DIRECTORATE OF ESTATES & FACILITIES

PROCEDURE AND INFORMATION MANUAL

EPM HS17 –THE GAS SAFETY MANAGEMENT ARRANGEMENT

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1.0.0 FOREWARD

1.1.0 Introduction

The University is responsible for gas safety related activities on domestic, catering and commercial type natural gas installations with a limited number of LPG Installations on the University estate..

The Directorate of Estates and Facilities (DOEF) is responsible for ensuring that all properties including domestic dwellings with natural gas installations are safe and compliant with respect to the Gas Safety (Installation and Use) Regulations 1998 (the Regulations). This document outlines the extent to which Estates and Facilities will put in place arrangements that will ensure so far as is reasonably practicable, the safety of staff and contractors when working on gas installations and appliances..

The University's arrangements Chapter 23 'Interface between Estates and Facilities, and building occupiers' highlights the responsibilities of Estates and Facilities and building occupiers. The Chapter states that:

Estates and Facilities have responsibility for mains gas supplied up to the point of appliance isolation. They have no responsibility for other piped gases unless this has been specifically agreed with them.

Building occupiers have responsibility for maintaining mains gas appliances used by them eg Bunsen burners (including rubber tubing), glass blowing torches.

1.2.0 Scope

The University property portfolio is extensive and covers Medical, Pharmaceutical, Engineering and Biological Schools, Halls of Residence, Faculty Offices, Sports Hall and Administrative Amenities. The properties are distributed across the campus and also include a number of remote locations.

These arrangements will apply to all sites owned or managed by the University and any gas supply / gas fired equipment contained therein. In addition, fixed or portable sources of LPG and any temporary heating / catering / process facilities imported for use on the campus shall be covered. The University has a private natural gas networks and gas supply network. Other network gas supplies are outside of the remit of this management arrangement.

1.3.0 Legal Considerations

Under the Regulations the University is required to ensure that all natural and LPG fixed gas appliances, flues and gas pipework are checked regularly. This responsibility has been delegated to the director of Estates and Facilities. A Gas Safe registered gas installer will carry out the required safety checks and a record of such will be retained by Estates and Facilities. Estates and Facilities

has a duty to ensure that access is gained to each property and also that it can be demonstrated that it has made reasonable efforts to verify that the checks are being undertaken properly . The DOEF will also be responsible for overseeing the activities of any Gas Safe contractor employed to install, service, or maintain any gas pipework or appliances contained within or supplying University properties. These arrangements are designed to ensure that the University fully discharges its responsibilities and duties imposed upon them by the Regulations.

2.0.0 CONTENTS

3.0.0 AMENDMENT RECORD

Version 3	May 2019 - Permit to work on natural gas systems added and general updates regarding file location.
Appendix C	GAS 1 – Gas Asset Survey removed, asset managed from EPM FM1 - Maintenance Strategy and associated university guides and policies.

General update. A copy of all changes has been retained in an archive file.

4.0.0 GAS SAFETY STATEMENT

4.1.0 Purpose

This section describes the DOEF arrangement in relation to all works dealing with gas supply, equipment, smoke and carbon monoxide alarm installations as outlined in Chapter 23 of the University arrangements.. This section highlights the DOEF commitment to taking all practicable steps to comply with the legal duties imposed onto it by the Regulations and the Health and Safety at Work etc., Act 1974 in relation to gas fuelled equipment, smoke and carbon monoxide alarm installations.

Note: In relation to smoke and CO alarms, the arrangement relates to access for the annual safety check only. Arrangements relating to access for other works in relation to smoke alarms are covered by general repairs & maintenance arrangements.

4.2.0 Arrangement

2.1.1 The arrangements seek to ensure all gas equipment installed and used within all university properties are installed and maintained by competent engineers and are safe to use and present no harm.

2.1.2 The DOEF will arrange for access to be gained to all properties at least once in every twelve month period to:

- ensure the safety of persons through regular maintenance of all fixed gas fuel-burning equipment
- inspect and test gas supplies and flue installations for integrity and safety
- ensure the safety of persons through the regular maintenance of smoke alarms
- ensure the safety of persons deemed to be at risk by regular maintenance of carbon monoxide alarms

2.1.3 For all non-domestic gas pipework installations a programme of tightness testing will be undertaken ensuring no installation is left untested for more than 5 years.

2.1.4 Where a report is received that gas equipment is not operating satisfactorily then a risk management process will be adopted.

2.1.5 The DOEF will ensure that all users of gas fuelled equipment either residential or educational are made aware of the safe operation of such equipment.

4.3.0 Legal Considerations

4.3.1 The University is not defined as a Registered Social Landlord but has accepted a duty under the Regulations to maintain, in a safe condition, all gas fittings and flues in all of its rented / managed properties. (Regulation 36).

4.3.2 Where specified, the DOEF has a duty to carry out an annual safety check on all gas appliances, flues and pipework. In addition, a responsibility for the maintenance of

every fixed gas appliance that it has responsibility for in accordance with the appliance manufacturers servicing instructions.

4.4.0 Implementation

4.4.1 The Principal Mechanical & Energy Engineer will implement, manage and monitor these arrangements and ensure all sections within are adhered to as far as is reasonably practicable.

4.4.2 Planning and auditing of these arrangements will be carried out by the DOEF.

4.4.3 The DOEF will maintain appropriate records of all works carried out by contractors and others on natural gas installations, appliances and fittings it has responsibility for.

4.4.4 An annual review of the gas safety management arrangements will be carried out by the Gas Safety Management Group. The Gas Safety Management Group consist of the following personnel……..

4.5.0 Responsibility

4.5.1 The overall responsibility for effective implementation of these arrangement lies with the Director of Estates and Facilities. This duty has been delegated by the Director to the Principal Mechanical and Energy Engineer.

4.6.0 Consultation

4.6.1 The DOEF will consult with other bodies in order to continually develop best practice in this area.

4.6.2 Any proposed changes to these arrangements will be reviewed by relevant stakeholders.

4.7.0 Review

The Gas Safety Management Group will formally review this arrangement every two years.

5.0.0 ORGANISATION

5.1.0 Purpose

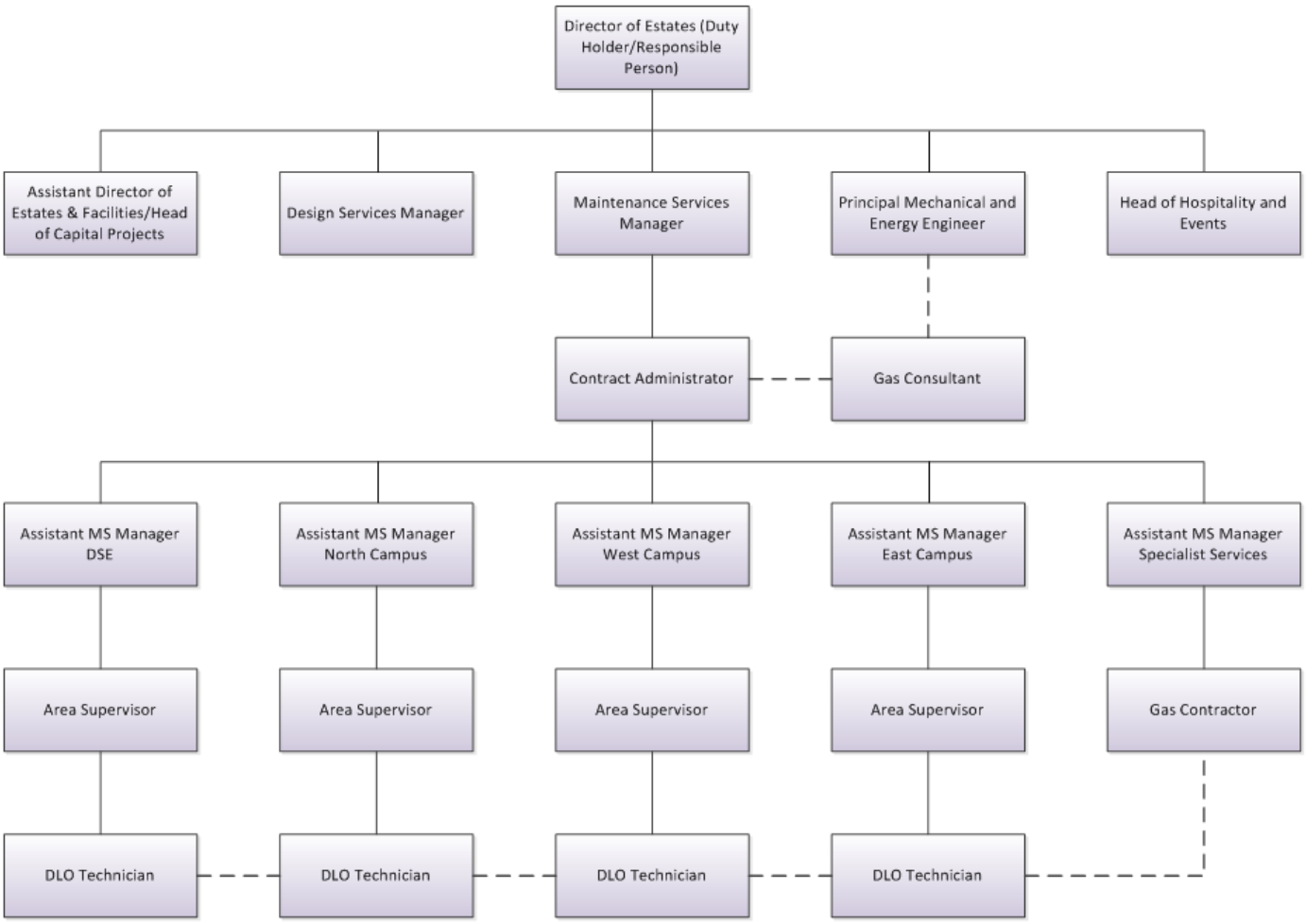
This section establishes the reporting lines and operating structure for the DOEF.

5.2.0 Scope

For the purposes of these arrangements all reporting lines will flow through the Principal Mechanical and Energy Engineer and the Maintenance Services Unit..

5.3.0 Organisation Structure/Chart

The operating structure is as identified on the flow chart



6.0.0 ROLES AND RESPONSIBILITIES

6.1.0 Introduction

This section details the roles and responsibilities of staff employed or contracted to DoE&F who have an active or passive role in delivering these arrangements..

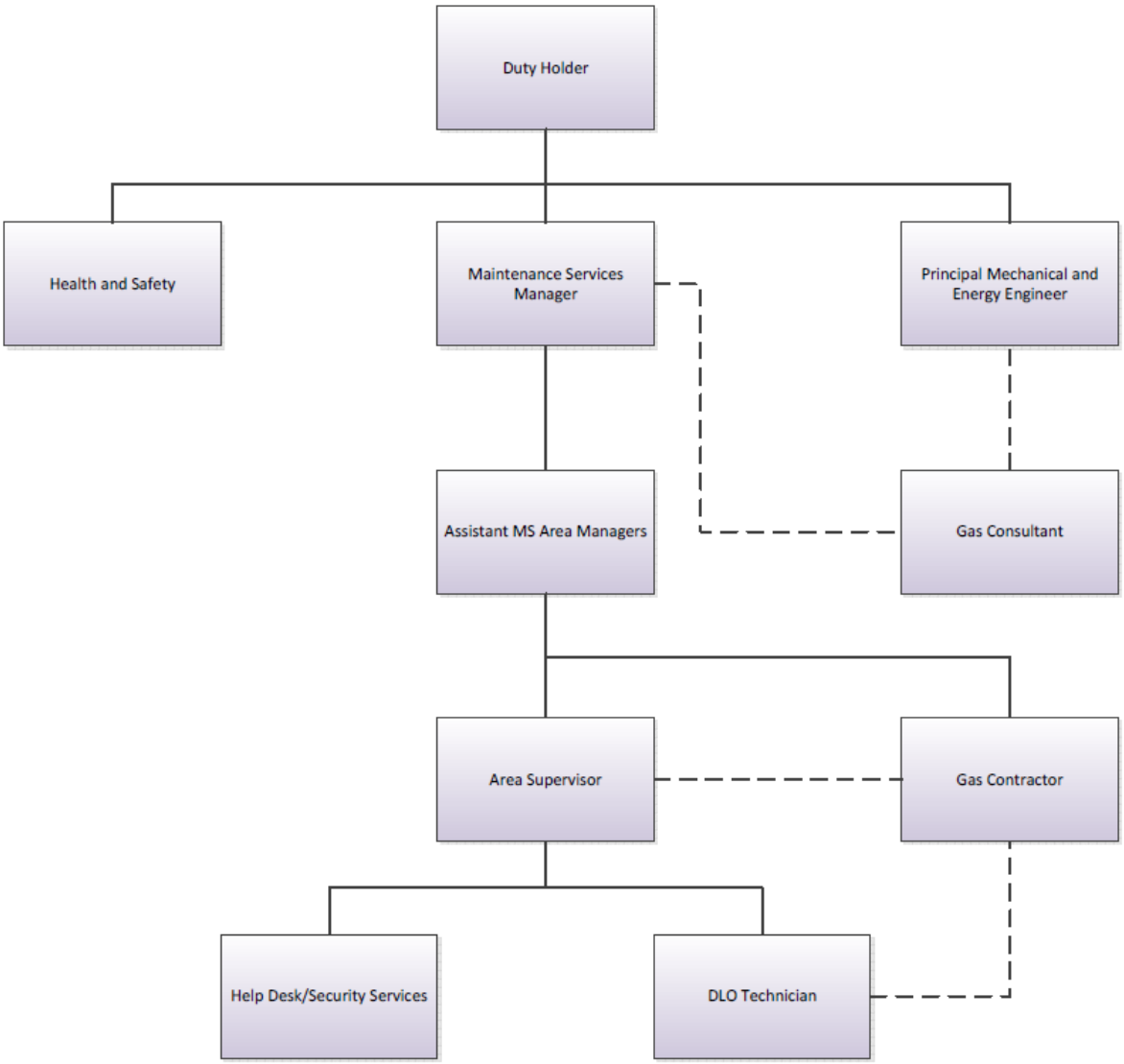
6.2.0 Scope

6.2.1 This section details th roles and responsibility of staff who deal with installation, servicing and maintenance of natural gas installations, appliances and related works, it does not apply to other areas of building services work in the DOEF, Schools and Faculties such as medical gases and oxygen supply lines or specialised department equipment other than their relationship to the installation of natural gas appliances or supply lines.

