



**Defence
Infrastructure
Organisation**

Gas Safety Management Plan (Section A)

**Produced to meet the requirements of the
Gas Safety (Installation and Use) Regulations**

**(Gas Safety Management Plan (Section B) covers the requirements
of the Gas Safety (Management) Regulations)**

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1. Approval of Gas Safety Management Plan

This Gas Safety Management Plan has been prepared to enable the MOD to satisfy the requirements of the Gas Safety (Installation and Use) Regulations.

The Gas Safety Management Plan describes the management arrangements which are in place to control the risks from natural gas and liquefied petroleum gas (LPG) at {enter name of establishment}.

This Gas Safety Management Plan was prepared by Defence Infrastructure Organisation on behalf of the Commanding Office / Head of Establishment by {enter name of person/organisation} and is subject to periodic review as indicated in the plan.

Authorisation for Implementation

Gas Safety Management Plan for {enter name of establishment}

Issue No:

Dated:

The content and format of this Gas Safety Management Plan are agreed by DIO and authorised for implementation by:

{Enter name and position} on behalf of the Commanding Officer/Head of Establishment.

Signature _____

Date _____

This Gas Safety Management Plan has been devised for the use of the Crown and its contractors in the execution of contracts for the Crown. The Crown hereby excludes all liability (other than liability for death or personal injury) whatsoever and however arising (including, but without limitation, negligence on the part of the Crown, its servants or agents) for any loss or damage however caused where the Plan is used for any other purpose.

2. Introduction

2.1 The Management of Health and Safety at Work Regulations requires employers to put in place arrangements for the effective planning, organisation, control, monitoring and review of the preventive and protective measures necessary to ensure health and safety at work is properly managed and to establish, where necessary, appropriate procedures to be followed in the event of serious and/or imminent danger.

2.2 This document contains the Gas Safety Management Plan (Section A) for the Ministry of Defence (MOD) Establishment at Implementation of this plan will enable the Establishment to demonstrate compliance with the Gas Safety (Installation and Use) Regulations for working on and maintaining gas systems.

Note: Section 'B' of the Gas Safety Management Plan supports the requirements under the Gas Safety (Management) Regulations where the MOD is deemed to be a gas transporter/supplier and a Gas Safety Case has been produced and approved by the Health and Safety Executive.

2.3 The Gas Safety (Installation and Use) Regulations place responsibilities on a wide range of people, including those installing, servicing, maintaining or repairing gas appliances and other gas fittings; as well as suppliers and users of gas. The Regulations deal with the safe installation, maintenance and use of gas fittings, appliances and flues and generally apply to any gas as defined in the Gas Act and Gas Safety (Management) Regulations. (A summary of requirements of the GS(IU)R is provided in Annex A)

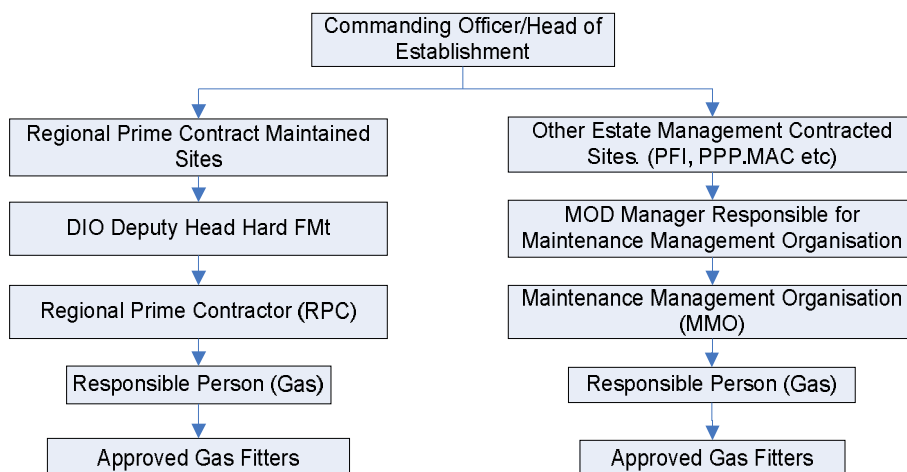
2.4 The Commanding Offices/Head of Establishments (CO/HoE) (as the duty holder with authority over and responsibility for the activities within a MOD establishment – JSP 815) are required to ensure that a Gas Safety Management Plan (GSMP) has been prepared and maintained for the Establishment(s) under their control. The CO/HoE is to be supported in this role by the following persons/organisations.

2.5 For Establishments or areas of an Establishment which fall within the scope of a Regional Prime Contract:

- a) The Defence Infrastructure Organisation Deputy Head Hard FM (DIO D HFM)
- b) The Maintenance Management Organisation (the Regional Prime Contractor)

For Establishments maintained under any other form of contract and areas of an Establishment not within the scope of a Regional Prime Contract:

- a) The MOD manager responsible for the Maintenance Management Organisation (MMO)
- b) The Maintenance Management Organisation (PFI, PPP, MAC etc)



2.6 Monitoring of the implementation of the GSMP will take place at regular intervals (quarterly during the first year of implementations and then at periods not exceeding 12 month) to make sure that the arrangements are working and that people are fully aware of what their responsibilities are in order to comply with the requirements of the above legislation. The arrangements will need to be reviewed and amendments made particularly when there are changes or modifications to the estate gas infrastructure, including any changes to leases and licences on the establishment. The arrangements shall be reviewed every twelve months, (even if there have been no changes), or more frequently if the situation requires. Details of the review(s) are to be recorded within the plan.

2.7 The details of the review, when it is made, are to be written down, including whether the arrangements are still satisfactory or whether any changes are made. Everyone who needs to know (those affected by any change) should be informed of any changes made.

