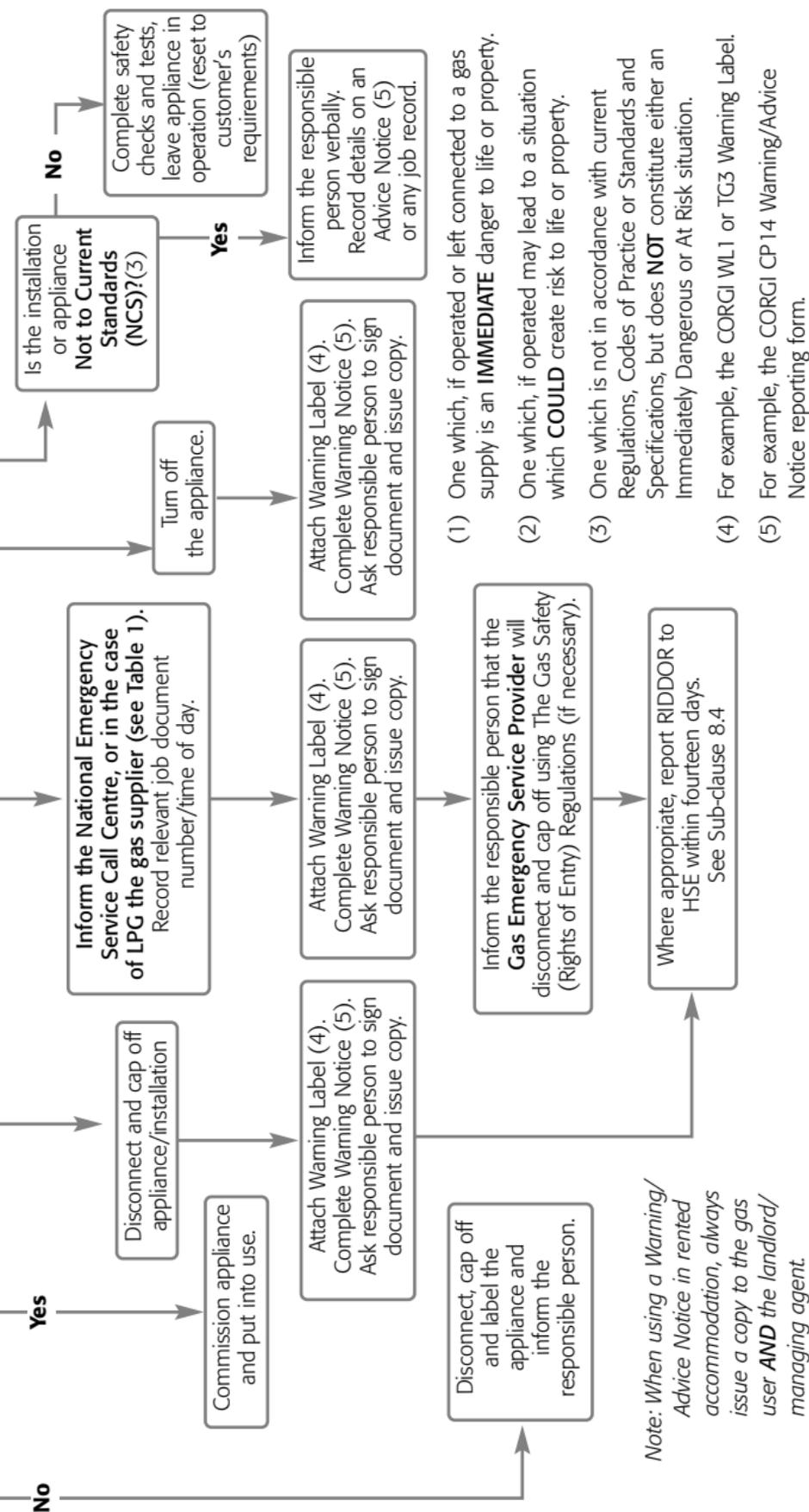
The gas operative should include the following factors in deliberations:

- Size and purpose of the space containing the appliance;
- Number of air changes;
- Age and condition of the appliance;
- Appliance combustion performance;
- Period and frequency the appliance is in use.