6.2.2 Roles that interface with teaching staff, students or members of the public are included. This will specifically apply to Security Services and Help Desk personnel who may receive gas related calls in particular reports of gas escapes or fumes and are required to offer guidance and advice in such circumstances.

6.2.3 Users of gas equipment within the University such as teaching staff, students, catering staff etc. will not be included. General gas safety guidelines are highlighted within the relevant sections of these procedures.

6.3.0 GAS MANAGEMENT ROLES AND RESPONSIBILITIES



6.3.1 Duty Holder / Responsible Person (Gas)

The Director of Estates and Facilities is the designated Duty Holder and 'Responsible Person' for the purposes of these arrangements.. The implementation of these arrangements has been delegated to the Principal Mechanical and Energy Engineer.

6.3.2 The Principal Mechanical and Energy Engineer

The Principal Mechanical and Energy Engineer for the Client Services Unit (CSU) is responsible for ensuring that these arrangements are implemented. . The role shall be confirmed in writing by the Duty Holder. This document and any gas related procedures shall be subject to periodic review by the Working Group which includes the Principal Mechanical and Energy Engineer to ensure continued compliance.

6.3.3 **Maintenance Services Unit Manager**

The Maintenance Services Unit Manager also has responsibilities under these arrangements. The Maintenance Services Unit Manager will ensure that regular contractor meetings and monitor performance are held, as necessary. The Maintenance Services Manager is responsible for ensuring that sufficient resources are available to enable these arrangements to be fully implemented.. The post holder will ensure adequate induction and training is provided to new members of staff on gas safety related matters as appropriate to their role and responsibilities.

6.3.4 **Contract Administrator**

The Contract Administrator (Specialist Services) has responsibility for ensuring that the gas maintenance contract is managed and monitored appropriately; this will include l attending contractor meetings and monitor contractor performance. Other duties will include liaison with Gas Safe registered contractors to ensure, key performance indicators are met. The Contract Administrator or his nominated deputy will develop and oversee the operation of an effective reporting system that will be used to ensure continual monitoring and updating of relevant gas works throughout the university sites and buildings. The Contract Administrator will be responsible for ensuring both contractor and the University comply with the requirements of Section 17 (Quality Control and Auditing). The Contract Administrator will support the Maintenance Services Unit Manager, record details of contract maintenance onto the gas database, identify any warning notices raised and record remedial actions undertaken.

6.3.5 **Assistant Maintenance Services Managers.**

For operational purposes the Maintenance Services Unit has four designated areas under the control of individual Assistant Maintenance Services Managers who report directly to the Maintenance Services Manager and have overall responsibility for operational control of the arrangement for those buildings under their control. The Assistant Maintenance Services Managers will control access for the planned gas inspection programme and deal with responsive repairs. They will respond to any warning notices raised, confirm and close out any remedial actions. Check corrective actions raised by contractors as a result of unsafe situations etc. The Assistant Maintenance Services Managers will also attend monthly contractor meetings, review response times, investigation of reports of fumes or gas escapes and findings and subsequent risk assessments deviating from the Industry Unsafe Situations procedures' as detailed in Section 16.

6.3.6 **Area Supervisors**

Area Supervisors are line managed by Assistant Maintenance Services Managers; have responsibility for the day to day operations of Direct Labour Operatives (DLO) technicians under their control and the general management / control of gas related problems within that portion of the University's stock for which they have responsibility. They may receive gas related calls from the Help Desk or Security Services and allocate a DLO Technician to investigate the report. Where a situation arises that is outside the competence of the DLO technician, the Area Supervisor will contact to Helpdesk and request that a Gas safe Contractor is required to attend site.. The Area Supervisors are instructed to escalateng information to the Assistant

Maintenance Services Manager / Maintenance Services Manager dependent upon the circumstance and the gas contractor or emergency services.

6.3.7 **Design Services Unit Manager / Capital Projects Manager**

The Design Services Unit Manager/Capital Projects Manager are responsible for the planning, co-ordination and completion of new works in accordance with Estates and Facilities arrangements.. In addition, they are also responsible for ensuring that sufficient resource is available to ensure targets are being met. The Design Services Unit Manager/Capital Projects Manager may nominate a Project Manager to supervise the works for the duration of a project. The Project Manager for new or refurbishment works must ensure that copies of all staff competencies must be submitted to the Design Services Unit Manager/Capital Projects Manager for file purposes and no person must be allowed to work on gas unless competent to do so and listed on the competent contractors list. The Design Services Unit Manager/Capital Projects Manager may nominate a gas competent person to act in the role of "Clerk of Works" to exercise control of the work carried by contractors / sub-contractors working on any project at design stage or installation of gas appliances and systems for the University. The Project Manager or nominated gas competent person will ensure all evidence of gas installation work, commissioning and related certification is supplied for the Health and Safety File as required by the Construction Design and Management Regulations prior to handover and final acceptance of responsibility by the University.

6.3.8 **Auxiliary Services Manager**

All post holders who do not assume any direct day to day responsibility for gas safety issues but do have occasional responsibility as identified within this arrangement. These roles have been identified as:

- DLO Technician who are not gas competent but may attend callouts and carry out gas related duties within the scope of works as identified at Section 7 clause 2.2 and request qualified gas contractors to attend and carry out "work" as defined in the Regulations.
- Help Desk Staff that will receive calls of any gas related issue, log and record details and allocate job numbers. Outside the normal working hours of the help desk a contractor call-out procedure is utilised.
- The Residential Management Team will maintain a record of catering gas appliance service details, and retain copies of any gas safety report forms. Report any suspicion of gas escapes or fumes emissions. Take appropriate actions to ensure the well-being of all occupants in accordance with these procedures.
- Catering / Halls Managers and supervisors who will be responsible for the servicing and maintenance regime of any contracted out gas equipment, related gas controls or ventilation and extract system within their kitchens. Checks will be made of engineer qualifications and only competent persons will be employed for the installation, servicing and maintenance of any gas fired equipment. They will be responsible for ensuring adequate training of catering staff in the safe operation of all gas fired equipment under their control.

- Security Staff will assist in dealing with reported gas safety issues outside normal working hours and responding appropriately to ensure suitable actions are carried out.
- Fire Wardens who may be involved in the evacuation of large buildings in the event of a reported gas escape. A silent procedure must be adopted and no access allowed back into the building until permission is given by the "Responsible Person".
- Premises or Lease Holders that have gas fired equipment such as baking ovens or catering equipment installed within their premises which are relevant to the performance of the lease or business.

6.3.9 **Gas Consultants**

A Gas Consultant will be retained by DEoF to act in an advisory and support capacity to the Principal Mechanical and Energy Engineer in addition to the Maintenance Services Unit. In this advisory capacity, the consultant will;

- chair monthly contract meetings ,
- provide quality assurance around completed documentation,
- Train identified individuals in gas safety awareness,
- train iidentified individuals to deal with industry unsafe situations, Carbon Monoxide releases, and develop risk assessments for the inspection and testing of pipework,
- carry out audits of the Gas Management System,
- act in any other gas related capacity as directed by the Principle Mechanical and Energy Engineer or the Maintenance Service Unit Manager.

6.3.10 **Gas Contractors**

Gas Contractors will ensure all operatives working on gas installations, fittings, pipework or appliances hold appropriate gas qualifications for the areas of work they are employed to undertake. They will comply with all relevant standards and regulations currently in force. They shall complete gas safety reports or other documentation relevant to the work undertaken and issue any warning notices in accordance with the Industry Unsafe Situations Procedures (Gas Safe Technical Bulletin 001).

6.3.11 **Implementation**

Staff within DEoF will be allocated the roles above dependent upon their experience, qualifications and current job description. A structured training program will be implemented to ensure all staff is aware of their responsibilities.

6.3.12 **Evaluation**

Performance will be audited by the Principle Mechanical and Energy Engineer to ensure the procedures for which persons are responsible are performed satisfactorily. Management Review Meetings will be held and minuted to monitor and evaluate performance.

6.3.13 **Review**

The PM&EE and other key stakeholders within the DoE&F will formally review roles and responsibilities subject to the results of the audit and performance review.

7.0.0 STAFF AND CONTRACTOR INDUCTION

7.1.0 Purpose

7.1.1 This procedure describes how newly recruited members of staff with responsibilities for the safe operation of the Gas Safety System, or any contractor with responsibility for performing gas related work carried out on properties for which The DOEF have responsibility, are suitably inducted into and, conversant with these procedures and any other related Health and Safety requirements pertaining to those areas of gas work they undertake.

7.1.2 The purpose is to ensure new employees and/or contractors understand the day to day delivery of the maintenance, servicing, and installation of gas systems across all the campuses, academic, administrative, commercial and residential buildings.

7.1.3 The induction process will include a review and feedback process to identify any training needs required to fully implement these procedures.

7.2.0 Scope

7.2.1 The scope of the induction process for the University covers all buildings within the university portfolio.

7.2.2 For contract purposes gas appliances are classified as those <275kW and those >275kW heat input. For those appliances <275kW the service and maintenance is contracted out to a single company with responsibility of those appliances and where competencies are covered by the Nationally Accredited Certificate Scheme (ACS) scheme. Due to the varied requirements of the University and taught subject matter specialised gas equipment may be installed that is outside the normal scope of ACS competencies or are >275kW in which case the service and maintenance will be contracted out on an individual basis to maintenance companies or manufactures conversant in their installation, service and maintenance.

7.3.0 Procedure

7.3.1 An induction form will be held on file by the Maintenance Services Unit. The induction form will identify the roles and responsibilities of the inductee and those areas of responsibility applicable to the job role being undertaken within the University premises. The induction procedure will be subject to bi-annual review or as required due to changes in legislation or operational requirements.

7.3.2 The Maintenance Services Manager will ensure any new members of staff, in accordance with the Section 6 roles and responsibilities, undertake an induction course. On completion, the Induction Form shall be completed and added to the staff records.

7.3.3 The associated line manager shall identify all training requirements that must be completed in order for a member of staff to fully undertake their duties. All such training must be undertaken prior to an individual taking up their duties. Evidence of all required qualifications and training shall be filed with the Training Records File.

7.4.0 Retention of Records

Evidence of the induction process shall be retained for 5 years on the induction form.

8.0.0 QUALIFICATIONS AND TRAINING OF EMPLOYEES AND CONTRACTORS

8.1.0 Purpose

This procedure describes the methods used and documentation utilised in ensuring that any person with responsibility for gas safety issues or gas work carried out on properties for which the DOEF has responsibility, is carried out by suitably qualified gas contractors. The procedure will also ensure that university staff who are not gas qualified will undertake suitable training to show their understanding of current legislation and standards affecting gas safety.

8.2.0 Scope

8.2.1 The ACS system contains competence assessments for all mainstream work involving Natural Gas or Liquefied Petroleum Gases. Some elements of more specialised work are covered by The Approved Code of Practice (ACoP) but the only existing route for Gas Contractors to demonstrate continued competence for mainstream work is ACS qualifications. All Gas Safe registered gas operatives must be re-assessed on their professed competencies at a maximum of 5 yearly intervals. For the purposes of this procedure the obligations and standards to be applied in determining and maintaining competence will apply to all gas contractors. All ACS qualifications will need to be current, valid, and supported by ongoing evidence of maintaining knowledge with changes in law, technology and safe working practice during the 5 yearly renewal periods of ACS qualifications.

8.2.2 The DoE&F do not employ staff who are qualified to work on gas installations, fittings or appliances. however, some normal day to day activities which are excluded from the requirement for ACS competence can include but is not limited to;

- Connecting or disconnecting bayonet fittings or other self-sealing connections for the purpose of cleaning the space a gas appliance normally occupies,
- Changing of bottled gas cylinders and ,
- Relighting of pilot lights or operation of appliances.

8.2.3 Other university staff who are not gas qualified and therefore outside the scope of ACS competencies but hold responsibilities as identified at Section 6 shall undertake training as agreed by the Principal Mechanical and Energy Engineer or the Mechanical Compliance and Energy Engineer. Where a training need is identified for non-technical staff evidence of staff training in safe operation or procedural requirements will be maintained by the Mechanical Compliance and Energy Engineer on the training database.

8.3.0 Procedure

8.3.1 An ACS competence matrix will be held on file by the Maintenance Services Unit. The competence matrix will identify the necessary ACS competencies required for contractors to work on the types of gas systems and appliances within the University premises for which the Maintenance Services Unit has responsibility. The matrix will be subject to annual review or as required by changes to ACS competency requirements.

8.3.2 All Contractors **must** provide details of their GAS SAFE registration by supplying details to the Mechanical Compliance and Energy Engineer to hold on file. This duty to be undertaken at each annual renewal date with Gas Safe Register. Contractors will supply the identity of any operatives that will / may undertake work on university gas systems and provide copies of individuals relevant and current ACS certificates and Gas Safe Registration Cards.

8.3.3 Any contractor will assume responsibility for vetting any sub-contractors and forwarding their details to the Mechanical Compliance and Energy Engineer for entry onto the database as approved contractors.