3. Key Requirement

3.1 The GSMP introduces formal control of work on or near gas systems. The level of control is similar to that provided by other MOD management procedures. Unlike other disciplines, however, there is a nationally recognised registration scheme for operatives working on gas systems 'Gas Safe Register'. This is recognised in the GSMP. (See Annex B for details of Gas Safe Register)

4. Roles and Responsibilities

4.1 This encompasses all those who are involved in the execution, supervision, management and monitoring of work on gas systems¹.

Commanding Officer/Head of Establishment: In order to have an effective GSMP, the CO/HoE is to ensure:

- clear lines of responsibility are established for the plan's management and implementation;
- detailed risk assessments of the gas network are to include schematic plans of the system;
- competent contractors/persons are engaged to undertake work on the system (registered with the 'Gas Safety register');
- a maintenance regime is maintained to monitor/implement control measures,
- adequate records are maintained.

Landlord: MOD as a Landlord is responsible for:

- ensuring gas fittings and flues are maintained in a safe condition. Gas appliances should be serviced in accordance with the manufacturer's instructions. If these are not available it is recommended that they are serviced annually unless advised otherwise by a Gas Safe registered engineer;
- ensuring an annual safety check is carried out on each gas appliance/flue. Before any new lease starts, must make sure that these checks have been carried out within one year before the start of the lease date, unless the appliances in the property have been installed for less than 12 months, in which case they should be checked within 12 months of their installation date;
- having all installation, maintenance and safety checks carried out by a Gas Safe registered engineer;
- keeping a record of each safety check for at least two years;
- issuing a copy of the latest safety check record to existing tenants within 28 days of the check being completed, or to any new tenant before they move in (in certain cases there is an option to display the record).

¹ The following details for GSM. RP (Gas), Approved Gas Fitter and Registered Body are taken from GSMP Section B

The Gas Safety Manager (GSM) With regard to the management of work on gas systems, the GSM will:

- confirm that a sufficient number of Responsible Persons (Gas) (RP(Gas)) are appointed with specific responsibility for the management of work on gas systems;
- ensure that a demarcation agreement is drawn up and agreed. This is to be in the form of a schematic drawing for each gas distribution system, and is to be displayed and available to all interested parties;
- confirm in writing for each site or geographical area the custodian of the Schematic Drawings & Register of Gas Appliances.

The Responsible Person (Gas)²: The RP (Gas) will:

- ensure that, where a company is employed to work on gas systems, the individuals concerned are registered with the Registration Body and have a certificate of competence appropriate to the type of work and system to be worked upon;
- maintain, for each geographical area, a database of sites on which gas systems are maintained or operated;
- ensure that, for each geographical area, a database of competent staff (Approved Gas Fitters) is maintained;
- ensure that a schematic drawing detailing the pipe work installation in each building is maintained and available to all Approved Gas Fitters;
- ensure that a register of every gas appliance and flue is maintained and available to all Approved Gas Fitters
- undertake six monthly checks of the system, documents & records operated and maintained by the Gas Supervisors.

Every company employed to carry out work on gas systems, appliances or ancillary equipment on the MOD Estate is to have suitable and sufficient management procedures in place to discharge the duty of the Employer under the regulations.

The Employer of an Approved Gas Fitter will:

- obtain and maintain Corporate Registration from the Registration Body;
- ensure that, where directly employed staff are engaged on work on gas systems, the individuals are trained to the appropriate standards and registered with the Registration Body and have a certificate of competence appropriate to the type of work and system to be worked upon;
- ensure that, where a sub-contractor is employed to work on gas systems, the individuals concerned are registered with the Registration Body and have a certificate of competence appropriate to the type of work and system to be worked upon;
- maintain records of training of individuals assessed as competent and any assessments carried out by the Registration Body;
- ensure that records of employment, training and assessment of 'competent persons' are available to the Authorising Engineer and Responsible Person (Gas) for audit purposes;
- ensure that any modifications to installed pipe work are communicated to the Responsible Person (Gas) including the provision of an updated schematic drawing for the installation;
- ensure that the Responsible Person (Gas) is informed of the installation or removal from a site of any gas appliance and/or flue;
- undertake routine checks (in line with the requirements of Gas Safe Register) of all employees and contractors employed on gas works.

² An RP(Gas) does not need to be an Authorised Person (AP).

Approved Gas Fitters will:

- carry out work in a competent manner in accordance with industry best practice;
- co-operate with management in the adoption of safe systems of work as dictated by both this and other MOD Safety Rules & Procedures;
- advise management of any work situation which could result in either serious or immediate danger to health and safety.

The Registration Body: 'Gas Safe Register'³ is appointed by the Health & Safety Executive to operate a mandatory registration scheme for competent businesses which carry out gas work. (See Annex B for more details)

A list of the relevant codes of practice and standards is at section 14

5. Training

5.1 By law anyone carrying out work on gas appliances or fittings as part of their business must be competent and registered with the Gas Safe Register

6. Risk Assessment

6.1. The Management of Health and Safety at Work Regulations require all employers and self employed persons to assess risk to workers and any others who may be affected by their undertaking. Their application within the MOD is detailed in JSP 375.Vol 2 Leaflet 39.