Appendix 2 Dealing with Unsafe Situations in Domestic Premises



Gas Industry Unsafe Situations Procedure



Gas Industry Unsafe Situations Procedure

Appendix 3 Glossary of terms and definitions

Term	Definition
ACS	An acronym for the Nationally Accredited Certification Scheme for Individual Gas Fitting Operatives.
Appliance compartment	An enclosure (not being a habitable space) specifically designed or adapted to house one or more gas appliances only.
Appropriate fitting	Appropriate fitting means a fitting which has been designed for the purpose of effecting a gas tight seal in a pipe or other gas way, which achieves that purpose when fitted and is secure, so far as is reasonably practicable, against unauthorised opening or removal.
Atmosphere Sensing Device (ASD)	(Also known as an oxygen depletion system) shuts off the gas supply to an appliance burner before there is a build-up of a dangerous quantity of combustion products in the room concerned.
At Risk (AR)	An appliance/installation, which if operated, may lead to a situation which could create risk to life or property.
Bedsitting room	Any room or space used for living and sleeping purposes.
Commissioning	Initial start-up of an installation to check and adjust for safe and reliable operation.
Competence	Competence in safe gas installation requires gas operatives to have enough knowledge, practical skill and experience to carryout the job in hand safely, with due regard to good working practice. Knowledge must be kept up-to-date with awareness of changes in law, technology and safe working practice.
CORGI	The Council for Registered Gas Installers.
Defect	<p>For the purposes of this procedure, 'Defect' can be defined as either of the following:</p> <ul style="list-style-type: none"> • Those situations that are listed in the GIUSP as ID or AR (including NCS situations that stack to AR). However, the list provided is not definitive. • Those situations that did not meet the appropriate British Standard, manufacturer's instructions, or other relevant industry normative document at the time of installation and affect safety. <p><i>Note: All flueing and ventilation NCS situations should be brought to the attention of the gas user/responsible person.</i></p>
Disconnect	To isolate the appliance and/or installation from the gas supply using a permanent means of disconnection i.e. plug or cap off the supply.

Gas Industry Unsafe Situations Procedure

Term	Definition
Domestic installations	Domestic installations are those installed in buildings designed for dwelling purposes including dwelling houses, flats and student accommodation, where gas installation pipework is normally no greater in size than 28mm diameter, where the appliances installed are designed for domestic purposes and have a maximum heat input rating no greater than 70kW net.
Downstream	That part of a gas installation after a certain point e.g. the appliance is downstream of the gas meter.
Emergency Control Valve (ECV)	The ECV is a valve, not being an "Additional Emergency Control Valve" (AECV) for shutting off the supply of gas in an emergency, intended for use by a gas user and being installed at the end of a gas service or gas distribution main. The outlet of the ECV terminates and thus defines the end of the Network.
Additional Emergency Control Valve (AECV)	An AECV is a valve, not being the ECV, for shutting off the supply of gas in an emergency, intended for use by a consumer of gas. An AECV may be located within either the meter installation or installation pipework and as such, may isolate all of the consumer's pipework or meter installation.
Emergency Service Provider (ESP)	Means a person appointed pursuant to Regulation 7(11) of the Gas Safety (Management) Regulations (GSMR).
Enforcing Authority	An authority with a responsibility for enforcing the Health and Safety at Work Etc. Act 1974 and other relevant statutory provisions; normally the Health and Safety Executive (HSE) or the local authority for the area as determined by the Health and Safety (Enforcing Authority) Regulations 1977.
Existing installations	Gas appliances or other fittings, which are not new installations and have already been used.
Factory	The legal definition of 'factory' is wide ranging and in addition to manufacturing/processing premises includes printing, fruit and vegetable packing, scrap yards, repair workshops (e.g. TV, vehicle), dairies, prison workshops, hospital and other institutional laundries, certain warehouses using mechanical power, power stations etc.
Free area	The total area of the individual unobstructed openings of an air vent.
Flue	Passage for conveying the products of combustion from a gas appliance safely to atmosphere.
Fumes	Products of complete or incomplete combustion.