8.3.4 The Contract Administrator will retain evidence of of operatives that will / may undertake work on the university gas systems and retain copies of relevant and current certificates and Gas Safe Registration cards. Competencies will be checked against the competency matrix or Gas Safe Register. No operative will be authorised to undertake work on any gas system without this procedure being undertaken beforehand.

8.3.5 Managers with responsibility for gas systems and gas fired equipment such as fixed catering equipment which is out with the contractual responsibilities of the Estates and Facilities Maintenance Services Unit must ensure competent persons are employed to service, maintain or install gas fired equipment as required by Clause 8.3.2 and provide evidence of operative competence

8.3.6 The relevant Faculty Estates Team/Events and Conference Team will be responsible for checking contractor qualifications and referring to the Contract Administrator before temporary transportable gas systems such as LPG fuelled temporary heat sources or outside temporary catering equipment are imported into university premises to ensure compliance with the requirements of Clauses 8.3.2 and 8.3.3.

8.3.7 Where a contractor's gas operative training need is identified due to findings from quality control inspections, changes in legislation or ACS competencies then the Gas Consultant will advise the Maintenance Services Unit Manager and Principal Mechanical and Energy Engineer of the Gas Contractors training need. Compliance dates will be identified, and evidence of completion of relevant training, and achievement of ACS assessments submitted and held on file as per requirements of Clause 8.3.2 and 8. 3.3. Any operative not achieving compliance by the required dateline will be deemed no longer competent and not allowed to work on gas systems until such compliance is achieved and evidence thereof submitted.

8.3.8 The Maintenance Services Unit Manager will identify any gas safety training needs of non-technical staff such as DLO Technicians, Premises Managers, Housekeepers, Helpdesk Personnel and Security Staff etc. who have responsibilities under these gas safety procedures. A training needs analysis will be conducted and where training is required the Gas Consultant will agree the course content and will deliver the appropriate training. Evidence of training will be held as proof of compliance.

8.3.9 For MSU staff the Maintenance Services Unit Manager will ensure that suitably technically qualified staff will deliver refresher training to relevant staff and maintain a record of the training.

8.4.0 Retention of Records

8.4.1 Evidence of operative training shall be retained on a matrix.

8.4.2 Copies of contractor annual Gas Safe registration certificates will be held on file for a period of not less than 5 years.

8.5.0 Permit to Work on Natural Gas Systems

8.5.1 To operate safe systems of work, and fulfil requirements of the Gas Safety Regulations. A permit to work on natural gas systems is in place for managing/checking gas contractor/operative competency under Gas Safe Register

8.5.2 The only exception to the permit to work on natural gas systems, shall only be for pre-determined UoM authorised gas safe registered framework contractors, who have undergone the full Gas Safe Registration evaluation during;

- Tender stage.
- Contract mobilisation stage.
- Contract tenure where there is a sustained ad continuous contractor/operative Gas Safe registration checks in place.

9.0.0 STANDARD OPERATING PROCEDURES

9.1.0 Introduction

9.1.1 Standard methods and procedures to use when carrying out service and maintenance work on relevant appliances found within the university premises are provided in Appendix A – Gas Standard Operating Procedures.

9.1.2 Regardless, all service and maintenance work shall be carried out in accordance with the manufacturer's recommendations, relevant ACOP's British Standards and industry best practice.

9.2.0 Scope

9.2.1 The standard methods and procedures cover the following equipment;

9.2.2 Gas Installation Pipework

9.2.3 Gas Fired Central Heating and Hot Water Boilers and System (including independent water heating appliances). Including the following appliances:

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

or any combination thereof fitted with any type of flue system.

9.2.4 Domestic Gas Fired Cooking Appliances. Including the following appliances:

- Free standing cookers.
- Built-in hotplates.
- Built-in Ovens.
- Independent grills.

or any combination thereof.

9.2.5 Gas Fired, Direct and Indirect, Forced Convection Air Heaters and System. Including the following appliances:

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

or any combination thereof fitted with any type of flue system.

9.2.6 Gas Fired Overhead Radiant Heaters and Systems. Including the following appliances:

- Suspended overhead radiant tube heaters.
- Radiant Plaque heaters.

- Ducted / Combined units.

or any combination thereof fitted with any type of flue system.

9.2.7 Gas Fired Catering Appliances and Allied Equipment. Including the following appliances:

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

or any combination thereof.

9.3.0 Review

The University Gas Consultants will update the procedures as new equipment is installed within the university estates. It shall be the responsibility of the Gas Maintenance Manager to inform the Consultant of additions to the university gas equipment stock. The operational procedures will be formally reviewed annually.

10.0.0 TECHNICAL SUPPORT LIBRARY

10.1.0 Purpose

This procedure describes the methods used and documentation utilised for providing technical support relating to gas, smoke and carbon monoxide alarm installations to university employees.

10.2.0 Statutory Documents

The DoE&F subscribes to, a Web Base document library – IHS which access is available to all appropriate DoE&F staff This document library provides access to Statutory Instruments, BSI Publications, HSE documents and other associated documents.

10.3.0 Manufacturer's Instructions

10.3.1 Copies of appropriate manufactures instructions for all appliances / equipment owned by the University are contained within the appropriate building health and safety file. These documents are held electronically, located at G:\Estates\PSU H&S files.

10.3.2 Although this list of documents are considered comprehensive, it is possible that in certain circumstances reference may have to be made to a document that is not shown; in these circumstances the most current version should be used.

10.4.0 Contractor/Operative Technical Library

10.4.1 Gas contractors **should be aware of** Technical Bulletin 999 which identifies all normative documents for use by gas contractors. Technical Bulletin 999 identifies changes and expected revision dates to normative documents. This technical bulletin is updated where appropriate and republished on or about the following dates each year;

12 January
13 April
14 July
15 October

10.4.2 The gas contractor will review technical Bulletin 999 at the appropriate dates and inform the Maintenance Services Unit Manager and the Mechanical Compliance and Energy Engineer of any changes to normative documents, technical bulletins, HSE Safety Alerts or manufactures updates that will result in operational change.

11.0.0 DESIGN GUIDANCE – NEW AND REFURBISHED INSTALLATIONS / EQUIPMENT

11.1.0 Purpose

11.1.1 This section describes the University's arrangements in relation to the design, installation commissioning and handover of new installations containing gas and gas fuelled equipment.

11.1.2 This section highlights the commitment of the DoE&F to ensure that all new works are compliant and installed in accordance with all relevant legislation and standards in force at the time of the installation.

11.2.0 Responsibilities

It is the responsibility of the Project Manager of a particular contract to ensure this and all other sections of the management system are adhered to. The Project Manager will convene regular progress meetings to review the project status and identify any actions necessary to deliver the design management plan. Gas systems must be designed, installed and inspected by competent people. All gas supply systems must be based on nationally accepted standards and competent persons used to implement good design practices with respect to mechanical and process design.

11.3.0 Scope

This section applies to all Natural Gas installations not exceeding 20mb operating pressure and LPG fixed tank installations not exceeding 37mb operating pressure from the Emergency Control Valve (ECV) to the appliance installation, including chimney and ventilation requirements. It is inclusive of all pipework, valves and controls. It covers the design, construction and installation of gas systems but also applies during operation, decommissioning and demolition.

11.4.0 Arrangement

11.4.1 The DoE&Fwill ensure that all gas installations up to the point of appliance isolation unless DoE&F arte responsible for that piece of appliance are designed in accordance with the applicable standards in force at the time of installation, whether designed in house or by an external consultant.

11.4.2 The DoE&F will ensure that all materials and equipment shall be in accordance with the relevant standards. No equipment shall be used that does not bear reference that it conforms to an approved type; for example CE marked.

11.4.3 Installations shall only be installed by approved operatives who have satisfied the Contract Manager or other relevant person of their competence as shown in Section 8 of these arrangements.

11.4.4 The DoE&F reserve the right to ensure that all new installations have been subject to 'sign off' by a competent auditor as detailed in Section 17 - Quality Control and Auditing of these arragements.

11.5.0 Procedures

In addition to all national legislation and official approved codes of practice and guidance designers are to follow guidance and technical standards published by the

Institution of Gas Engineers and Managers
IGEM House
26-28 High Street
Kegworth
Derbyshire
DE74 2DA

The following documents provide relevant guidance in gas installation design, risk assessments and management procedures associated with university buildings.

- IGE/UP/1 Edition 2 - Strength testing, tightness testing and direct purging of 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
- IGEM/UP/2 Edition 3 - Installation pipework on industrial and commercial premises
- IGEM/UP/10 Edition 4 - Installation of flued gas appliances in industrial and commercial premises
- IGEM/UP/11 Edition 2 - Gas installations for educational establishments
- IGEM/UP/16 - Design for Natural Gas installations on industrial and commercial premises with respect to hazardous area classification and preparation of risk assessments
- IGEM/UP/19 - Design and application of interlock devices and associated systems used with gas appliance installations in commercial catering establishments
- IGEM/G/5 Edition 2 Communication 1762 - Gas in multi-occupancy buildings
- IGME/UP/4 Edition 4 - Commissioning of gas fired plant on industrial and commercial premises

Other IGEM guidance documents and technical standards to be followed were relevant.

11.6.0 Gas Pipework

11.6.1 The installation will be designed to cover the general principles of gas system design including, pipe sizing, pressure losses, protection, pipe routing and supporting, operational demands, isolation and industry applications. Calculations and a pipe line

drawing will be produced showing pipe routes and all emergency control valves; section isolation valves primary and secondary meter positions.

11.6.2 The designer will ensure that the primary meter has the capacity to supply the maximum duty of the installation and any future extension. The required number of valves will be provided at various locations in the gas supply, for emergency purposes, section isolation, appliance isolation, flow trimming, burner isolation and meter control. Valves may be manually operated or automatic.

11.6.3 Additional Emergency Controls which are manually operated shall be clearly marked with ON / OFF directions and must be readily accessible. The operating lever or hand wheel must be securely fixed. In pipework less than 50mm bore a plug or ball valve is advised, and for 50mm and above a double seal gate-valve is recommended.

11.6.4 In areas where there is a high risk of vandalism or risk of a valve being inadvertently left open (i.e. kitchens, laboratories and workshops) Automatic Isolation Valves may be considered. (AIV's). When an AIV is selected it is vital to ensure that when re-energising a supply following valve closure that gas cannot inadvertently escape from an open control or unsupervised burner. If the risk exists then the AIV system must be either self-proving or require manual intervention together with the provision of a clear warning/instruction notice detailing re-instatement procedure.

11.7.0 Gas Meters

Consultation must be carried out at the initial stages of building design and planning for the designer / contractor to ensure that the proposed meter installation is capable of providing a gas supply adequate for the immediate needs of the proposed gas system and appliances and meet the University specification of type of meter.

This section applies to all Natural Gas installations not exceeding 20mb operating pressure and LPG fixed tank installations not exceeding 37mb operating pressure from the Emergency Control Valve (ECV) to the appliance installation, including chimney and ventilation requirements. It is inclusive of all pipework, valves and controls. It covers the design, construction and installation of gas systems but also applies during operation, decommissioning and demolition.

12.0.0 MAINTAINING AND UPDATING THE GAS ASSET REGISTER

12.1.0 Purpose

This procedure describes the methods used and documentation employed in ensuring that the gas asset register is current and reflects the status of all gas systems, controls and appliances within sites and premises that are the responsibility of the University. The gas asset register will identify the gas systems, components and locations inclusive of all emergency controls, meters and equipment. This will contribute towards a robust maintenance and service regime of all components of fixed gas systems.

12.2.0 Scope

12.2.1 For the purposes of this procedure assets are classified as all fixed pipework including emergency controls (ECV), additional emergency controls (AECV), section isolation valves (SIV) all primary and secondary meters used for metering or accounting purposes, mechanical extract systems, warning and detection systems, fixed gas appliances and equipment. This will also include any LPG systems and equipment supplied from fixed storage vessels.

12.2.2 Portable gas fittings, and appliances such as:

- temporary heating supplied with gas from a cylinder,
- leisure equipment,
- temporary catering facilities,

Contractor supplied site facilities such as, wash rooms/showers, offices, security cabins and rest rooms etc., brought onto the university site and intended for temporary use will NOT be considered assets unless such portable appliance are owned by the University and used by them even if for temporary purposes.

12.3.0 Procedure

12.3.1 An asset register will be maintained under the control of the Mechanical Compliance and Energy Engineer. This is available at G:\Estates\PSU\Mech Eng & Energy Team\LP Spreadsheets\Gas. A unique code identifier and location prefix will be allocated to each asset. The data base will provide a record of;

- Past and present gas safety servicing activities,
- All actions taken in chronological order including dates visited, checked / serviced,
- Repairs history , remedial actions and,
- Replacements or removals' from the register.

The data base will also profile by way of time banding the number of overdue checks and services.

12.3.2 The Asset register should contain details of:

- All Emergency Control Valves (ECV) which will be tagged with code identifiers. Location details will be recorded for emergency services use.

- All Additional Emergency Control Valves (AECV) and tagged with code identifiers. Location details will be recorded for emergency services or contractor localised isolation use.
- All primary gas meters will be tagged with code identifiers and site location recorded. Details will include meter designation (e.g. diaphragm, rotary displacement or turbine) and badged capacities. Meter by-passes will be recorded. Enclosed meter locations will include access details and key holder names will be recorded for emergency services usage.
- All secondary meters used for commissioning, accounting and check metering will be tagged with code identifiers and location details recorded. Details will include meter designation (e.g. diaphragm, rotary displacement or turbine) and badged capacities.
- Pipe line drawings will be maintained which identify pipe routes and all gas system components including any regulators, isolation valves, safety shut valves, safety interlocks, gas boosters, test and purge points and low pressure cut-offs. Drawing reference numbers and location will be held on the asset register spread sheet for reference and retrieval purposes
- All gas fired appliances will be tagged with code identifiers and location details on the asset register. The register will also record the appliance make, model and flue type applicable to that appliance.
- Specialised mechanical ventilation, extracts and flue systems will be recorded on the asset register mechanical extracts, mechanical ventilation and fan dilution systems.