6.2 The general issues to be considered in carrying out a risk assessment include:

- a permission from the appropriate manager for the work
- b who will be effected by the work
- c a method statement and plan of work
- d the requirement for permits, sanctions or standing instructions to be issued
- e the number of personnel needed, their trades and skill levels
- f the need for persons to work accompanied
- g competence
- h training
- i means of safe access and egress
- j the work equipment and its availability
- k location and availability of safety equipment, portable access ladders etc.
- l the conditions to be encountered at the point(s) of work:
 - carry out work in a competent manner in accordance with industry best practice
 - air quality
 - exposure to gases
 - entry into a confined space
 - high or low temperatures
 - humidity levels
 - illumination
 - noise levels
 - weather conditions
 - working at height
 - wet surfaces
 - the presence or potential presence of asbestos
- m any relevant MOD, statutory or any other regulations
- n and other MOD Safety Rules and Procedures
- o emergency procedures

³ Gas Safe Register is run by Capita Gas Registration and Ancillary Services Limited

p other specific hazards associated with gas system

6.3 Specific issues that may need to be addressed when carrying out a risk assessment on a gas system include:

- a limitations on the timing and scope of work
- b the methods of isolation:
- c isolating from other part of the system
- d procedure for electrical isolation
- e procedure for gas system isolation
- f isolating exhaust gases
- g the procedure for purging
- h the need for any other work, which would create a hazard if undertaken at the same time, to be suspended and left in a safe condition
- i proving the purged state
- j asbestos control measures
- k a method to ensure adequate ventilation and dilution or freeing of toxic or flammable gases
- l the space required to carry out the work
- m procedure for commissioning the system
- n proving of safety devices
- o operation of other equipment
- p provision for a competent person to examine the completed work.

7. Inspections and Tests

7.1 Regular inspection of equipment is an essential part of any preventive maintenance programme. Records of maintenance, including inspection and test results are to be maintained preferably throughout the life of equipment. Completion and/or test certificates are mandatory.

7.2 The following lists the documents most common to the MMO's activities and are to be processed when applicable, copies of which are to be issued to and held by the Responsible Person (Gas):

- Gas Safety Inspection
- Landlord's Gas Safety Certificate
- Electrical Cross Bonding
- Combustion Report Form
- Warning/Advice Notice.

7.3 Annex C is an example of the maintenance inspections that would normally be undertaken as part of the Planned Maintenance Operations.

7.4 Annex D is an example template for a Site Specific Records and Procedures document. This template is an example only and other forms of records can be maintained, however, they must contain as a minimum the information identified in Annex D.

8. Audit and Monitoring

8.1 System audits will be conducted by the Gas Safety Manager.

8.2 System audits will review, as a minimum the existence and continued competence of the appointments mandated by the Gas Safety Management Plan Section B and the existence and completeness of the documents referred to in those procedure.

8.3 Monitoring of work on gas systems will be undertaken as required, by the Employer. This will include checks on the current Registration of the Approved Gas Fitter; the adherence to safe

work instructions and Quality Assurance procedures; witnessing the results of tests and the checking of any completed records.

8.4 Audits and monitoring by the Employer of an Approved Gas Fitter are to be carried out as required to satisfy the requirements and maintain registration with the Registration Body.

9. Emergency Procedures

9.1 It is statutory requirement to provide information to individuals for the securing of safety in an emergency.

9.2 Emergency procedures are to be prepared by the line management in consultation with the Gas Safety Manager for all facilities in which there is a gas supply. The procedures must be recorded and held with other health and safety documents and in other appropriate places. The emergency procedures are to include, where appropriate:

- fire precautions
- venting of gas to atmosphere
- isolation arrangements
- escape and evacuation procedures
- rescue arrangements.

9.3 A flowchart for dealing with unsafe conditions is included at Annex E

10. Inspections and Investigations by External Authorities

10.1 A number of external Authorities have the legal right to undertake inspections and investigations on gas systems details of these are provided in Annex F

11. Gas Safety Certificates for Landlords

By law, landlords must provide up-to-date gas safety certificates to their tenants. This certificate shows the tenant appliances have been serviced and the property is gas safe.

The 'Landlord Gas Safety Record' is often referred to as a 'Gas Safety Certificate' or 'CP12' form.

As a minimum, the record of a gas safety check must contain:

- a description of and the location of each appliance or flue checked
- the name, registration number and signature of the individual carrying out the check
- the date on which the appliance or flue was checked
- the address of the property at which the appliance or flue is installed
- the name and address of the landlord (or his agent where appropriate)
- any defect identified and any remedial action taken
- a statement confirming that the safety check completed complies with the requirements of the Gas Safety (Installation and Use) Regulations 1998

12. Abbreviations

CO/HoE	Commanding Officer/Head of Establishment
DIO RIM	Defence Infrastructure Organisation Regional Infrastructure Manager
GS(I&U)R	Gas Safety (Installation & Use) Regulations
GSMP	Gas safety Management Plan
GS(M)R	Gas Safety Management Regulations
GSM	Gas Safety Manager
HSE	Health and Safety Executive

HSE-FOD	Health and Safety Executive – Field Operations Directorate
HSE-HID	Health and Safety Executive – Hazardous Installations Directorate
JSP	Joint Services Publication
MAC	Multi activity Contract
MMO	Maintenance Management Organisation
MOD	Ministry of Defence
PFI	Private Finance Initiative
PGT	Public Gas Transporter
PSR	Pipeline Safety Regulations
PPP	Public Private Partnership
RP (Gas)	Responsible Person (Gas)

Advice can also be obtained from:

HSE Gas Safety Advice Line 0800 300 363
HSE's Gas Safety website: www.hse.gov.uk/gas/index.htm
Gas Safe Register website: www.gassaferegister.co.uk

13. Further reading

- a Management of Health and Safety at Work Regulations
- b Gas Safety (Installation and Use) Regulations (GS(I&U)R)
- c Gas Safety Management Regulations
- d Pipeline Safety Regulation SI 1996/825
- e The Gas Safety (Rights of Entry) Regulations 1996
- f Safety in the installation and use of gas systems and appliances - ACoP and Guidance L56
- g A guide to the Gas Safety (Management) Regulations – Guidance on Regulations L80
- h A guide to the Pipelines Safety Regulations 1996 - Guidance on Regulations L82
- i A guide to regulation 13A of the Pipeline Safety Regulations 1996 (ISBN 0 7176 11825)
- j HSE Leaflet - Gas Appliances 'Get them checked, keep them safe' – INDG238(rev3)
- k HSE Leaflet - A guide to landlord's duties: INDG285(rev2)
- l JSP 375 Volume 2 Leaflet 39

14. Codes of Practice & Standards

14.1 LP Gas Association Codes of Practice and guidance

Code 1 Bulk LPG storage at fixed installations.