Gas Industry Unsafe Situations Procedure

Term	Definition
Gas appliance	Means an appliance designed for use by a consumer of gas for heating, lighting, cooking or other purposes for which gas can be used, but it does not include a portable or mobile appliance supplied with gas from a cylinder except for a portable or mobile space heater supplied with gas from a cylinder and the cylinder, pipes and other fittings used for supplying gas to the heater.
Gas fitting	<p>"Gas fittings" means gas pipework, valves (other than emergency controls), regulators and meters and fittings, apparatus and appliances designed for use by consumers of gas for heating, lighting, cooking or other purposes for which gas can be used (other than the purpose of an industrial process carried out on industrial premises), but it does not mean:</p> <ul style="list-style-type: none"> (a) any part of a service pipe; (b) any part of a distribution main or other pipe upstream of the service pipe; (c) a gas storage vessel; or (d) a gas cylinder or cartridge designed to be disposed of when empty.
Gas installation	Gas pipework, valves (other than emergency controls), regulators and meters and fittings, apparatus and appliances designed for use by consumers of gas for heating, lighting, cooking or other purposes for which gas can be used (other than the purpose of an industrial process carried out on industrial premises) and gas storage vessels.
Gas related incident	Gas related incidents are catergorised as follows: gas explosions, property fires and burnt gas incidents (carbon monoxide (CO) poisonings), which result in death or major injury (reportable under RIDDOR, Regulation 6(1)).
Gas Transporter (GT)	A person conveying gas in a network as defined in GSMR.
Gas user	In a domestic environment, this will include: the owner of the property or tenant. In a non-domestic environment, this will include: Site Engineer; Site Manager; Facilities Manager. (See also Responsible person)
Ginnell	Covered passageway.
GIUSP	Gas Industry Unsafe Situations Procedure.
GSIUR	The Gas Safety (Installation and Use) Regulations 1998.
GSMR	The Gas Safety (Management) Regulations.
HSE	The Health and Safety Executive.

Gas Industry Unsafe Situations Procedure

Term	Definition
Immediately Dangerous (ID)	An appliance/installation, which if operated or left connected to a gas supply is an immediate danger to a life or property.
Industry Standards or Code of Practice	Documents published by bodies to provide guidance on how to carry out gas work activities e.g. British and European Standards, Institution of Gas Engineers and Managers publications and LP Gas Association Codes of Practice.
Intermediate pressure stage (LPG)	That part of the LPG installation between the outlet of the 1 st stage regulator and the inlet of the 2 nd stage regulator. For Propane, the pressure will be in the region of 75mbar. Also known as medium pressure stage.
Leisure Accommodation Vehicle (LAV)	A unit of living accommodation for temporary or seasonal occupation that may meet the requirement for the construction and use of road vehicles, e.g. a caravan.
Low pressure stage (LPG)	That part of the LPG installation between the outlet of the 2 nd stage regulator and the gas appliance(s). For Propane, the normal operating pressure is 37mbar. For Butane, the normal operating pressure is 28mbar.
Low pressure (Natural gas)	Gas inlet pressure to the meter regulator not exceeding 75mbar.
LPG	Liquefied Petroleum Gas (LPG) is the generic name for commercial Propane and Commercial Butane, stored in vessels under pressure, which turns into a liquid state.
High pressure stage (LPG)	That part of the LPG installation between the take-off valve of the bulk storage vessel or cylinder and the inlet of the 1 st stage regulator. For Propane, the pressure will be in the region of 6.9bar. For Butane, the pressure will be in the region of 1.93bar. These pressures may vary dependant upon ambient temperatures.
Manufacturer's instructions	Documents supplied with the gas appliance/equipment by the manufacturer giving guidance on how to use, service, maintain and install the product.
Medium pressure (Natural gas)	Gas inlet pressure to the meter regulator between 75mbar and 2bar.
Meter box	A receptacle or compartment designed and constructed to contain a meter with its associated gas fittings.
Meter Inlet Valve (MIV)	A valve fitted upstream of all the other components of a meter installation to shut-off the supply of gas.
Meter regulator	A device located in close proximity and upstream of a primary meter which is used solely to control the pressure of the gas within the gas installation.

Gas Industry Unsafe Situations Procedure

Term	Definition
Must	Identifies a requirement by law in Great Britain at the time of publication.
Non-domestic installations	Non-domestic installations include those installed in commercial premises such as hospitals, libraries, prisons, churches, hotels and the communal areas of housing premises such as walkways, stairs, lift-shafts and boiler rooms, where the gas installation pipework is normally greater in size than 28mm diameter and where the appliances installed are designed for non-domestic purposes.
Not to Current Standards (NCS)	An installation which is not in accordance with current Regulations, Standards and Specifications or Codes of Practice, but does NOT constitute either an Immediately Dangerous (ID) or At Risk (AR) situation.
New Installations	Gas appliances or other fittings installed or brought into use for the first time and the new installation of previously used or second-hand appliances.
PE	Polyethylene pipework.
Residential Park Home	A mobile home designed for permanent residential accommodation that does not meet the requirement for construction and use of road vehicles.
Responsible person	In relation to any premises, means the occupier of the premises or where there is no occupier or the occupier is away, the owner of the premises, or any person with authority for the time being to take appropriate action in relation to any gas fitting therein. (See also Gas user).
RIDDOR	The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995.
Shall	Prescribes a procedure that it is intended will be complied with in full and without deviation.
Should	Prescribes a procedure that it is intended will be complied with unless after prior consideration deviation is considered to be acceptable.
Turn off	To isolate the appliance using controls accessible to the gas user i.e. turn off using multifunctional valve to extinguish a pilot, turn appliance control to off position.
Upstream	That part of a gas installation prior to, or before a certain point e.g. the gas meter is upstream of the appliance.
Working satisfactorily	Working safely at the time of attending the premises.