12.3.3 The Mechanical Compliance and Energy Engineer will detail a maintenance and inspection regime which will be conducted annually on all appliances, and controls including checks on:

- All primary meter locations and enclosures to confirm status of asset including route to meter, ECV is free and accessible, no corrosive action or vandalism has occurred and all supporting information labels and line diagrams are in place.
- All secondary meter locations to confirm status of asset including route to meter and AECV is free and accessible, no corrosive action or vandalism has occurred and all supporting information labels and line diagrams are in place. All AECV's will be tested to ensure correct operation.
- A visual survey of the gas supply pipework will be conducted to establish if any work has been undertaken within the previous 12 months that requires alteration to site pipeline drawings and no damage has occurred which requires remedial actions. This to include any alterations to gas supply pipework or additions to or removals from the asset register.
- Visual and operational checks will be carried out on any safety shut of systems, mechanical extracts, mechanical ventilation, safety interlocks and low pressure cut offs.
- All gas fired appliances will be visually inspected by competent gas contractors to confirm that the appliance is tagged with code identifiers and the information on the asset register is correct.

12.3.4 Appliances which are removed from site due to mechanical failure or safety reasons and disposed of will retain their unique code identifiers for tracking purposes should they inadvertently avoid destruction and find their way into the wider community by

mischance. The reasons for removal and dates disposed of will be recorded on the asset register. Replacement appliances will be allocated a different code identifier.

12.3.5 The Principal Mechanical and Energy Engineer will annually canvas persons who have responsibility and exercise budgetary control over a premise and who can authorise alterations to gas systems or addition and removal of components and appliances from premises under their control. Such persons will be required to complete (Survey Form No GS1) to identify any work undertaken on the gas system including additions, removals or omissions from the asset register that they have authorised for the premises for which they have responsibility

12.4.0 Retention of Records

12.4.1 The gas asset register shall be retained on the G:/ Drive and CSU SharePoint Hub and be subject to continual review for any additions to or removals from the register

12.4.2 Pipe line drawings will be reviewed bi-annually and held on file at G:\Estates\PSU\Mech Eng and Energy Team\LP SPREADSHEETS\GAS. Any alterations to pipework, control valves or warning and detection systems must be reflected in the drawings by continual updates.

12.4.3. Minutes of the Gas Safety Group meetings will be retained by the Contract Administrator for a period of not less than 5 years.

13.0.0 GAS MAINTENANCE PROCESS

13.1.0 Purpose

This procedure describes the methods used and documentation employed in managing, monitoring and recording of the gas maintenance processes. The procedure provides guidance on the actions to be taken when maintaining records to ensure that detailed information held about the sites and properties is regularly updated on property condition, maintenance history and cycles, component remaining life details, works requested, ordered and completed, service dates, and gas safety certificates

13.2.0 Scope

13.2.1 This procedure applies to all gas appliances and gas systems managed by the DOEF which are located on the University sites and premises for which the University has responsibility. The procedure will apply to:

- allocation of gas servicing work,
- access arrangements to gas systems and appliances for servicing or responsive repairs,
- installation or removal of pipework including tightness testing and purging,
- responding to reports of fumes or gas escapes,
- parts replacements,
- processing of repairs or notification of defects
- permits to work
- complaints and,
- dealing with unsafe situations.

13.2.2 The range of work will include domestic, commercial and industrial appliances and gas systems.

13.2.3 This procedure will NOT apply to portable gas fittings, and appliances such as temporary heating and catering facilities supplied with gas from a cylinder. Contractor supplied site facilities such as, wash rooms/showers, offices, security cabins and rest rooms etc. brought onto the university site and intended for temporary use will not be considered assets unless such portable appliances are owned by the University and used by them even if for temporary purposes as detailed in Sections 14 and 15.

13.3.0 Procedure- Annual Safety Check / Service-Work Allocation.

All appliance and gas system service history details including annual inspections will be held on the Oracle Enterprise Asset Management database system/CSU records for which the Mechanical Compliance and Energy Engineer is responsible.

13.3.1 The Maintenance Services Unit Manager will ensure that resources are allocated to demands generated by responsive repairs such as out of hours calls received to the Helpdesk system and Security call outs. Remedial actions and work allocation will be decided on priority levels.

13.3.2 Anniversary dates will be allocated to assets in an equitable and cyclical fashion that enables a managed monthly programme of works to be implemented.

13.3.3 The Planned Preventive Maintenance database system will automatically generate work requests for the scheduling of gas servicing work to be allocated to the relevant person. All conclude documentation shall be made available to the Mechanical Compliance and Energy Engineer and retained in the central filing system.

13.3.4 The Assistant Maintenance Services Managers will manage attendance times and addresses/locations for the work generated and issue job cards to the gas contractors. Each work request will identify the asset by make model type and asset code identification number.

13.3.5 Allocation of emergency works involving loss of pressure or alterations to supply gas pipework will be agreed by the relevant Assistant Maintenance Services Manager after submission of a risk assessment and method statement.

13.3.6 Any repairs, re-lighting and testing of appliances outside the maintenance regime, including checking low pressure cut offs on gas boosters will be allocated and recorded on the Oracle Enterprise Asset Management system.

13.4.0 Procedure - Access (Residential And Non Residential)

13.4.1 The Assistant Services Manager responsible for residential properties will advise the general manager of Domestic and Portering services of the planned times and addresses for service and inspection of the gas appliances and gas systems in those premises identified by the Enterprise Asset Management or the existing Planned Preventive Maintenance database system for service inspections.

13.4.2 Access to the premises will be in accordance with the Directorate procedure to establish if further hazards are present therefore the appropriate risk assessment and method statement shall be provided.

13.4.3 A Permit to work may be required where maintenance work can only be carried out if normal safeguards are disabled or when new hazards are introduced by the work. Examples are entry into vessels, hot work and pipeline breaking. The Permit-to-Work procedure is located at: http://www.estates.manchester.ac.uk /services/psu/permit-to-work/ and provides a formal control system aimed at the prevention of accidents and damage to property where foreseeable. A permit should be instigated by the requester.

13.5.0 Procedure Processing Gas Safety Records.

13.5.1 Upon completion of the allocated work, the gas contractor will obtain a signature from the relevant Assistant Maintenance Services Manager or Supervisor. The Assistant Maintenance Services Manager or Supervisor will return all relevant completed gas safety records to the Contract Administrator. The Contract Administrator will ensure the issue of completed reports to the Gas Consultant who will scrutinise such records for accuracy and completeness. Where any shortfalls exist, the Gas Consultant will inform the Contract Administrator who will then contact the Gas Contractor Manager to inform them of the shortfall. then process and prioritise according to the contents, comments, recommendations and remedial actions contained within returned gas safety records.

13.5.2 Completed report forms must be appropriate for the range of work allocated. This can include but is not limited to;

- Landlord/Home Owner Gas Safety Records,
- Tightness Test and Purge Certificates,
- Appliance Installation and Commissioning Records,
- Fumes Investigation Report,

Suitable report forms are available from CORGIdirect at: www.corgi-direct.com

13.5.3 Contractors may submit their own versions of a gas safety record subject to approval by the Principal Mechanical and Energy Engineer or Mechanical Compliance and Energy Engineer acting on behalf of the University. Report forms that are not fully completed or non-compliant will be returned by the Assistant Services Manager or Area Supervisor to the person responsible for completion to alter, modify or complete in a satisfactory manner.

13.5.4 Payment may be withheld from contractors where the compliance or standard of completed report forms are judged not to be in accordance with these procedures.

13.5.5 The Assistant Maintenance Services Manager – South area will, on request provide completed domestic Gas Safety Report Forms for residences to the General Manager of Domestic and Portering services.

13.5.6 Any manager of the DOEF responsible for contracted out gas appliances and gas systems must retain all copies of any gas safety report for any appliance or gas system safety inspection they have arranged or authorised. A copy must be submitted to the Mechanical Compliance and Energy Engineer for including in the archive data base.

13.5.7 Reports of fumes investigation or CO alarm activation which result in the attendance of a gas registered contractor will entail the production of a report which will be submitted to the Contract Administrator for filing. Consideration will be given to recording the presence of any persons or symptoms suffered and any further monitoring or data logging required.

13.5.8 The Mechanical Compliance and Energy Engineer will retain records of all Annual Gas Safety checks, on behalf of the University, for five years.

13.6.0 Procedures - Responsive Repairs – Work Allocation.

13.6.1 The Maintenance Service Unit will manage the majority of “day to day” repairs of gas systems that the DOEF are responsible for.. These reporting routes for these may be:

- Remedial works or parts replacements identified by contractors as part of the normal system of planned service inspections and maintenance repairs.
- Telephone calls made to the Helpdesk which are attended in the first instance by DLO technicians.
- Out of hours emergency calls made through Security Services routed to the nominated stand-by duty response person.

Some repairs may be identified while the appliance is still under a manufacturer's warranty period or the appliance is subject to a contracted out maintenance regime. Such works will be referred to the installer/manufacture for action.

13.6.2 When a request is made all information will be logged onto the Enterprise Asset Management system to enable the job to be enlisted within a programme of works. When a request is logged onto the system it will be given a priority number to determine when the request will be undertaken. Inputting will provide the information to monitor the progress of a request until its completion.

13.6.3 There are four levels of priority; Emergency, Urgent, Essential and Routine.

The DOEF shall endeavour to clear all outstanding emergency call out repairs each day by fully utilising the normal working hours 0800 to 1530 hours Monday to Friday and 1530 to 0800 for out of hour's calls. A contractor is expected to respond to call out repairs with a Priority 01, the same day if the repair request is received before 1400 hours. The occupant will be informed when the repair will be carried out.

Priority Codes and completion periods are detailed below.

Priority Code	**Condition**	**Completion Period**
00	Emergency items of repairs Breakdown or failure repairs that seriously affect living conditions. Extreme weather conditions apply.	Within 4 hours
01	Emergency items of repairs Breakdown or failure repairs that seriously affect living conditions. Occupant has no alternative form of space or water heating during Oct to April only	Within 24 hours
02	Items of repairs that <u>do not</u> constitute a danger or health hazard. Replacement of parts required or repairs that seriously affect living conditions. Extreme weather conditions apply	Within 3 days
03	Pre-inspection of repairs required Individual central heating, hot water or immersion heater failures Replacement of parts required or repairs that do not seriously affect living conditions. Appliance under warranty period.	Within 5 days.
04	Items of repair or parts replacements that are routine and have no significant effects on living conditions.	Within 10 Days.

13.6.4 The Area Supervisor, Helpdesk Personnel or attending personnel may, at their discretion, vary the priority code and /or reduce the target completion period for a repair. The circumstances that they may take into account when varying the Priority Code and/or reducing the completion period include but are not limited to the following:

- When a repair is ordered towards the end of the week and the delay added by the weekend and any bank holiday would be unreasonable;
- Where the delay would make the problem progressively worse;
- The vulnerability of the occupants (eg children under 5 years, adults over 60 years, persons who are unwell or have a disability or other special needs).
- The nature of the defect and its impact or potential impact (e.g. risk to life or safety,
- damage to the dwelling, serious inconvenience to the occupants

13.6.5 Works or replacement parts received as a part of normal planned routine maintenance activities will be recorded as remedial actions on returned gas safety reports and job numbers allocated and vouchers raised as per Clause 13.3.5. The Area Supervisor will allocate resources and decide priority rating before distribution to the contractor for action.

- Where there are serious or repeated persistent problems the repair history will be consulted to assist with diagnosis and to avoid wasted effort through unnecessary repeated inspections.
- Specialist advice will be called in where needed.

13.6.6 Where repair requests are received via the Helpdesk via telephone calls the details of the defects will be recorded onto the Oracle Enterprise Asset Management system and job numbers allocated by Helpdesk Personnel. Area Supervisors will be informed by Helpdesk personnel of repair request details. The Area Supervisor will determine appropriate actions and allocate work order to appropriate personnel as detailed in Clauses 13.6.2 and 13.6.3 above.

13.6.7 Maintenance Staff will operate an 'on-call' duty roster. Out of hours emergency calls will be routed through to Security Services who will contact the on-call supervisor by mobile phone. A log will be maintained by Security Services to record all out of hour's calls including caller details, reason for call and time of call. Security Services staff will follow procedures laid down in Section 18 – Gas Related Emergencies.

13.6.8 Job reports will be submitted to the relevant Assistant Maintenance Services Manager for inputting onto the Oracle Enterprise Asset Management system identifying nature of call out, actions taken and further remedial actions as required. Further remedial works and work orders will be generated and monitored as indicated in these procedures.

13.7.0 Procedure - Access Responsive Repairs

13.7.1 For 'out of hours' emergency calls Security Services will ensure access for attending personnel who will affect an emergency repair, the aim of which is to make safe. After making safe, arrangements will be made by the Area supervisor to complete the repair within the appropriate timescale as set out within this section. The Area

Supervisor will allot a priority code to the repairs and arrange a suitable appointment time for any further repairs or parts required.

13.7.2 Responsive repair calls received during normal working hours from whatever source will be logged via the Helpdesk onto the Oracle Enterprise Asset Management system. The Area Supervisor will allocate and manage the resource required. Helpdesk will respond to the caller advising the caller of the technician/contractor estimated attendance time for entering a property to assess or complete the required repair.