Part 1: Design, installation and operation of vessels located above ground

Part 2: Small bulk installations for domestic purposes

Part 3: Examination and inspection

Part 4: Buried/mounded LPG storage vessels

Code 7 Storage of full and empty LPG cylinders and cartridges

Code 17 Purging LPG vessels and systems

Code 21 Guidance for safety checks on LPG appliances in caravans

Code 22 LPG piping system design and installation

Code 24 Use of LPG cylinders.

Part 1: The use of LPG cylinders at residential and similar premises

Part 3: The use of LPG in mobile catering vehicles and similar commercial vehicles

Part 4: The use of LPG for catering and outdoor functions

Part 5: The storage and use of LPG on construction sites

Part 6: The use of propane in cylinders at commercial and industrial premises

These publications are available from The LP Gas Association,
UKLPG, Camden House , Warwick Road, Kenilworth, Warwickshire, CV8 1TH

14.2 Institution of Gas Engineers and Managers (IGEM) technical publications

IGE/UP/1: Second edition 2005 Strength and tightness testing of industrial and commercial gas installations

IGE/UP/1A: 2005 Strength and tightness testing and direct purging of small low pressure industrial and commercial gas installations

Guidance Appendix 4 Safety in the installation and use of gas systems and appliances Page 96 of 100 Health and Safety Executive

IGE/UP/1B: 2006 Tightness testing and direct purging of small Natural Gas installations

IGE/UP/2: 1994 Gas installation pipework, boosters and compressors on industrial and commercial premises

IGE/UP/4: Second edition 1999 Commissioning of gas fired plant on industrial and commercial premises

IGE/UP/6: 1998 Application of positive displacement compressors to natural gas fuel systems

IGE/UP/7: 2006 Gas installations in timber framed and light steel framed buildings

IGE/UP/8: 2001 Gas installations for caravan holiday homes, residential park homes and permanently moored and boats

IGE/UP/9: 2004 Application of Natural Gas and fuel oil systems to gas turbines and supplementary and auxiliary fired burners

IGE/UP/10: Third edition 2007 Installation of gas appliances in industrial and commercial premises

IGE/GM/5: Second edition 2000 Selection, installation and use of electronic gas meter volume conversion systems

IGE/GM/6: 1996 Specification for low pressure diaphragm and rotary displacement meter installations with badged meter capacities exceeding 6 m³/h (212 ft³/h) but not exceeding 1076 m³/h (38 000 ft³/h)

IGE/GM/7: Second edition 2004 Electrical connections and hazardous area classification for gas metering equipment

These publications are available from The Institution of Gas Engineers and Managers, Charnwood Wing, Holywell Park, Ashby Road, Loughborough, Leicestershire LE11 3GH

Summary of Requirements of the Gas Safety (Installation and Use) Regulations

This summary is for background only and is intended to provide a general indication of some of the main requirements. It should not be taken as a statement of the legal position, for which reference needs to be made to the relevant statutory instrument; Gas Safety (Installation and Use) Regulations 1998 (SI 1998 No 2451).

The Regulations are divided into 7 Parts

- | | |
|---------------------|---|
| Part A (Regs 1&2) | Deals with the citation, interpretation of terms and the application of the regulations (not shown below) |
| Part B (Regs 1-10) | Addresses duties, responsibilities, workmanship. General installation precautions and emergency controls. |
| Part C (Regs 11-17) | Is concerned with the installation of meters and regulators. |
| Part D (Regs 18-24) | Specifies the regulations for installation pipework |
| Part E (Regs 25-34) | Covers the safety requirements for appliances |
| Part F (Regs 35-36) | Addresses the responsibilities of employers, self employed and landlord's duties to maintain appliances |
| Part G (Regs 37-41) | Is the 'catch-all' category for the gas related work that does not fit naturally elsewhere. |

The Regulations, (subject to certain exceptions/provisos):

- require work on a gas fitting to be carried out only by a competent person; and employers of gas fitting operatives, together with other specified persons (e.g. those in control of the work such as building contractors), to ensure that operatives have the required competence for the particular work being done. Employers of persons carrying out work on gas fittings/service pipework and self-employed persons doing this work are required to be a member of a class of persons approved by HSE; this means that they should be registered with the 'Gas Safety register' *–(Changed from CORGI from 1st April 2009) (regulation 3)*;
- require any employer or self-employed person requiring work to be done on a gas fitting, or in control to any extent of such work (e.g. a contractor), to take steps to ensure the person doing the work is, or is employed by a member of a class of persons approved by HSE *(regulation 4)*;
- require an installer of a gas fitting to ensure that the fitting is suitable for the purpose for which it is to be used. Installation of lead pipe/fittings is prohibited and controls are placed on the use of non-metallic pipe/fittings. Any work on a gas fitting/storage vessel is required to comply with appropriate standards and to be done in a manner which avoids danger to any person *(regulation 5)*;
- specify measures to be taken by any person working on a gas fitting against danger from gas release, and requirements for sealing gasways and testing gastightness after work is completed. Use of ignition sources is prohibited where there is a risk of fire/explosion, e.g. in searching for a gas leak. Requirements are specified for safe installation of gas (e.g. LPG) storage vessels, and the storage of natural gas at domestic premises is prohibited *(regulation 6)*;
- require gas fittings to be protected from damage, including corrosion, and from blockage by a foreign body, e.g. dirt/dust *(regulation 7)*;