Gas Industry Unsafe Situations Procedure

Term	Definition
Work	<p>In relation to a gas fitting, this includes any of the following activities carried out by any person, whether an employee or not:</p> <ul style="list-style-type: none">a) Installing or reconnecting the fitting;b) Maintaining, servicing, disconnecting, permanently adjusting, repairing, altering or renewing the fitting or purging it of air or gas;c) Where the fitting is not readily movable, changing its position; andd) Removing the fitting. <p><i>Note: Work in this context does not include the connection or disconnection of a bayonet fitting or other self-sealing connector.</i></p>

NOTES

Gas Industry Unsafe Situations Procedure

Appendix 4 Normative References

Note: This should not be regarded as an exhaustive list of normative references.

Statutory Instruments

- The Gas Safety (Installation and Use) Regulations (S.I. 1998 No. 2451)
- The Gas Safety (Installation and Use) Regulations (Northern Ireland) (S.I. 2004 No. 63)
- The Gas Safety (Management) Regulations (S.I. 1996 No.551)
- The Gas Safety (Rights Of Entry) Regulations (S.I. 1996 No.2535)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (S.I. 1995 No.3163)
- The Health and Safety at Work Etc. Act 1974, chapter 37 as amended
- Dangerous Substances and Explosive Atmospheres Regulations (S.I. 2002 No. 2776)
- Building Regulations (England & Wales)
- Building Standards (Scotland) 1990
- Building Regulations (Northern Ireland) 2000
- Building Regulations (Isle of Man) 2003
- Building Regulations/Standards Approved Documents as appropriate to each geographical region of the UK

Approved Codes of Practice and Guidance

- Safety in the installation and use of gas systems and appliances – Gas Safety (Installation & Use) Regulations 1998 – Approved Code of Practice and Guidance. (L56) ISBN. 0-7176-1635-5

Industry Normative Documents

British Standards

- BS 5440: 2000 Installation and maintenance of flues and ventilation for gas appliances of rated input not exceeding 70kW net (1st, 2nd and 3rd family gases): Parts 1 & 2.
- BS 5482: Code of Practice for domestic butane and propane – gas burning installations: Parts 1, 2 & 3.
- BS 5871: Specification for installation of gas fires, convector heaters, fire/back boilers and decorative fuel-effect gas appliances (1st, 2nd and 3rd family gases) Parts 1, 2 & 3.
- BS 6172: Specification for installation of domestic gas cooking appliances (1st, 2nd & 3rd family gases).
- BS 6173: Specification for installation of gas-fired catering appliances for use in all types of catering establishments (1st, 2nd & 3rd family gases).

Gas Industry Unsafe Situations Procedure

- BS 6230: Specification for installation of gas-fired forced convection air heaters for commercial and industrial space heating (2nd family gases).
- BS 6400: Specification for installation of domestic sized gas meters (2nd & 3rd family gases): Part 1.
- BS 6644: Specification for installation of gas-fired hot water boilers of rated heat inputs between 60kW and 2MW (2nd & 3rd family gases).
- BS 6891: Specification for installation of low pressure gas pipework of up to 28mm (R1) in domestic premises (2nd family gases).
- BS 6896: Specification for installation of gas-fired overhead radiant heaters for industrial and commercial heating (2nd & 3rd family gases).
- BS 7624: Installation and maintenance of domestic direct gas-fired tumble dryers of up to 6kW heat input (2nd & 3rd family gases) - Specification.
- BS 8446: Specification for the installation and maintenance of open-flued non-domestic gas-fired laundry appliances
- BS EN 721: Leisure accommodation vehicles safety ventilation requirements.
- BS EN 1949: Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and in other road vehicles.
- BS EN 10239: Small craft LPG systems.
- BS EN 13410: Gas-fired overhead radiant heaters. Ventilation requirements for non-domestic premises.