13.8.0 Responsive Repairs Processing Gas Inspection Work Orders

13.8.1 All Work Orders will be returned to the Contract Administrator for scrutiny and processing.

13.8.2 Any follow up remedial actions, monitoring, advice or other appropriate preventative measures will be decided by either the Contract Administrator or the Principal Mechanical and Energy Engineer or the Mechanical Compliance and Energy Engineer dependent upon the facts which contributed to the failure or reason for call out.

13.9.0 Void Properties

13.9.0 The University has responsibility for properties on leasehold agreements which may be re-let and have periods when they are void prior to being re-let. Technical checks are to be undertaken at the end of the lease agreement and start of a void period and to be undertaken prior to recommencement of the new lease by the new leaseholder.

13.9.1 The premises responsible person must notify the Estates Surveying Unit of any termination of a lease agreement resulting in a period of void occupancy prior to re-letting and or the Client Services Unit regarding any locked off areas.

13.9.2 The Contract Administrator following approval from the Estates Surveying Unit will arrange with the suitably qualified gas contractor to attend and "make safe" the gas appliances within the property to prevent dangerous situations caused by vandalism or misuse.

13.9.3 The gas contractor will;

- Carry out a visual survey of the appliances and property to identify any obvious remedial works required to the gas installation, appliance controls, fluing or ventilation requirements.
- Insert a blanking disc in the gas meter,
- Leave a warning label on the meter which states that the Installation/appliances require to be safety checked prior to reinstating the gas supply,
- Complete a gas work record identifying the work carried out and any remedial actions that may be required and submit to the Contract Administrator. A copy should also be held on record by the Estates Surveying Unit

13.9.4 The Contract Administrator will file a copy of the gas work record and provide a copy to the Mechanical Compliance and Energy Engineer. In addition, record the property void details on the Oracle Enterprise Asset Management system

13.9.5 For a commercial lease agreement the responsible person must notify the Estates Surveying Unit, the Contract Administrator and the Mechanical Compliance and Energy Engineer of the commencement date of a new lease agreement which will end the void period. The lease holder will be responsible for all safety checks and any planned alteration to the gas installation.

13.9.6 For residential properties the Contract Administrator will arrange with the suitably qualified gas contractor to attend and "safety check" the gas installation and any appliances within the property.

13.9.7 The gas contractor will remove the blanking disc perform a tightness test and inspect and perform a safety check on all gas appliance and associated flues contained within the property as detailed in Section 9 of this document. Remove any warning labels if the system is safe to use and will advise the incoming leaseholder of any manufactures operating procedures and safe operation of the gas appliances. The gas contractor will complete all relevant gas safety documentation and pass to the Area Supervisor for filing and retention on the Enterprise Asset Management system.

13.9.8 If any faults are identified requiring remedial actions the contractor will comply with Section 16 - Unsafe Situations and advise the Area Supervisor accordingly.

13.9.9 Where new gas appliances are to be installed by the leaseholder they must inform the Mechanical Compliance and Energy Engineer of any alterations to the gas installation the type of appliances to be installed.

13.9.10 Prior to installation the relevant Project Manager will request details of any contractor installing any appliances in the leaseholder's property and confirm that the contractor is gas qualified to the Mechanical Compliance and Energy Engineer. Once confirmed permission will be granted to proceed with the installation.

13.9.11 Once installation is complete the Project Manager will obtain from the contractor evidence that commissioning procedures have been recorded and manufacture's operating instructions have been left with the leaseholder.

14.0.0 CATERING FACILITIES

14.1.0 Introduction

This procedure describes the methods used and documentation employed in the management, servicing and maintenance of fixed catering facilities utilising natural gas and the provision of LPG fuelled appliances imported for temporary catering facilities employed in the operation of conferences and events at the University.

14.2.0 Scope

This Procedure covers the use, maintenance and servicing of all fixed catering facilities, and the importation, safe installation, use and retrieval from site of LPG fuelled appliances which may be imported onto any university premises as temporary LPG catering equipment used for outdoor events including conferences and social functions. The scope will be dealt with in 3 parts as follows:

- Maintenance and servicing of fixed catering equipment fuelled by Natural Gas
- Preventative maintenance measures to be employed on kitchen ventilation and extract systems.
- Procedures to be followed when planning outdoor events involving the provision of temporary catering facilities and mobile catering vehicles for temporary heating purposes.

14.3.0 Responsibilities

14.3.1 The DOEF is responsible for the provision of catering, the marketing, sale and operation of conferences and events at the University. As such the DOEF has responsibility for gas safety issues relating to the contract management and employment of suitably qualified gas contractors to install, service or maintain in a safe condition all fixed natural gas fuelled catering equipment contained in kitchens or premises and any temporary LPG catering equipment.

14.3.2 The DOEF will ensure that suitable and sufficient risk assessments are completed prior to importing transportable gas for supplying temporary catering facilities supporting events and conferences.

14.3.3 The Mechanical Compliance and Energy Engineer will ensure that fixed catering facilities are inspected / tested annually and relevant documentation is submitted and inspection results entered onto the asset database.

14.3.4 Users of fixed catering equipment will be responsible for lighting and undertaking safety checks at the beginning and end of each day and the maintenance and cleaning of grease traps in ventilation and extract systems.

14.3.5 Event Managers will, where the use of temporary LPG appliances and LPG cylinders are involved, be responsible for carrying out an appropriate risk assessment, preparing clear guidance on emergency procedures to cover the possibility of leakage or fire, and damaged appliances or cylinders. They will issue a safe system of work and ensure all staff is trained in its use and the procedure is implemented.

14.3.6 Contractors will be responsible for ensuring that operatives are competent in servicing and maintaining catering equipment fuelled by either Natural Gas or Liquefied Petroleum Gas (LPG). They must comply with the requirements of BS 6173; such work will include equipment using natural gas or LPG. For kitchen ventilation systems they must refer to the Regulatory Reform Fire Safety Order (RRFSO) and TR/19 HVCA Guide to Good Practice - Internal Cleanliness of Ventilation Systems. Reference must also be made to Gas Safe Technical Bulletin 140. All work carried out must take into account the guidelines of the Food Hygiene Regulations to prevent contamination and any gas operative must wear any clothing or comply with any preventative measures as required by the Catering Managers.

14.4.0 Procedure Fixed Catering Equipment Fuelled By Natural Gas

14.4.1 The Contract Administrator will plan the annual service inspections and contact the Compliance Manager-Food Safety to advise of planned times for annual inspections and inform the Gas Contractors of requirements.

14.4.2 The Gas Contractors **shall** contact the Compliance Manager-Food Safety to arrange access times around the working hours of the kitchen.

14.4.3 The Gas Contractor shall ensure that operatives have the correct equipment to carry out all tests as required. All gas safety inspection documentation must be specific to commercial catering appliances and provide evidence of checks on the ventilation / exhaust system and a risk assessment of any ventilation interlock that does not comply with current standards.

14.4.4 Gas Contractor's Operatives will carry out gas safety inspections on all gas fired catering equipment and must ensure the inspection is in accordance with all relevant legislation..

14.4.5 Natural make up air provision, if there is no practicable alternative, shall incorporate a filter or at least a vermin screen to comply with Food Hygiene Regulations.

14.4.6 All documentation will be returned to the Contract Administrator who will implement quality control checks on the documentation and works carried out as detailed at Section 17 (Quality Control Audit Programme).

14.4.7 The Contract Administrator will discuss findings at the monthly contractors meetings and report findings/results to the quarterly Management Review Meeting.

14.5.0 Preventative Maintenance on Ventilation & Extract Systems in Kitchens.

14.5.1 The Compliance Manager-Food Safety will ensure preventative maintenance measures are carried out to prevent the clogging up of grease filters which may result in the failure of the ventilation system allowing the escape or dispersal of combustion products to atmosphere which may cause harm to kitchen staff. The preventative measures will also take into account the possible failure of gas safety controls and interlocks or fire hazards due to grease or cooking oil build up.

14.5.2 A suitable record of the examination and test should be kept for a minimum of 5 years from the date on which it was made and will be presented to the Mechanical Compliance and Energy Engineer.

14.5.3 The Compliance Manager-Food Safety will ensure the Food Hygiene (England) Regulations are complied with which include the cleaning and maintaining of ventilation canopy, filters and ducting. There is also an obligation to assess the risk of fire due to the excessive build-up of cooking oil deposits and grease residue. The Compliance Manager-Food will ensure that:

- The canopy, filters and internal ducting is to be checked for maintenance issues weekly and the entire ventilation must be checked annually by a competent person.
- The complete installation must be thoroughly cleaned dependant on the cooking oil, fuel and level of use as indicated below.

Level of use	**No of Hours per day**	**Frequency**
Heavy	12-16	3 Monthly
Moderate	6-12	6 Monthly
Light	<2-6	11Monthly

14.5.4 The Compliance Manager-Food will keep records of the cleaning undertaken and will provide the Mechanical Compliance and Energy Engineer with copies of such, when requested..

14.5.5 Users of catering equipment must be trained in the safe operation of gas appliances and correct method of cleaning the ventilation canopy and filters.

14.6.0 Temporary Catering Facilities and Mobile Catering Vehicles

14.6.1 General guidance when planning an outdoor event can be found at the Chartered Institute of Environmental Health publication "National Guidance for Outdoor and Mobile Catering" which identifies it as a high risk activity due to the large numbers of people that may frequent such an event. Reference can also be made to The Liquefied Petroleum Gas Associations Codes of Practice, "The use of LPG in Mobile Catering Vehicles and Similar Commercial Vehicles" (200 COP 24 Pt3) and "The use of LPG for Catering and Outdoor Functions" (1999 COP 24 Pt4).

14.6.2 The Estates and Facilities events team must ensure a risk assessment is carried out which considers the use of heavier than air gases and the danger of fire or gas escapes.

14.6.3 It is a legal requirement to have all mobile catering vehicles gas equipment inspected by a Gas Safe registered operative annually.. All operators of mobile catering vehicles must submit a current gas safety certificate prior to permission to attend any event.

14.6.4 It is not normal university practice to use gas appliances in field kitchens for marquees, tents etc. However if LPG appliances are used and comprise anything more than a single appliance connected to a cylinder via the hose and cylinder it requires the services of a Gas Safe operative to:

- certify that the appliances are up to standard,
- to install the appliances and supply pipework,
- test the installation, make sure it is safe to use,
- Issue relevant certification.

14.7.0 Use and Storage of LPG Cylinders

14.7.1 Guidance on safe practice in storing and handling LPG cylinders is given in HSE Guidance Note CS4. The following must be complied with in the transportation, use and storage of LPG cylinders on the University campus.

- LPG gas cylinders are to be properly restrained where in use, being stored or being transported.
- No LPG gas cylinders' are to be used or stored in basements, cellars or rooms below ground level
- Only minimum practical quantities of LPG are to be kept and used in buildings.
- All cylinders used by contractors for any work or industrial process to be removed from premises to an externally located safe and secured storage stage area at the end of the working day.
- Empty and filled cylinders must be stored in separate areas.
- Safe manual handling procedures are to be followed in the unloading, loading, transport and storage of full or empty cylinders at all times.

What about reports of Carbon monoxide poisoning, training staff how to respond to a gas escape, failure of a gas ventilation system?

15.0.0 TEMPORARY HEATING APPLIANCES

15.1.0 Introduction

This procedure describes the methods used and documentation employed in the management, servicing and maintenance of temporary heating appliances utilising LPG. Where they are to be used there is a need to consider the fire, explosion and toxic risks associated with the use of temporary fuel sources.

15.2.0 Scope

This Procedure covers the use, maintenance and servicing of LPG fuelled temporary heating appliances, the importation, safe installation, use and retrieval from any university premises as a temporary heat source.

15.3.0 Procedure Use of Temporary Heating Appliances Fuelled by LPG.

15.3.1 It is not normal practice to use LPG fuelled temporary heating appliances in university buildings. However where the need arises for the use of portable heaters the responsible person for the building will contact the Maintenance Services Unit Manager to advise on the, location, usage and type of heat source required or being considered.

15.3.2 The Maintenance Services Unit Manager will ensure persons hiring equipment will only hire from an approved company. The supplier must have adequate facilities to ensure proper maintenance. The manufactures or suppliers instructions will be requested and made available to the users of the equipment.

15.3.3 Due to its different properties to Natural Gas only persons deemed competent in the area of LPG will be allowed to work on these types of appliances. The Maintenance Services Unit Manager can delegate inspection services to such persons who will be responsible for carrying out a risk assessment ensuring the safe siting and operation of temporary LPG heat sources. For example, large industrial mobile heaters fuelled by 47kg propane cylinders may be suitable for large open areas such as sports halls but not when premises are being occupied for educational purposes or laboratories using flammable or explosive substances. Account must also be taken of any work activity that may occur which involves use of materials that give off flammable vapours. Where a safe location cannot be identified an LPG heater should **not** be used.

15.3.4 An LPG qualified competent person will examine the temporary LPG equipment prior to use to ensure that specific items such as flame failure devices (FFD), atmosphere sensing devices (ASD) regulators and hoses are safe to use.

15.3.5 The competent person will also check ventilation requirements and advise premises managers and users on the dangers associated with a heavier than air gas in the event of a gas escape without fire. They will also offer guidance to users on safe operation and lighting procedures appropriate to their responsibility.

15.3.6 Each heater brought in for use in an emergency, but not limited to should:

- Be located so as not to affect the means of escape and not in corridors or circulation spaces forming part of the means of escape and not exposed to draughts.

- Have at least one metre of clear space around it and no curtains or other combustible space within the one metre space.
- Fire guards fitted to prevent contact with hot surfaces.
- Not be located in basements or cellars.