- prohibit any alteration to premises in which a gas fitting or storage vessel is installed which causes the fitting or storage vessel no longer to comply with the Regulations, as well as work on a gas fitting or associated flue/ventilation system which results in danger to any person (regulation 8);
- require an emergency control to be provided when gas is first supplied to premises. Where this control is not adjacent to a meter, a notice is required to be posted adjacent to the control, describing the procedure in event of a gas escape (regulation 9);
- require electrical continuity to be maintained during work on a gas fitting, where necessary to avoid danger (regulation 10);
- require gas meters to be installed so as to avoid, as far as is reasonably practicable, adverse effect on means of escape from premises, and specify requirements concerning construction of certain meters. Other requirements are imposed for meter installation, e.g. to avoid electrical hazards and facilitate inspection/maintenance, and for pipe connections, gastightness tests and purging of meters (regulations 11-12);
- specify requirements for meter housings concerning safe dispersal of any gas escape, avoidance of combustible materials, and provision of keys to enable consumer access (regulation 13);
- stipulate protection arrangements to maintain gas pressure within safe limits, in the case of systems supplied from gas (e.g. LPG) storage tanks, or from certain cylinder configurations. Requirements are also included for sealing of regulators against unauthorised interference (regulation 14);
- require an emergency notice to be posted at a primary meter, giving the procedure to be adopted in event of a gas escape; a notice showing the position of the emergency control is also required in certain cases (regulation 15);
- prohibit installation of a pre-payment meter as a primary meter in certain cases and specify requirements for notices at primary meters where gas is supplied to more than one secondary meter. Precautions, e.g. for isolation/sealing, are also specified for situations where a primary meter has been removed (regulation 16);
- require any person supplying or permitting the supply of gas through a primary meter to a secondary meter (e.g. a landlord), to display at specified positions, a notice showing the configuration of the gas system (regulation 17);
- require installation pipework to be installed in a safe position having regard to factors which might affect safety, e.g. location of other pipes, drains, cables and electrical apparatus. Any person connecting installation pipework to a meter is required to inform the person responsible for the premises (e.g. the occupier) of the need for equipotential bonding (regulation 18);
- specify restrictions and protective measures for pipes passing through solid walls and floors, cavity walls and building foundations; conditions are stipulated whereby pipework associated with 'living flame effect fires' may be run in a wall cavity. Ducts and voids accommodating installation pipework are required to be adequately ventilated (regulation 19);
- require installation pipework to be installed so as to avoid impairing the structure or fire resistance of a building (regulation 20);
- require a receptor to be fitted to installation pipework where liquid or solid deposits may occur, eg from 'wet gas' (regulation 21);

- specify requirements for gastightness testing after work has been done on installation pipework, and for purging/sealing of such pipework both in cases where gas is being supplied to the premises where it is installed, and where gas is not being so supplied ([regulation 22](#));
- require installation pipework, other than in premises or part of premises used only as a dwelling or living accommodation, to be marked, e.g. colour coded, in any position accessible to inspection, to identify that it is carrying gas ([regulation 23](#)); require a valve to be fitted in certain installation pipework and a system diagram provided (e.g. for use by emergency services), where service pipe/pipework exceeding specified sizes feeds certain buildings or floor areas ([regulation 24](#));
- require any person installing a gas appliance to ensure it is safe for use; is not left connected to the gas supply unless it can be used safely; it complies with other relevant safety requirements (eg gas appliances safety legislation), and that any second-hand appliance is in a safe condition for further use. Any work on an appliance is required to maintain safety standards and requirements are specified for the examination of any appliance after work has been done, and for notification of any defect to the owner/user ([regulation 26](#));
- require any flue to be suitable and in a proper condition for safe operation of the appliance which it serves, and any power-operated flue system to prevent operation of the appliance if the draught fails. Requirements to enable inspection of, and to prevent spillage of combustion products from, certain flues are specified; and any flue is required to be installed in a safe position ([regulation 27](#));
- require a gas appliance to be installed in a position readily accessible for operation, inspection and maintenance ([regulation 28](#));
- require the installer of a gas appliance to leave the manufacturer's instructions for the appliance, for use by the owner or occupier of the premises where the appliance is installed ([regulation 29](#));
- prohibit installation of certain gas appliances in specified rooms unless the appliance is room-sealed. In other specified locations, certain appliances are required to be room-sealed or fitted with a device to cause shutdown before a dangerous quantity of combustion products can build up in the room concerned; a general prohibition is placed on the installation of any instantaneous water heater, unless it is room-sealed or fitted with such a device ([regulation 30](#));
- prohibit installation of suspended appliances unless the installation pipework is capable of supporting the weight imposed and the appliance is designed to be so supported ([regulation 31](#));
- specify requirements for interlocking of automatic flue dampers, and their inspection. Installation of a manual flue damper on a domestic appliance is prohibited, and where an appliance is installed to an existing flue incorporating a manual flue damper, the damper is required to be permanently fixed in the open position ([regulation 32](#));
- specify requirements for testing gastightness and examining appliances, flues, ventilation etc, and action where adjustments are necessary; in cases where a gas appliance is installed at a time when gas is being supplied to the premises concerned. Requirements are also specified where installation takes place when gas is not being supplied to premises ([regulation 33](#));
- require a responsible person for any premises (for instance, the occupier/owner of the premises, e.g. landlord) not to use or permit the use of any unsafe appliance. Persons carrying out specified work, e.g. on service pipes or gas fittings, are required to report any appliance they suspect as being dangerous to the responsible person for the premises, or where this person is not available, to the gas supplier or transporter, as appropriate ([regulation 34](#)); require an employer or self-employed person to ensure that any gas appliance, flue or installation pipework installed at a place of work they control is maintained in a safe condition ([regulation 35](#));
- require landlords, in specified circumstances, to ensure safe maintenance of gas appliances, flues and installation pipework installed in premises under their control, that annual safety checks

are carried on such appliances/flues and that a record is kept and issued (or in certain cases, displayed) to tenants. Landlords are required to ensure that no gas fitting of a type that would contravene regulation 30 (e.g. certain instantaneous water heaters) is fitted in any room occupied or to be occupied as sleeping accommodation after the Regulations came into force. This includes any room converted into such accommodation after that time ([regulation 36](#));

