

# **CARDIFF COUNCIL**

## **CODE OF GUIDANCE**

### **GAS SAFETY IN CATERING ESTABLISHMENTS**

#### **Purpose**

The purpose of this Code of Guidance is to address the safety criteria required to be followed to ensure that catering establishments meet a minimum standard with regard to gas safety.

The Guidance is set out as follows:

- 1.0 The Law
- 2.0 Installation and repair work on gas appliances
- 3.0 Maintenance and inspection by users
- 4.0 Use of gas and routine tasks on equipment
- 5.0 Ventilation
- 6.0 Information, Instruction and Training
- 7.0 Further Information and References

#### **Background**

When gas does not burn properly, or is used in an area without adequate ventilation, it produces excess carbon monoxide. If this is inhaled, it binds with the haemoglobin in the blood, starving the body of oxygen and poisoning it. Symptoms can include drowsiness, headaches, nausea and chest and stomach pains. In extreme cases, carbon monoxide poisoning can kill people within a matter of hours.

To prevent carbon monoxide poisoning, gas appliances must be adequately installed and maintained by appropriately qualified individuals.

Gas catering equipment could include any large scale kitchen equipment (i.e. not domestic equipment) which is used in the catering industry, e.g. cooking ranges, ovens, grills, etc.

#### **1.0 The Law**

The Health and Safety at Work etc Act 1974 provides a general obligation on employers to ensure the health, safety and welfare of their employees at work including the safe use of gas.

The provisions of the Management of Health and Safety at Work Regulations 1999 relating to risk assessments also apply to the use of gas.

The Provision and Use of Work Equipment Regulations 1998 require all equipment used at work to be constructed or adapted as to be suitable for the purpose for which it is used or provided.

The Gas Safety (Installation and Use) Regulations 1998 (GSIUR) contain requirements on the installation and use of gas appliances. It places specific duties on gas users, installers, suppliers and landlords.

## **2.0 Installation and repair work on gas appliances**

No person is allowed to work on gas fittings or appliances unless they are competent and in membership of a 'class of persons' approved by the Health and Safety Executive. This means CORGI registered persons. All Service Areas must take reasonable steps to ensure that in-house staff or contractors working on gas fittings are CORGI registered and also that they have the required competence for the type of work to be undertaken. This can be checked by asking to see an individual's CORGI identity card, which lists the competencies held.

In addition to duties to maintain appliances, flues and pipe work, landlords must have all appliances checked every 12 months by a CORGI-registered business and provide tenants with a copy of the report (landlord's gas safety certificate) within 28 days.

## **3.0 Maintenance and inspection by users**

All gas appliances, flues, pipe work and safety devices must be maintained in a safe condition and inspected by a competent person in accordance with current industry practice. There is an annual maintenance contract in place with a competent contractor (currently Independent Catering Supplies, Unit G, Trecenydd Industrial Park, Caerphilly CF83 2RZ Tel: 029 2088 5845).

It should be noted that the use of smoke pellets to determine the efficiency of extraction systems and to detect spillage of gases and fumes is no longer acceptable. Additionally, the use of anemometers may not be reliable. Other methods of detecting poor extraction are required. These may include signs of spillage, poor ventilation, excessive condensation, blockages, and whether staff report feelings of headaches or ill health while at work.

It should be ensured that the appliances are safe for use on the completion of the service and a certificate should be produced to that effect.

## **4.0 Use of gas and routine tasks in equipment**

All staff who use gas equipment should be trained in its proper use. Daily visual inspections should also be conducted for obvious faults such as:

- damaged pipe work and connections,
- inoperative flame supervision devices (these shut off the gas supply automatically if the flame disappears)
- missing restraints on equipment needing them for stability
- inoperative locks on castors of mobile equipment and
- smells of escaping gas.

All staff should be familiar with necessary procedures in such situations.

If plug-in gas connections to appliances are required to be connected or disconnected for the purposes of cleaning or changing LPG cylinders or hoses, these routine tasks can be undertaken by people who are not CORGI registered, but they must be competent. It should be noted that the installation of an appliance with a plug-in gas connection should only be carried out by a CORGI-registered person, including the safety examinations prescribed in GSIUR.

## 5.0 Ventilation

Ventilation is particularly important with gas appliances because of the risk of carbon monoxide poisoning from incomplete combustion and inadequate flueing.

Mechanical ventilation systems are used in the majority of catering kitchens. They create a comfortable working environment that promotes health and safety at work and encourages good practice for hygiene and food safety. Such systems are designed to remove the products from the cooking processes and discharge them to a safe external location. This is normally achieved via a canopy installed over the cooking appliances. 'Make-up' air is supplied in the form of natural ventilation through air vents, louvres or serving hatches, etc. Some ventilation systems also provide mechanical make-up air to the kitchen as well as extraction.