15.3.7 Users of LPG appliances will be trained on lighting and control measures. Each heater will be checked for leaks and damage before lighting each morning. Checks must include:

- Visual examination of hoses
- No evidence of damage or tampering and no evidence of leakage.
- At the end of each working day the nominated user will ensure the main cylinder valve is turned off to prevent the escape of gas.

15.3.8 No appliance will be moved from its approved position without permission and a competent person will be assigned to approve the new position.

15.3.9 All users will be issued with written procedures in the event of fire or gas escape from the area manager and fire officer.

15.3.10 Only a suitably trained person will change LPG cylinders. An LPG competent person will carry out a weekly inspection of the appliances.

16.0.0 DEALING WITH UNSAFE SITUATIONS

16.1.0 Purpose

This procedure describes the process for identifying risk and carrying out appropriate procedures when dealing with any unsafe situations related to gas appliances or gas installations which are identified by gas contractors when carrying out gas installation, service maintenance or commissioning work on premises for which the University assumes responsibility.

16.2.0 Scope

The procedure is based on the requirements of The Gas Industry Unsafe Situations Procedure which is published by Gas Safe as Technical Bulletin 001 and is relevant to all existing or new installations and appliances for 1st, 2nd, and 3rd family gases installed in both domestic and non-domestic premises. It will apply to all gas contractors and management staff of the DOEF.

16.3.0 Procedure Dealing with Unsafe Situations

16.3.1 Any contractor carrying out work who becomes aware of an unsafe or potentially unsafe installation / appliance as defined in Clause 16.2.0 during the course of that work must inform the Assistant Maintenance Services Manager, whether or not work is being carried out on that appliance. Refer to Clause 16.4.0 of this procedure for contractor risk classification process.

16.3.2 The Maintenance Services Unit Manager and/or the Principle Mechanical and Energy Engineer may, due to the nature of the types of installation (Non-Domestic) contained within the University, deviate from the Industry Unsafe Situations procedures and allow appliances to remain on when advised of an unsafe situation by a gas contractor provided a suitable and sufficient risk assessment is carried out. Refer to Clause 16.5.0 for risk assessment process when deviating from this process. In this event the gas contractor will discharge his responsibilities to the University.

16.3.3 Upon report of an unsafe situation the Maintenance Services Unit Manager or the Principal Mechanical and Energy Engineer shall request details of the unsafe situation, sign copies of the warning notice and consider appropriate actions.

16.3.4 Copies of all Warning Notices and relevant documentation for the risk assessment will be retained by the Contract Administrator.

16.3.5 Where a gas operative identifies an unsafe situation on a gas installation or gas appliance or associated flue which is owned or maintained by the University and which is reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR) reports of dangerous gas fittings, a report / information must be produced / provided by the gas contractor to allow the Head of Safety Services to complete a RIDDOR report form and report such to the relevant statutory body.

16.3.6 The Contract Administrator will attend monthly contractors meeting to discuss any Warning Notices raised, evidence submitted, remedial actions undertaken and close-out actions implemented.

16.3.7 All records are to be kept for at least 6 years to cater for possible future civil litigation.

16.4.0 Risk Classification Process

16.4.1 Gas competent operatives are required by law to categorise both unsafe i.e. Immediately Dangerous (ID) and At Risk (AR) situations. Where such situations are identified the contractor gas operative will complete a warning notice attach it to the appliance and with either the Maintenance Services Manager or the Principal Mechanical and Energy Engineer permission isolate the appliance or gas installation until remedial actions are undertaken. The gas operative shall also complete the HSE Form HSE 2508/G2 – Report of a Dangerous Gas Fitting.

16.4.2 The contractor must notify via e-mail or telephone and issue a copy of the warning notice to the relevant Assistant Maintenance Services Manager and the Contract Administrator.

16.4.3 Once notified of, or issued with a Warning Notice, the gas appliance/installation must not be used until remedial works are carried out.

16.4.4 Where the "responsible person" considers maintaining the gas appliance/installation for operational reasons then they must follow the documented risk assessment process as detailed in Clause 16.5.0

16.5.0 Risk Assessments when Deviating from Unsafe Situations Procedures

16.5.1 The guidance contained in the Gas Industry Unsafe Situations Procedures is not exhaustive and gas operatives must exercise sound engineering judgment to their actions within their area of competence and where there is doubt seek further guidance from the Maintenance Services Unit Manager or the Principal Mechanical and Energy Engineer.

16.5.2 Where dealing with deviations from the actions advised in the Gas Industry Unsafe Situations Procedure (Gas Safe Technical Bulletin 001) the Maintenance Services Unit Manager or the Principal Mechanical and Energy Engineer should complete a suitable and sufficient risk assessment to determine a safe course of action following the identification of an unsafe situation.

16.5.3 The risk assessment may consider that immediate shut down of large gas installations can produce its own risk from gas pressure loss in the system that may require complex testing and purging procedures to re-instate. Any risk assessment may conclude that a gas fired appliance and /or installation may remain in use provided that additional safety measures utilised would provide a level of assurance..

16.5.4 In all cases the contractor operatives must keep accurate documented records of tests and /or checks completed

16.6.0 Retention of Records

Copies of HSE form 2508/G2 shall be retained for a period of not less than 5 years.

17.0.0 QUALITY CONTROL AND AUDITING

17.1.0 Purpose

16.0.1 This section describes the DOFE arrangement in relation to the monitoring of gas processes, procedures and related gas work undertaken within all University Properties.

16.0.2 The DOEF will ensure with a risk based approach that all gas related works undertaken within all sites are as safe as practicable. The audit programme will ensure a consistent approach to safety and monitor performance using both document monitoring, post work inspections and in progress checks.

17.2.0 Scope

17.2.1 Audits will be undertaken on all areas of work undertaken by contractors responsible for the installation, servicing or maintenance of gas installations and associated controls within properties for which the DOEF has responsibility. The inspection process will include works in progress, post work and any associated document checks deemed necessary.

17.2.2 Contractors will be required to develop and undertake their own Quality Control programme, evidence of which will be provided at the monthly contractors meetings. The DOEF will undertake their own Auditing to compliment that of the contractor.

17.2.3 In addition to Auditing the gas contractor the DOEF shall be subject to office audits during which the processes contained within this document shall be audited annually to ensure continued accuracy and compliance The audits will take the form continual system monitoring and a six monthly Internal audit followed by an independent external audit every 12 months to ensure compliance.

17.3.0 Procedure

17.3.1 The DOEF will by using competent staff or employing specialist third party auditors, where practical, undertake quality control audits on gas contractors utilising a number of formats which will include:

- Post Inspection Audits - Inspection of works where practicable following completion, audits will be undertaken of a sample of the works being completed, the quality of workmanship and safety of the installation / equipment will be checked where practicable.
- In Progress Audits – Sample assessment of the gas operative whilst the works are in progress, the operative will be checked for safe working practices, workmanship and good customer interaction.
- Document Checks – sample documents such as Landlords Gas Safety Records, Tightness Test Certificates and Commissioning Sheets will be checked to ensure legibility and accuracy by the gas specialist. All certificates shall be provided to the Assistant Mechanical and Energy Engineer.

17.3.2 Quality control audits will be undertaken on a number of gas work including maintenance of gas appliances both domestic and commercial, repair work following breakdowns or remedial operations. New installations, where practical, will be

inspected to ensure the quality of workmanship and adherence to current standards before the installation is accepted by the University.

17.4.0 Arrangement

17.4.1 The University do not employ direct labour staff to undertake work upon gas installations / appliances.

17.4.2 Project Managers will make available if required contract and sub-contract staff to undergo an in progress audit carried out by University or specialist gas consultants, where deemed appropriate.

17.4.3 Quality control audits of contractors shall be recorded, documented and passed to the Contract Administrator.

17.4.4 Audits of documents relating to gas installations shall be passed to the Principal Mechanical and Energy Engineer. Corrective actions will be undertaken within two months of them being raised; corrective actions shall be confirmed by the auditor and recorded as completed.

17.5.0 Implementation

17.5.1 The Principal Mechanical and Energy Engineer will implement these procedures and ensure all sections contained within are adhered to as far as is reasonably practicable.

17.5.2 Planning and auditing of this process will be carried out by the Client Services Unit staff.

17.5.3 The Maintenance Services Unit will maintain appropriate records of all works carried out by contractors.

17.5.4 It shall be the responsibility of the Mechanical Compliance and Energy Engineer to ensure that any non-conformances and corrective actions are closed out within agreed time scale as previously identified.

17.5.5 An annual review of the audit results shall be carried out by the Principal Mechanical and Energy Engineer and where necessary the audit check sheets and procedures adapted to ensure a consistent quality approach.

17.6.0 Auditor Qualifications

17.6.1 Due to 'Post Completion' audits being full / intrusive and because of the level of work required during the audit the auditor must be Gas Safe Registered and competent in the areas of work undertaken. (See Section 8 of this procedures manual).

17.6.2 Auditors observing 'Work in Progress' audits need not be Gas Safe Registered but they will be competent in the areas of work being undertaken by the gas operative.

17.6.3 Staff undertaking document checking need not be Gas Safe Registered or competent but shall have undergone training and have a pre-designed checklist for reference.

17.7.0 Responsibility

The overall responsibility for effective implementation of the audit lies with the Principal Mechanical and Energy Engineer.

17.8.0 Review

On behalf of the DOEF, the Client Services Unit will formally review this arrangement on an annual basis.

18.0.0 GAS RELATED EMERGENCIES

18.1.0 Purpose

18.1.1 This procedure describes the methods used and documentation utilised when dealing with gas related emergencies, including gas escapes, actual or suspected, emissions of fumes from gas appliances, activation of CO alarms, fires or explosions (where gas is suspected to be involved) or other similar gas related emergencies, are reported to any university employee. These reports should be actioned irrespective of whether the gas related emergency is on university premises or elsewhere.

18.1.2 This procedure is intended to deal with reports of gas related emergencies including where the report has been inadvertently misdirected to The University rather than to the National Gas Emergency Call Centre.

18.2.0 Scope

This procedure is to be applied in the event of any smell of gas or reports of fumes being detected / reported within University property or on University grounds. The procedure should be followed by all staff, students, contractors and members of the public.. Reports should be made via the Helpdesk which is operational from 8.00am to 4:00pm Monday to Friday, except Bank Holidays. Outside these hours emergencies should be reported to Security Services who will activate the out of hours call service.

18.3.0 Procedure - Dealing with Reports of a Gas Related Emergency

18.3.1 Whenever a gas related emergency is identified by any persons whilst at the University, information shall be provided to assist in completing the Gas Works Procedures Form - Gas Escape / Fumes / Fire /Explosion / Etc. (Form GE 1). This form serves as an 'aid-memoir' to ensure all the necessary information required is obtained by the Security Services or Helpdesk personnel who will, in accordance with Form GE 1, confirm that adequate safety information, where practical, has been passed onto the person reporting the gas related emergency. This form is available at the following location: G:\Estates\PSU\Mech Eng and Energy Team\LP SPREADSHEETS\GAS

18.3.2 Examples of gas related emergencies that should be reported to the National Gas Emergency Call Centre includes:

- any gas escapes / reports of gas escapes (suspected or actual),
- suspected emissions of fumes from gas appliances,
- fires or explosions (where gas is suspected to be involved),
- damaged gas pipes,
- fluctuating gas supplies.

18.3.3 The member of staff receiving a report DIRECTLY shall in ALL cases give the person making the report the following safety advice:

- TURN OFF the gas supply at the emergency control valve, normally adjacent to the gas meter, except where the valve is not accessible (i.e. in a cellar, locked meter cupboard) or where there is also a smell, when the advice should be NOT to enter but to vacate the premises.

- TURN OFF all appliances suspected of having a gas escape / emitting fumes if safe to do so (CO may be present).
- OPEN doors and windows to ventilate the property and help disperse any gas fumes.
- DO NOT turn electrical switches / appliances on or off.
- DO NOT smoke; use naked flames, mobile phones or any other potential means of ignition.
- DO NOT use any door entry systems to allow person's access to the property, open them manually.

Confirmation that this advice has been given shall be made by inserting a tick in the box alongside each point on Form GE 1

18.3.4 The University incorporates some buildings which include an array of chemicals and substances which often are often confused for natural gas. In these instances, a procedure will be incorporated to include the attendance of the Shift Plant Operators, who are available 24hr a day, to measure the environmental conditions therefore minimise potential false call outs of the Gas Emergency Call Centre. The procedure will include the use of gas analysis equipment to establish the environmental conditions therefore adequate training shall be afforded to the Plant Operators to ensure they are fully competent to conclude the task.

18.3.5 All available details collated by staff must be passed to Security Services on 0161 306 9966 (Found on the back of all Student/Staff ID Cards), or Helpdesk on 0161- 27 - 52424, who will immediately contact the relevant Shift Plant Operator/Residences Supervisor or Gas Competent Contractor and report the incident. In the event the reported gas escape is in accordance with Clause 18.3.4, the associated procedure will apply.

18.3.6 Under appropriate circumstances, at by direction from the Maintenance Services Unit Manager or the Principle Mechanical and Energy Engineer, the information will be passed to the National Gas Emergency Call Centre on 0800 111.

18.3.7 The date and time the gas related emergency was reported to the National Gas Emergency Call Centre shall be recorded and their Job Reference number noted on Form GE 1.

18.3.8 In the case of a MISDIRECTED gas related emergencies being inadvertently reported for premises NOT owned by the University, advice will be given to contact the National Gas Emergency Call Centre on 0800 111. In addition paragraphs 18.3.1 to 18.3.7 of this sub-section shall still be followed in their entirety.

18.4.0 Procedure Processing Gas Works Procedure Form GE 1.

18.4.1 Form GE 1 shall be signed by appropriate Senior Manager to verify that it has been checked then forwarded to the Contract Administrator with a copy to the Mechanical Compliance and Energy Engineer.