- specify action to be taken by gas suppliers and persons responsible for premises in event of an escape of gas other than natural gas (as covered by the Gas Safety (Management) Regulations 1996); this extends to the emission of, or suspected emission of, carbon monoxide from an appliance using gas, other than natural gas supplied from a network ([regulation 37](#));
- require protective measures as stipulated by the gas transporter, to be taken by a consumer where gas is used with plant (such as a compressor or engine) liable to cause dangerous fluctuation of pressure in the gas supply, or where an extraneous gas (e.g. compressed air) is used in connection with the consumption of gas ([regulation 38](#)).

Extract from Gas Safety (Installation and Use) Regulations 1998 - Approved Code of Practice and Guidance - L56 HSE BOOKS



Gas Safe Register deals with all aspects of the downstream gas industry covering the Gas Safety (Installation and Use) Regulations 1998. It covers both piped natural gas and liquefied petroleum gas.

It is the law that anyone carrying out gas work that is within the scope of the Regulations is on the Gas Safe Register. The Gas Safe Register maintains a register of details of businesses and operatives who are competent to undertake a variety of gas work.

Registered gas engineers are issued with an Identity Card



General enquiries

By phone:

0800 408 5500

If you have hearing difficulties you can use our text phone service on 0800 408 0606.

By email:

enquiries@gassaferegister.co.uk

By post:

PO Box 6804
Basingstoke
RG24 4NB

In an emergency

Free 24-hour National Grid Gas Emergency Helpline:

England, Scotland and Wales: 0800 111 999

Northern Ireland : 0800 002 001

ANNEX C

Example of the maintenance inspections that would normally be undertaken as part of the Planned Maintenance Operations under the heading Gas Safety (installation and Use) Regulations

Task No.	Item Description	Task	Lead Ref.	Status	Frequency	Remarks	Responsibility
1	Gas Safety (Installations & Use) Regulations	a) Check each appliance for correct operation b) Test safety devices & ventilation air provisions	HSE L56 BS 5839-1: 2002 BS 5839-6: 2004 JSP426	PMS	Annually	To be carried out by a Competent Person who is a member of an organisation registered with Gas Safe Register	
2		a) Inspect above ground pipework & installations. b) Check operation of safety isolation valves		PM	2 Yearly		
3		Inspect & service gas installations (Landlord's Gas Safety Check) to include smoke and CO detectors		PMS	Annually	Domestic Properties Only	
4		a) Check appliances & pipework for correct operation. b) Test safety devices & ventilation air provisions		PMS	Annually	Catering Equipment Only	
5		a) Gas regulators: b) Carry out a periodic inspection.		PM	5 Yearly		
6		Check meter box/compound are clear of combustible materials		PMS	Annually		
7		Check that Emergency Notices are prominently displayed on or near the meter		PMS	Annually		
8		Check that accurate line diagrams are in place on or near primary meter and emergency controls connected to the primary meter					Natural Gas only
9		Check that accurate line diagrams are in place on or near storage tanks and emergency controls connected to the system					LPG only
8	LPG Underground Pipework	a) Review the current risk assessment b) Carryout periodic inspection in accordance with inspection plan	TM No. 84 Mar 07	PM	Annually		

L56 - Safety in the installation and use of gas systems and appliances - ACoP and Guidance

BS 5839-1: 2002 - Cracking the new Fire Code

BS 5839-6: 2004 - Fire detection and fire alarm systems for buildings. Code of practice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings

JSP426 - MOD Fire Safety Manual

TM 84 LP Gas Association Technical Memorandum No 84

Site Specific Records and Procedures (example)

Site Specific Records and Procedures

Where both natural gas and LPG are used on site the documents should clearly show which installations are LPG and which parts are natural gas

Name of Site:

Site Address:

Gas Supervisor:

Contact Details:

☎:

✉:

Site Gas Infrastructure Details

This section is to detail the following:

Details of the Source

Natural Gas fed from a Gas Network

Incoming supply details (pressure, meter details, name of gas transporter, gas transporter emergency contact details and action in emergency details).

LPG Gas (including Storage Tanks)

Storage details (location and number, owner of the storage vessel, point of demarcation, owners emergency contact details and action in emergency details).

Details of the Site External Installation Pipework

The construction, approximate age, condition etc.

Details of the Areas Served

The buildings/locations served (including capped supplies) and the uses of the gas (catering/hot water/heating/fire training/process).

Site Gas Infrastructure Drawings

This section is to contain site record drawings and line drawings of the external installation pipework, these drawings are to cover the following:

Natural Gas fed from a Gas Network

The primary meter housing up to and including the first valve internal to a building/location or the point at which the pipework is capped.

LPG Gas (including storage tanks)

The tank farm up to and including the first valve internal to a building or the point at which the pipework is capped.