The Institution of Gas Engineers and Managers Technical Publications

- IGE/GM/1 (Edition 2) – Gas meter installations for pressures not exceeding 100bar.
- IGE/GM/6 – Specification for low-pressure diaphragm and rotary displacement meter installations with badged meter capacities exceeding 6m³/h (212ft³/h) but not exceeding 1076m³/h (38000ft³/h).
- IGE/GM/8 – Non-domestic meter installations. Flow rate not exceeding 6m³/h and inlet pressure not exceeding 38bar.
- IGE/UP/1 Edition 2: Strength testing, tightness testing and direct purging in industrial and commercial gas installations.
- IGE/UP/1A Edition 2: Strength testing, tightness testing and direct purging of small, low pressure industrial and commercial natural gas installations.
- IGE/UP/1B: Tightness testing and purging of domestic sized natural gas installations.
- IGE/UP/2: Installation pipework boosters and compressors on industrial and commercial premises.
- IGE/UP/10 Edition 2: Installation of gas appliances in industrial and commercial premises: Part 1.
- IGE/UP/11: Gas in educational establishments.
- IGE/UP/15: Gas in flats.

Gas Industry Unsafe Situations Procedure

- BG IM/28 – Appliances in commercial garages.

Other references

- HSE Information Sheet Number 3 – Precautions at manually ignited gas-fired catering equipment.
- HSE Information Sheet Number 23 – Gas safety in catering and hospitality.

Appendix 5 – Explaining the problem to the responsible person

The scripts below may be useful to help when called upon to explain a particular situation to the gas user/responsible person.

For 'IMMEDIATELY DANGEROUS' (ID) situations

"I must advise you that your gas appliance is considered to be '**Immediately Dangerous**' and if it is used it will create a danger to life or property.

It must not be used. It has been turned off and should be disconnected in the interests of safety.

If permission to disconnect is refused, it will be reported to the gas emergency services who are able to demand entry to make safe.

It must not be used until work has been carried out to correct the deficiencies identified.

It is an offence to use gas burning equipment knowing it is dangerous".

For 'AT RISK' (AR) situations

"I must advise you that your gas appliance is considered to be '**At Risk**' and if it is used, it may create a risk to life or property.

It should not be used. It has been turned off and should not be used until work has been carried out to correct the deficiencies identified.

It may be an offence to use a gas appliance knowing it is at risk."

For 'NOT TO CURRENT STANDARDS' (NCS) situations

"I must advise you that your gas appliance is not installed in accordance with the current installation practice.

It is currently operating safely, but you may wish to take advice on whether the installation should be brought into line with current installation standards. If the installation has been carried out recently, you should contact the original installer for advice.

If the installation is not recent, the situation may have been brought about by the introduction of revised installation standards.

Your CORGI registered installer can advise you on whether the installation should be brought into line with current installation standards."

Note: It is always best practice to bring an installation up to current standards, but that will often depend upon whether the work can be undertaken at reasonable cost, or whether any other work is likely to be carried out on the installation in the near future, such as a replacement appliance.

Gas Industry Unsafe Situations Procedure

Appendix 6 - CORGI*direct* merchandise for unsafe situations

To enable CORGI registered gas operatives to comply with the requirements of the Gas Industry Unsafe Situations Procedure, the following documents and labels are available from CORGI*direct* by Telephoning 0870 516 8111 or, by Fax 01889 568264 or, by e-mail corgi@yesresponse.co.uk or by visiting www.corgi-direct.com

- Pads of CORGI Warning/Advice Notices (Order No. CP14)
- Do Not Use Warning Labels (Order No. WL1 or TG3)
- The Gas Safety (Installation and Use) Regulations, available as 'The Approved Code of Practice and Guidance – Safety in the installation and use of gas systems and appliances' (Order No. GR1)
- RIDDOR F2508G2 reporting pads (Order No.RP1)
- The Gas Industry Unsafe Situations Procedure (Order No. USP1)
- Essential Gas Safety – Domestic (Order No. GID1)
- Essential Gas Safety – Non-domestic (Order No. ND1)
- Gas Cookers & Ranges (Order No. GID2)
- Gas Fires and Space Heaters (Order No. GID3)
- Laundry, Leisure and Refrigerators (Order No. GID4)
- Water Heaters (Order No. GID5)
- Gas Meters (Order No. GID6)
- Central Heating Wet & Dry (Order No. GID7)
- Gas Installations in Timber Framed Buildings (Order No. GID8)
- Liquefied Petroleum Gas including Caravans and Boats (Order No. GID9)

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