18.4.2 On receipt by the Mechanical Compliance and Energy Engineer, the Form GE 1 shall be checked for completeness and filed. In the case where a problem on completion of the form is highlighted, the Mechanical Compliance and Energy Engineer should contact the appropriate member of staff to inform them of the problem to help avoid possible re-occurrences.

The Contract Administrator will raise the issue of the GE 1 at the monthly contractor meetings.

18.5.0 Reporting under RIDDOR

18.5.1 Certain gas related incidents also need to be reported under RIDDOR. These are incidents that have caused fatal or major injuries, for example unconsciousness or the need for hospitalisation for more than 24 hours, to gas consumers. The death or injury may be as a result of either the acute symptoms of carbon monoxide poisoning or the effects of gas escapes and any associated fires or explosions. For CO exposure the relevant major injury conditions are:

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

18.5.2 The HSE must be **immediately** notified of such incidents and a report of the gas related incident should be completed on a 'Report of Gas Related Injury; form (ref. 2508/G1) available from the HSE Website. The University has a process in place where all RIDDOR reported incidents which occur to a member of staff / student / member of the public are reported through Safety Services.. The Head of Safety Services or his team will liaise with the relevant persons to ensure that the information provided to the Regulator is accurate and provided in a timely manner

18.5.3 The responsible person **must** ensure that any gas operatives who are called to, or encounter a gas related incident, secure the incident scene and preserve any forensic evidence. If the Gas Emergency Service is not on site they should immediately contact the Gas Emergency Service Call Centre and inform them of the incident.

18.5.4 The responsible person **must not** allow any remedial works to be undertaken in a property where there has been a recent gas incident, until the responsible person has obtained permission from the HSE. No remedial work should be carried out until the HSE have confirmed that their investigation is complete.

18.6.0 Retention of Records

18.6.1 Copies of the Gas Escape / Fumes / Fire / Explosion / etc. Report (Form GE 1) shall be retained for a period of not less than 5 years.

18.6.2 Electronic 'Records of Form GE 1' files shall be retained for a period of not less than 5 years.

18.6.3 Copies of HSE form 2508G1 shall be retained for a period of not less than 5 years.

APPENDICES

Appendix A Gas Standard Operating Procedures

Appendix B GE 1 – Gas Escape / Fumes / Fire / Explosion Report

Appendix C HSE 2508/G1 - Report of Gas Related Injury

Appendix D HSE 2508/G2 - Report of a Dangerous Gas Fitting

EPM HS17 -APPENDIX A GAS STANDARD OPERATING PROCEDURES

This Revision: Rev 1
Date: Sept 2016

1. Introduction

This procedure describes the standard methods and procedures used when carrying out service and maintenance work on relevant appliances found within the University premises. Regardless, all service and maintenance work shall be carried out in accordance with the manufacturer's recommendations, relevant ACOP's British Standards and industry best practice.

2. Scope

The standard methods and procedures described shall apply to the following equipment:

2.1 Gas Installation Pipework

2.2 Gas Fired Central Heating and Hot Water Boilers and System (including independent water heating appliances). Including the following appliances:

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

or any combination thereof fitted with any type of flue system.

2.3 Domestic Gas Fired Cooking Appliances. Including the following appliances:

- Free standing cookers.
- Built-in hotplates.
- Built-in Ovens.
- Independent grills.

or any combination thereof.

2.4 Gas Fired, Direct and Indirect, Forced Convection Air Heaters and System. Including the following appliances:

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

or any combination thereof fitted with any type of flue system.

2.5 Gas Fired Overhead Radiant Heaters and Systems. Including the following appliances:

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

or any combination thereof fitted with any type of flue system.

2.6 Gas Fired Catering Appliances and Allied Equipment. Including the following appliances:

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

or any combination thereof.

3. Procedures

The following procedures shall be followed when undertaking gas related work;

3.1. General Work on Gas Appliances

Following any work, however minor, on a gas appliance the gas operative shall carry out a safety check of the appliance including the following checks:

a) The effectiveness of any flue.

b) The correct supply of combustion and ventilation air.

c) The operating pressure or heat input or, where necessary, both.

d) The appliance operation so as to ensure its safe functioning.

More detailed requirements are to be found later in this section.

3.2. Testing Central Heating Systems

Where work has been carried out to a central heating system or part of the system, the Operative shall fully test the installation and commission the complete Works. Included in the testing and commissioning shall be the following general items:

a) Thoroughly flush systems with clean cold water.

b) Thoroughly flush the system, or appropriate part of the system, with clean cold water.

c) When a gas supply has been interrupted it must be re-tested in accordance with the appropriate standards and the requirements of this specification.

d) Re-commission and safety check the appliance in accordance with the appropriate standards and the requirements of this specification.

e) Thoroughly flush the system, or appropriate part of the system, with hot water.

f) Refill, completely vent all high level points and radiators and hydraulically test.

g) Add the correct dosage of corrosion inhibitor where applicable.

h) Instruct the site responsible person in the proper and safe working of the systems and hand over all manufacturers literature provided with each boiler, pump, thermostat and programmer intended for user's instructions. The instruction shall be contained in a plastic sachet and shall include at least one radiator vent key.

More detailed requirements for safety checking installations and appliances are to be found later in this section.

3.3. Safety Checks of Relevant Gas Appliances / Installations

3.3.1 All safety check work schedules documented in this section must be used in conjunction with the appropriate manufacturer's instructions, which must be fully complied with.

3.3.2 Where any appliance consists of two or more appliances, purposely designed to be used as a combined unit, then the relevant schedule shall be followed for each individual appliance.

3.3.3 Whenever a 'safety check' of a property is required by the university this shall include a full detailed safety check of any chimney system and any gas appliance for which the university is responsible. Should an additional tightness test of the entire gas installation be required over and above the three yearly specified tests this will be specified separately.

3.3.4 Tightness Testing of Installations / Appliance Connections

When tightness testing and purging non-domestic natural gas installations, the Operative shall carry out such work in accordance with the appropriate standards.

This tightness test shall be repeated at least every fifth year thereafter, unless required sooner by the manufacturer's instructions or deemed necessary by the gas operative or requested by the Contract Administrator.

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

In the event of a tightness test being unsuccessful and the escape cannot be repaired, make the installation safe and refer back to the Contract Administrator within 2 working hours or if outside normal working hours the 'Out of Hours Officer'.

Record the tightness test results on the 'Strength Testing, Tightness Testing and Purging Forms' as appropriate

2.3.1. Safety Checks must be carried out in accordance with manufacturer's instructions when caring out gas works, however the following should be further considered when inspecting and Testing Chimneys Serving Gas Appliances:

a) Visually inspect the entire chimney, removing access panels as required, including any section in the roof space, disconnecting and removing any gas appliance, plates, etc. as required to allow access to flue to ensure:

- The chimney route is acceptable.
- The chimney is adequately supported.
- The chimney is constructed from suitable materials.

- The chimney is the correct size and suitable for the appliance.
- The chimney is complete and continuous throughout its length.
- The chimney is not corroded or cracked and is in good condition.
- The chimney is a sufficient distance from any combustible material.
- The use of bends meets the appliance / chimney requirements.
- Flexible chimney liners are suitably sealed at the top and bottom.
- No unacceptable intermediate openings exist in the chimney.
- Any draught diverters, draught stabilisers, flue breaks or air inlets are correctly installed.
- Any chimney previously used with other fuels has been swept.
- All chimney and appliance joints / seals are correctly made and suitable adaptors are used as required. Where a ridge terminal is fitted cheque the integrity of the adaptor and its fixing bolts.
- Only one appliance is connected to the chimney unless the chimney has been specifically designed for the connection of more than one appliance, e.g. a modular boiler installation.
- Any catchment area is accessible via a suitably sized opening and is suitably constructed, of the correct size, free of debris and any air gaps into the space are sealed.
- The chimney is clear of obstructions and any dampers have been suitably installed and / or interlocked
- The termination is correct, suitably located and fitted with an appropriate guard as required.
- There are no signs of spillage of products of combustion.

b) Check flue flow and continuity using a smoke pellet and re-inspect all accessible chimney pipe including any section in an enclosed space for leakage - removing access panels as required.

c) Where necessary reconnect the gas appliance(s) then:

- Tightness test and purge the appliance connection.
- Check there is an adequate supply of combustion air
- Check the appliance operating pressure or heat input or, where necessary, both.
- Check the appliance operation to ensure safe functioning
- Test all disturbed joints for gas tightness.

d) Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests.

e) Complete all necessary documentation and advise the manager / site responsible person of any remedial work required.

2.3.2. Safety Checks - Gas Fired Central Heating & Hot Water Boilers and Systems (including independent water heating appliances). To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the installation conforms with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Check the suitability of any appliance base / plinth.
- Check that the method of appliance suspension is correct.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check the size location and suitability of any open vent and cold feeds.
- Check the condensate pipework is of suitable material and terminated in an acceptable position.
- Check all pressure relief and safety valves discharge to a safe position.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted and check mechanical ventilation interlocks are operational.

d) Isolate the gas, electric and water supplies, as required.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard.

f) Visually inspect the entire chimney, removing access panels as required, including any section in the roof space as described in clause 3.4.8.

g) Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed.

h) Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required.

i) Check the feed and expansion cistern water level and or a sealed systems pressure, top up as required.

j) Check the appliance for obvious signs of gas escapes.

k) Check the appliance and system for obvious water leaks and other defects.

l) Check all appliance seals.

m) Check all plant / boiler room automatic isolation valves and their associated systems for correct operation.

n) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

o) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

p) Reconnect the water supply and checks for any leaks.

q) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

r) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

s) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, pressure and temperature safety valves, and all other safety devices.

t) Check hot water flow rate and temperature rise is in accordance with manufacturer's instructions on instantaneous hot water appliances.

u) Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests.

v) Carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results

w) Test and reset all controls to suit the manager/site responsible person requirements.

x) Complete all necessary documentation and advise the manager/site responsible person of any remedial work required.

2.3.3. Safety Checks - Gas Fired Domestic Cooking Appliances / Installations. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Confirm that the appliances restraining device is correctly fitted.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of heat damage on the appliance and / or adjacent surfaces.

b) Inform the site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check openable window direct to outside air.

d) Isolate gas and electric supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

f) Check the appliance for obvious signs of gas escapes.

g) Check all appliance seals.

h) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

i) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance.

j) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

k) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats.

l) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices.

m) Test and reset all controls to suit the site responsible person's requirements.

u) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.4. Safety Checks - Gas Fired, Direct and Indirect, Forced Convection Air Heaters and System. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the installation conforms with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Check the suitability of any appliance base / plinth.
- Check that the method of appliance suspension is correct.
- Check any connected ductwork for adequate size, of suitable material, adequately protected and for any signs of damage / leaks.
- Check registers and diffusers for damage and operation.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted and check any mechanical ventilation interlocks are operational.

d) Isolate the gas and electric supplies, as required.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard.

f) Visually inspect the entire chimney, removing access panels as required, including any section in the roof spaces as described in clause 3.4.8.

g) Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed.

h) Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required.

i) Check the appliance for obvious signs of gas escapes.

j) Check all appliance seals.

k) Check all plant room automatic isolation valves and their associated systems for correct operation.

l) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

m) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / system.

n) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

o) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

p) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, and all other safety devices.

q) Check air flow rate and temperature rise is in accordance with manufacturer's instructions where appropriate.

r) Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests.

s) Where appropriate carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results

t) For unflued heaters carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO_2 levels, recording all results.

u) Test and reset all controls to suit the manager / site responsible person requirements.

v) Complete all necessary documentation and advise the warden / site responsible person of any remedial work required.

2.3.5. Safety Checks - Gas Fired Overhead Radiant Heaters and muliti-burner Systems. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the installation conforms with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Check that the method of appliance suspension is correct.
- Check any connected ductwork for adequate size and any signs of damage / leaks.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.

- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted and check any mechanical ventilation interlocks are operational.

d) Isolate the gas and electric supplies, as required.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard.

f) Visually inspect the entire chimney, removing access panels as required, including any section in the roof spaces as described in clause 3.4.8.

g) Check the appliance chimney connection and check around pipe ducts or any other voids entering the base of the chimney are sealed.

h) Check the appliance for obvious signs of gas escapes.

i) Check all appliance seals.

j) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

k) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / system.

l) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

m) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

n) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, and all other safety devices.

o) Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests.

p) Where appropriate carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results

q) For unflued heaters carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO_2 levels, recording all results.

r) Test and reset all controls to suit the manager / site responsible person requirements.

s) Complete all necessary documentation and advise the warden / site responsible person of any remedial work required.

2.3.6. Safety Checks - Gas Fired Catering Appliances / Installations. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Confirm that the appliances restraining device is correctly fitted.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks, where fitted, are operational.

d) Check the extract flow rate against the rate detailed on the canopy data plate; ensure that the canopy is capable of clearing products of combustion and cooking vapours without spillage.

e) Isolate gas and electric supplies before dismantling.

f) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

g) Check the appliance for obvious signs of gas escapes.

h) Check all appliance seals.

i) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

j) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance.

k) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

l) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats.

m) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices.

n) Carry out an ambient air test to the requirements of BS7967-5 to confirm satisfactory CO_2 levels, recording all results.

o) Test and reset all controls to suit the site responsible person's requirements.

u) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.7. Servicing of RELEVANT GAS APPLIANCES / INSTALLATIONS

2.3.8. All servicing work schedules documented in this section must be used in conjunction with the appropriate manufacturer's instructions, which must be fully complied with.

2.3.9. Where any appliance consists of two or more appliances, purposely designed to be used as a combined unit, then the relevant schedule shall be followed for each individual appliance.