Site

Source

Drawing No

Comments

Building List and Internal Gas Installation

This section is to contain building record drawings

Pipework Drawings *and line drawings of the internal installation pipework, these drawings are to cover the following:*

Natural Gas & LPG *The first valve internal to a building/location up to and including the equipment or the point at which the pipework is capped*

Site	Building	Drawing No	Comments
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Equipment List *This section is to include details of all equipment connected to the site gas installation pipework.*

Site	Building	Location	Equipment Details	Comments
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Site Procedure for Reporting Incidents (Inc Gas Escapes) *This section is to include a copy of the Establishments procedures for reporting gas incidents (including gas escapes) to the HSE.*

Site Procedure for dealing with reports of gas incidents *This section is to contain the Establishment's site specific procedure for dealing with reports of gas*

incidents with regards the external installation pipework, internal installation pipework and equipment and the details of all individuals with responsibilities under this procedure.

External Installation Pipework

Enter the details of the procedure to be followed, including contact details and named individuals with responsibilities

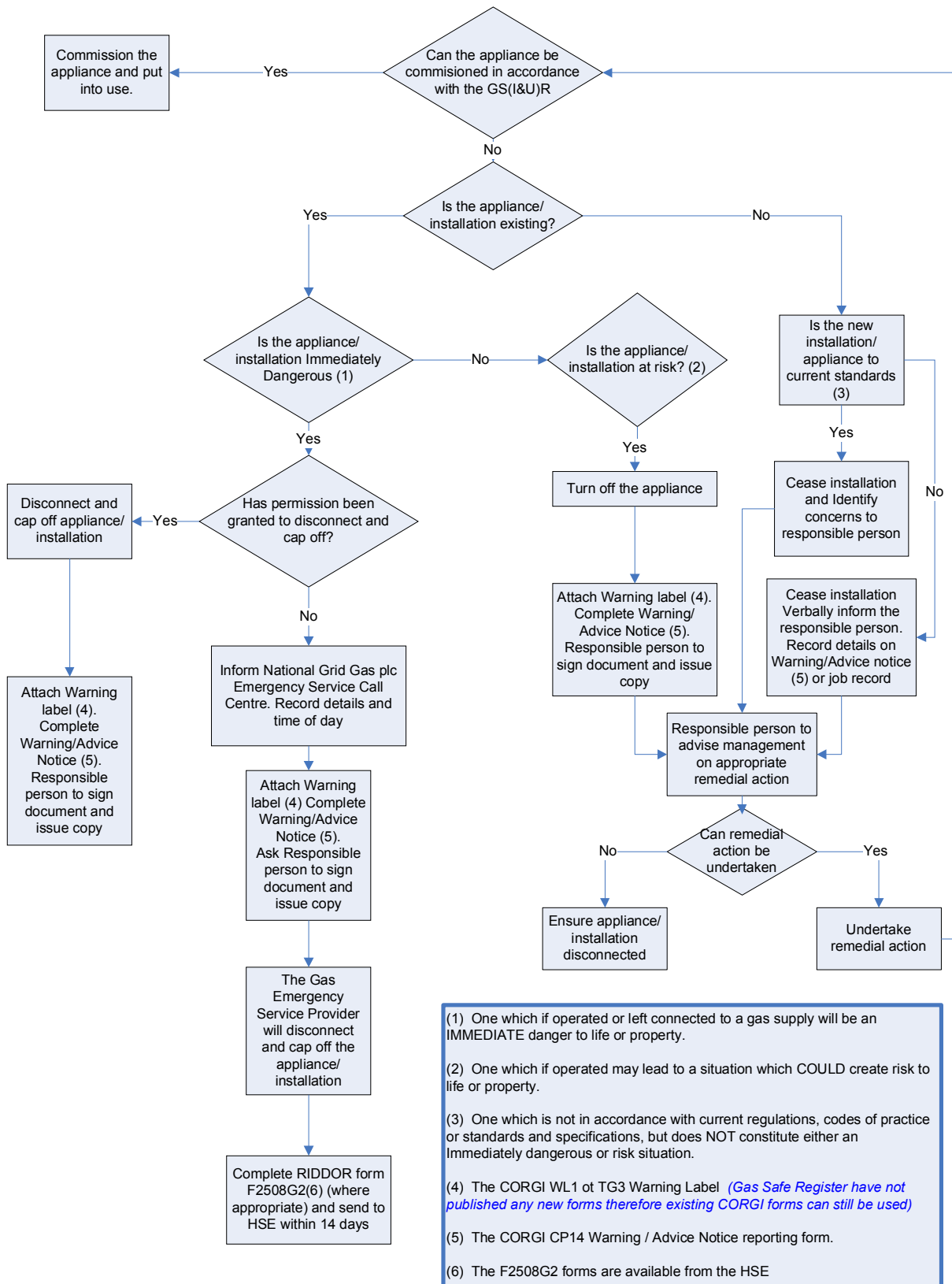
Internal Installation Pipework

Enter the details of the procedure to be followed, including contact details and named individuals with responsibilities.

Equipment

Enter the details of the procedure to be followed, including contact details and named individuals with responsibilities.

Dealing with Unsafe Gas Situations



Inspections and Investigations by External Authorities

The Pipeline Safety Regulations (PSR)

Gas Safety Management Regulations (GSMR)

Gas Safety (Installation and Use) Regulations 1998 (GS(I&U)R)

When the GSMR and the PSR introduced, gas safety enforcement was in the interests of clarity split between HSE-FOD and HSE-HID. The deliberate decision was taken to provide a definite cut-off point between these two sets of regulations and the GS(IU)R. This point was set as the outlet of the first emergency control intended for consumers' use, as defined in GSIUR (see definition of 'pipe' in GSMR reg.2 (1), and definition of 'pipeline for supplying gas to premises' in PSR reg.3 (4)).

Both the GSMR and the PSR extend up to, and include, this emergency control, and although the GS(IU)R contains provisions related to emergency controls, these controls are not included in the definition of 'gas fittings' in GS(IU)R, (reg.2(1)).