2.3.10. Whenever a 'Service' of an appliance is required by the University this shall include a full detailed safety check of any flue system and any gas appliance for which the University is responsible. Should an additional tightness test of the entire gas installation be required over and above the three yearly specified test this will be specified separately.

2.3.11. Servicing of Gas Fired Central Heating & Hot Water Boilers and Systems (including independent water heating appliances). To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:
   - Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
   - Check the stability of the appliance.
   - Check the suitability of any boiler base / plinth.
   - Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
   - Check the size location and suitability of any open vent and cold feeds.
   - Check all pressure relief and safety valves discharge to a safe position.
   - Check the condensate pipework is of suitable material and terminated in an acceptable position.
   - Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted and check mechanical ventilation interlocks are operational.

d) Isolate gas, electric and where applicable water supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standard.

f) Visually inspect the entire chimney, removing access panels as required, including any section in the roof space as described in clause 3.4.8.

g) Check the appliance chimney connection to any chimney or chimney liner and check annular spaces between chimney liner and chimney or around pipe ducts or any other voids entering the base of the chimney are sealed.

h) Check flue flow and continuity using a smoke pellet and re-inspect the entire chimney including any section in the roof space for leakage, removing access panels as required.

i) Check the feed and expansion cistern water level and or a sealed systems pressure, top up as required.

j) Check the appliance for obvious signs of gas escapes.

k) Check the appliance and system for obvious water leaks and other defects.

l) Check all appliance seals.

m) Clean dust and deposits from within the appliance casing and surrounding area.

n) Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components.

o) Check and clean fans and any air pressure sensing tubes.

p) Check and clean condensate traps, refill with clean water and refit to the appliance.

q) Check clean and lubricate, as required, all plant / boiler room automatic isolation valves and their associated systems.

r) Check, clean, lubricate and adjust other controls as required.

s) Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components.

t) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

u) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

v) Reconnect the water supply and checks for any leaks.

w) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

x) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

y) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls, pressure and temperature safety valves, and all other safety devices.

z) Check hot water flow rate and temperature rise is in accordance with manufacturer's instructions on instantaneous hot water appliances.

aa) Check operation of radiators / heat emitters / calorifiers.

bb) Test appliance(s) for spillage in accordance with manufacturer's instructions - carrying out individual and combined spillage tests.

cc) Carry out an electronic analysis of the combustion products to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results.

dd) Test and reset all controls to suit the warden / site responsible person requirements.

ee) Complete all necessary documentation and advise the manager / site responsible person of any remedial work required.

2.3.12. Servicing of Domestic Cooking Appliances. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Confirm that the appliances restraining device is correctly fitted.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of heat damage on the appliance and / or adjacent surfaces.

b) Inform the site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check for opening window direct to outside air.

d) Isolate gas and electric supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

f) Check the appliance for obvious signs of gas escapes.

g) Check all appliance seals.

h) Clean dust and deposits from within the appliance casing and surrounding area.

i) Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components.

j) Check and clean combustion and recirculation fans and any air pressure sensing tubes.

k) Check, clean, lubricate and adjust other controls as required.

l) Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components.

m) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

n) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

o) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

p) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats.

q) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices.

r) Test and reset all controls to suit the site responsible person's requirements.

s) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.13. Servicing of Indirect Gas Fired, Forced Convection Air Heaters and Systems. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Check the suitability of any heater base / plinth.
- Check the suitability of the method of suspension of the appliance.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check registers and diffusers for damage and operation.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks are operational.

d) Isolate gas and electric supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

f) Visually inspect the entire chimney including any section in the roof space as described in clause 3.4.8.

g) Check that the appliance chimney connection is satisfactory.

h) Check flue flow and continuity using a smoke pellet and re-inspect all exposed chimney pipe including any section in the roof space for leakage.

i) Check the appliance for obvious signs of gas escapes.

j) Check all appliance seals.

k) Clean dust and deposits from within the appliance casing and surrounding area.

l) Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components.

m) Check and clean combustion and recirculation fans and any air pressure sensing tubes.

n) Check clean and lubricate, as required, all boiler room automatic isolation valves and their associated systems.

o) Check, clean, lubricate and adjust other controls as required.

p) Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components.

q) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

r) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

s) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

t) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats.

u) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices.

v) Check air flow rate and temperature rise is in accordance with manufacturer's instructions where appropriate

w) Carry out an electronic analysis of the products of combustion to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results.

x) Test appliance for spillage in accordance with manufacturer's instructions.

y) Test and reset all controls to suit the site responsible person's requirements.

z) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.14. Servicing of Direct Gas Fired, Forced Convection Air Heaters and Systems. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Check the suitability of any heater base / plinth.

- Check the suitability of the method of suspension of the appliance.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check registers and diffusers for damage and operation.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks are operational.

d) Isolate gas and electric supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

f) Check the appliance for obvious signs of gas escapes.

g) Check all appliance seals.

h) Clean dust and deposits from within the appliance casing and surrounding area.

i) Check and clean burners, injectors, combustion chamber and appliance airways. Examine for any signs of cracking or damage to these components.

j) Check and clean combustion and circulation fans and any air pressure sensing tubes.

k) Check clean and lubricate, as required, all boiler room automatic isolation valves and their associated systems.

l) Check, clean, lubricate and adjust other controls as required.

m) Clean the flame supervision device components

n) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

o) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

p) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

q) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

r) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, temperature controls and all other safety devices.

s) Carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO_2 levels, recording all results.

t) Test and reset all controls to suit the site responsible person’s requirements.

u) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.15. Servicing of Radiant Heaters and multi-burner systems. To be carried out in accordance with the following:

a) Check the general condition of the appliance/s, and that the appliance/s is / are installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance / s in proximity to other fixtures, fittings and combustible materials
- Check the suitability of the method of suspension of the appliance.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check than air / flue duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks are operational.

d) Isolate gas and electric supplies before dismantling.

e) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

f) Check the appliance / s for obvious signs of gas escapes.

g) Check all appliance seals.

h) Check radiant tubes or plaques for integrity

i) Check and clean burners and injectors. Examine for any signs of cracking or damage to these components.

j) Check and clean combustion fans, exhaust fans and any air pressure sensing tubes.

k) Check, clean, lubricate and adjust other controls as required.

l) Clean the flame supervision device components

m) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

n) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

o) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

p) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings.

q) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, temperature controls and all other safety devices.

r) i) Unflued systems - carry out an ambient atmosphere analysis of the occupied heated space to confirm satisfactory CO_2 levels, recording all results.

ii) Flued systems - carry out an electronic analysis of the products of combustion to confirm satisfactory combustion, flue gas temperature and combustion efficiency, recording all results.

s) Test and reset all controls to suit the manager / site responsible person's requirements.

t) Complete all necessary documentation and advise the site responsible person of any remedial work required

2.3.16. Servicing of Commercial Catering Appliances & Kitchen Installations. To be carried out in accordance with the following:

a) Check the general condition of the appliance, and that the appliance is installed in accordance with the appropriate standards and manufacturer's instructions including:

- Check the correct distances from and location of the appliance in proximity to other fixtures, fittings and combustible materials.
- Check the stability of the appliance.
- Confirm that the appliances restraining device is correctly fitted.
- Check pipework is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check duct-work is suitably sized, correctly installed, adequately protected and the correct materials have been used.
- Check visually for signs of spillage on the appliance and / or adjacent surfaces.

b) Inform the manager / site responsible person of any damage that exists on the appliance and / or surroundings before commencing work.

c) Check ventilation is adequate with appropriate warning labels fitted. Check mechanical ventilation interlocks, where fitted, are operational.

d) Check the extract flow rate against the rate detailed on the canopy data plate, ensure that the canopy is capable of clearing products of combustion and cooking vapours without spillage.

e) Isolate gas and electric supplies before dismantling.

f) Check there are no signs of damage to the wiring, the fuse rating is correct and that the electrical installation complies with the appropriate standards.

g) Check the appliance for obvious signs of gas escapes.

h) Check all appliance seals.

i) Clean dust and deposits from within the appliance casing and surrounding area.

j) Check and clean burners, injectors, combustion chamber, heat exchanger and appliance air and flue-ways. Examine for any signs of cracking or damage to these components.

k) Check and clean combustion and recirculation fans and any air pressure sensing tubes.

l) Check, clean, lubricate and adjust other controls as required.

m) Clean the flame supervision device components and where fitted the atmospheric sensing device, if allowed by instructions, or similar control components.

n) Reconnect the gas supply, tightness test and purge the appliance connection and check any disturbed gas connections not covered by the tightness test for gas tightness.

o) Reconnect the electrical supply and carry out preliminary electrical checks on the electrical wiring to the appliance / heating system.

p) Check the appliance operating pressure or heat input or, where necessary, both and adjust if necessary.

q) Check, with any appropriate fans running, the flame picture and flame stability of all burners, on all settings including the bypass rate on thermostats.

r) Check the safe operation of all the appliance and system controls including gas taps, ignition devices, flame supervision devices, atmospheric sensing devices, temperature controls and all other safety devices.

s) Carry out an ambient air test to the requirements of BS7967-5 to confirm satisfactory CO_2 levels, recording all results.

t) Test and reset all controls to suit the site responsible person's requirements.

u) Complete all necessary documentation and advise the site responsible person of any remedial work required.

2.4. Review

The University Gas Consultants will update these procedures as new equipment is installed within the University estates. It shall be the responsibility of the Gas Maintenance Manager to inform the Consultant of additions to the university gas equipment stock. The operational procedures will be formally reviewed annually.

EPM HS17 APPENDIX B	**GAS SERVICES PROCEDURES**	Form Ref: GE 1 Version: 1.0 Page: 66 of 1 Issue Date:

TITLE:	Gas Escape / Fumes / CO Alarm Activation / Fire / Explosion / Etc. Report.						
Report Received:	Date:			Time:			
Method Report Recieved:	Telephone Call	Visit to Area Office	Letter	Other please specify			
Person Making Report:	Name:			Contact Telephone:			
Address:							
Postcode:			Telephone: (if different)				
Type of Property:	Domestic	Commercial / Non Domestic	Other please specify				
Tenant / Occupiers Name: (if different)							
What is being reported?	Gas Escape	Fumes	Fire / Explosion	Other please specify			
Precise location of the escape / fumes / fire / explosion / etc.:							
Where is the gas meter?			Is the gas turned off?	YES	NO	UNKNOWN	
Is there still a smell?	YES	NO	UNKNOWN	Is there a smell outside?	YES	NO	UNKNOWN

SAFETY ADVICE TO BE GIVEN TO TENANT / OCCUPIER / PERSON MAKING REPORT	**✓ TO CONFIRM**
TURN OFF the gas supply at the emergency control valve normally adjacent to the gas meter, except where the valve is in a cellar or confined space where there is also a smell, when the advice should be NOT to enter but to vacate the premises	
TURN OFF all appliances suspected of having a gas escape / emitting fumes	
OPEN doors and windows to ventilate the property and help disperse any gas / fumes	
DO NOT turn electrical switches / appliances on or off	
DO NOT smoke, use naked flames, mobile phones or any other potential means of ignition	
DO NOT use any door entry systems to allow persons access to the property, open manually	
DO NOT turn the gas supply / appliances on until checked by a Gas Safe Registered gas operative	
Reason advice NOT given (if applicable):	

IMMEDIATELY REPORT THE INCIDENT TO THE NATIONAL GAS EMERGENCY CALL CENTRE ON:

0800 111 999 THEN CONTACT / RAISE A JOB TICKET FOR THE GAS MAINTENANCE CONTRACTOR TO ATTEND

Info. Passed to Gas Emergency Call Centre:	Date:	Time:
Job Reference Numbers:	Gas Emergency Call Centre:	Aspire Job Ticket:

Employee Reporting Incident:	Name:	Signature:	
PLEASE FORWARD THE COMPLETED FORM TO GAS SERVICE SECTION			
Checked & Logged by Gas Services:	Name:	Signature:	Date:

HSE

Health and Safety Executive

Report of a gas-related injury (NB CHECK HSE WEBSITE FOR CURRENT VERSION)

Note: this is a preview of your form and does NOT represent the submitted details of your notification, which will include the Notification number for reference

About you and your organisation

Notifier name	
Job title	
Organisation name	
Address	
Phone no	
Email Address	

About the gas incident

Incident date		**Main cause**	
Address			

In which local authority did the incident occur (Country, Geographical Area and Local Authority)?

The incident happened in a building.

Type of building		**Type of room**	
Name of person living in the property			

About the rental status of the property

The premises were rented.

Landlord or managing agent name		**Phone no**	
Address			

About the person who can be contacted about the incident

undefined

About those injured as a result of the incident

No of people who died		**No of major injuries**	
Describe what happened			

HSE

Health and Safety Executive

Report of a dangerous gas fitting (NB CHECK HSE WEBSITE FOR CURRENT VERSIONS)

Note: this is a preview of your form and does NOT represent the submitted details of your notification, which will include the Notification number for reference

About you and your organisation

Notifier name		
Job title		
Organisation name		
Address		
Phone no		**Fax Number**
Email Address		

About the dangerous gas fitting

Date the dangerous gas fitting was found	
Where was the dangerous gas fitting found?	
In which local authority did the incident occur (Country, Geographical Area and Local Authority)?	

The dangerous gas fitting was found in a building.	
Type of building	**Room**
Additional information	
The premises were rented.	

Resident name	

Details of the landlord or their managing agent

Name	
Business address	
Phone no	
Fault notification	

Details of the gas fitting involved

What was the main fault found with the gas fitting?		
This is a report about a dangerous		**What type of appliance or gas fitting was involved?**
What type of gas was involved?		
Summary of the dangerous gas fitting		

About the servicing and installation of the appliance