Under the following legislation the identified Authorities have a statutory duty to undertake investigations into gas incidents including those on the MOD Estate

Regulation	Area of Responsibility	Enforcing Authority
The Pipeline Safety Regulations	Upstream of and including the emergency control valve (ECV)	Health and Safety Executive's (HSE) Hazardous Installations Directorate (HSE-HID) ⁴ .
Gas Safety Management Regulations	Upstream of and including the emergency control valve (ECV)	HSE - HID
Gas Safety (Installation and Use) Regulations 1998 (GS(I&U)R)	Downstream of the emergency control valve (ECV)	HSE Field Operations Directorate (HSE-FOD)

The Gas Safety (Rights of Entry) Regulations 1996 (GS(RoE)R) confer rights of entry upon "public gas transporters" and "relevant authorities" to enter premises for the purpose of preventing gas escapes, the examination and disconnection of "gas fittings" and other related purposes

All carbon monoxide incidents resulting from the use of faulty gas appliances are dealt with by HSE-FOD inspectors under GS(IU)R. (see Annex G for information on Carbon Monoxide)

Though carbon monoxide incidents are for HSE-FOD inspectors to investigate, the GSMR places gas suppliers (essentially those who bill consumers for their gas) under a duty to arrange for investigations to be carried out by competent persons (whether by themselves, or through others that they have contracted to act on their behalf) into all such incidents that are notifiable under RIDDOR reg.6(1) (GSMR reg.7(14));

In determining which part of the HSE investigates gas fires or explosions; the key issue is to establish the source of the leak. If it was from the main or service outside the premises (i.e. upstream of the ECV) which has tracked into the house and subsequently ignited, then the investigation should be with HSE-HID. However, if the source is anywhere downstream of the ECV (e.g. from a pipework joint within the premises) the investigation should be carried out by HSE-FOD.

⁴ The exceptions to this are incidents of third party damage to pipelines. In most cases, this stems from the activities of other utilities, agricultural or construction works. As these activities are generally looked after by HSE-FOD (including the Construction Division), it has been agreed that although local HSE-FOD and HSE-HID inspectors should liaise on any third-party interference damage incidents, in general, FOD inspectors will take the lead in investigating such incidents. HSE-HID specialist pipelines inspectors will provide technical support to HSE-FOD where necessary.

In reality, it may not be immediately possible to determine the source of the leak, it has therefore been agreed by the HSE that HSE-FOD inspectors⁵ will normally deal with all initial reports of fires or explosions. However, should it become clear that the source of the escape was upstream of the ECV; the investigation will be passed to HSE-HID.

In most domestic premises there will be only one emergency control valve, normally situated immediately alongside the consumer's meter. However, in the case of multiple occupancy accommodation (i.e. blocks of flats) or commercial/industrial sites there may be several such controls, for use by individual consumers. In such situations, it is the first emergency control for the premises/site for consumers to isolate the gas supply to the premises or site as a whole, in case of emergency, that determines the divide between GS(IUR) and GSMR/PSR, and the enforcement responsibilities of HSE-FOD and HSE-HID inspectors.

The Gas Safe Register have a team of inspectors who monitor that gas work is being undertaken competently and safely. They deal with reactive complaints, undertake planned inspections and handle ad hoc requests. The Gas Safe Register inspectors work closely with the regulators such as HSE.

⁵ FOD inspectors are generally responsible for enforcing gas safety matters downstream from the emergency control of consumers' meters (covered by the Gas Safety (Installation and Use) Regulations 1998 (GSIUR)), whereas HID inspectors are responsible for enforcing those matters upstream of these emergency controls, related to the safe transmission and distribution of gas at high, medium, and low pressure, (covered by both the Gas Safety (management) Regulations 1996 (GSMR) and the Pipeline Safety Regulations 1996 (PSR)).

Carbon Monoxide

Unsafe gas appliances produce a highly poisonous gas called carbon monoxide (CO). It can cause death and serious long term health problems such as brain damage.

In 2008/2009, 14 people died from CO poisoning and 234 suffered health problems from CO exposure. This poisonous gas is released when gas appliances are incorrectly fitted, badly repaired or poorly maintained.

An annual safety check (by a Gas Safe register engineer) will provide some degree of assurance that appliances are safe. This will prevent persons being exposed to low levels of CO. Properly managed, gas is safe. Poorly managed, gas can produce harmful levels of carbon monoxide.

What is carbon monoxide?

Carbon monoxide (CO) is a highly poisonous substance which is produced by the incomplete burning of gas and Liquid Petroleum Gas (LPG). This can happen if a gas appliance has been incorrectly fitted, badly repaired or poorly maintained or if flues, chimneys or vents are blocked.

Persons could be inhaling CO without realising it. CO can't be seen, smelt or tasted, but at high levels it can kill in minutes. Even breathing in a small amount can cause loss of consciousness and death.

Carbon monoxide alarms

HSE strongly recommends the use of audible carbon monoxide (CO) alarms as a useful back-up precaution but they must not be regarded as a substitute for proper installation and maintenance of gas appliances by a Gas Safe Registered engineer. Before purchasing a CO alarm, always ensure it complies with British Standard EN 50291 and carries a British or European approval mark, such as a Kitemark. CO alarms should be installed, checked and serviced in line with the manufacturer's instructions.

Although carbon monoxide (CO) is a colourless, odourless and tasteless gas, signs that indicate incomplete combustion is occurring, resulting in the production of CO, include:

- Yellow or orange rather than blue flames (apart from fuel effect fires or flueless appliances which display this colour flame)
- Soot or yellow/brown staining around or on appliances
- Pilot lights that frequently blow out
- Increased condensation inside windows