Apart from the removal of combustion products, ventilation systems:

- introduce sufficient clean, cool air and remove excess hot air from the cooking area, to enable the occupants to breathe adequately and provide comfortable conditions
- prevent incomplete combustion of gas and the consequent production of harmful carbon monoxide.
- dilute and remove odours, vapours and steam from the cooking process.

Modern ventilation systems are required to be interlocked with the gas supply and fixed ventilation provided. This prevents the use of gas fired equipment being used unless the extraction canopy is turned on and ensures that free air is provided. All kitchens which do not meet the afore-mentioned criteria are required to prominently display appropriate signage instructing staff that extractor fans / canopies are to be turned on and in situations where 'free' air (make-up air) is not available windows are to be opened when any gas fired catering equipment is being used.

Existing systems need to be assessed to ensure that combustion will be adequate and that the products of combustion will be diluted or reduced. If new gas appliances are installed, suppliers are obliged to give information on ventilation requirements and these will need to be complied with.

BS6173 specifies the installation requirements for new and second-hand, gas-fired appliances, with emphasis placed on food hygiene and ventilation requirements. The Standard makes the following points:

### *Flame supervision*

Flame supervision devices and appropriately upgraded gas controls should be provided when installing second-hand ovens and similar enclosed burner equipment. Such appliances should be gradually replaced as and when new equipment is bought, unless the risks in particular cases make flame supervision necessary. It is recommended that a programme to replace all equipment which does not meet current standards be put in place.

### *Isolation of gas supplies*

Each fixed appliance should have a single manual means of isolation for servicing or cleaning purposes and pipes shall be located to leave a space of at least 25mm between the pipe and the wall in order to assist cleaning.

### *Interlocking of mechanical ventilation system and gas supplies*

See the attached flowchart at Appendix A.

### *Regulation 27 (4) of GSIUR 1998*

Appliances which are installed under canopy systems and are designed to operate without a flue are known as Type A. Other appliances, such as some types of convection ovens and deep fat fryers, would normally require connection to a dedicated flue system. These are known as Type B.

The installation of Type B appliances without the use of an individual flue, but under a canopy is sometimes permitted in those kitchens with powerful mechanical ventilation systems. However, the canopy / extraction system is performing the same function as a flue therefore the provision of an interlock, which will shut off the gas supply to such an appliance in the event of an air movement failure as required by Regulation 27 (4) applies.

### *Existing installations*

Where there is no interlocking of the ventilation system and gas supply, users need to assess whether a risk is likely to arise and, if so, ensure it is removed.

### *Assessing the risks*

If there are any concerns about the safety of the installation, urgent advice should be sought from a competent gas operative / ventilation expert.

Gas operatives will need to assess the overall condition of the installation against the current standard when carrying out minor repairs or routine maintenance checks. In addition to the condition and use of the existing ventilation system, this process should also take into account the procedures, training, systems of work and warning notices etc. that are being applied.

## *Classifications of Unsafe Situations Procedure*

There is a procedure in place for a gas operative to identify whether an appliance meets appropriate standards or is operating an unsafe situation.

These standards are classified in categories ranging from immediate condemnation of the appliance to simple notification that it does not comply with current standards. If a gas operative applies any of these procedures, they should give the person responsible for the kitchen information relating to the new standard and the practicability of upgrading the existing installation.

The standards are as follows:

- Not to Current Standards (NCS) – the most likely notification, along with documented recommendations as to what is needed to upgrade the installation.
- If there are factors that may increase the risk, an At Risk (AR) or Immediately Dangerous (ID) classification should be issued, dependent on the nature of level of risk present.

It should be noted that, provided that proper maintenance has been carried out, such occurrences are likely to be rare.

### **6.0 Information, Instruction and Training**

It is the manager's responsibility to provide adequate training to staff on safe systems of work, particularly in relation to the use of gas equipment. Records should be made of all training given, in order to be able to demonstrate compliance with these requirements. It is also vital to ensure that enough people on the premises are trained in first aid.

### **7.0 Further Information and References**

The Gas Safety (Installation and Use) Regulations 1998

Precautions at manually ignited gas-fired catering equipment Catering Sheet Nr. 3

Health and Safety Training pays in the catering industry: Guidance for owners and managers. Catering Sheet Nr. 5

The main health and safety law applicable to catering. Catering Sheet Nr. 11

Gas Safety in Catering and hospitality. Catering Sheet Nr 23

Heating and Ventilation Contractors Association (HVCA) – Specification for Kitchen Ventilation Systems – DW/172

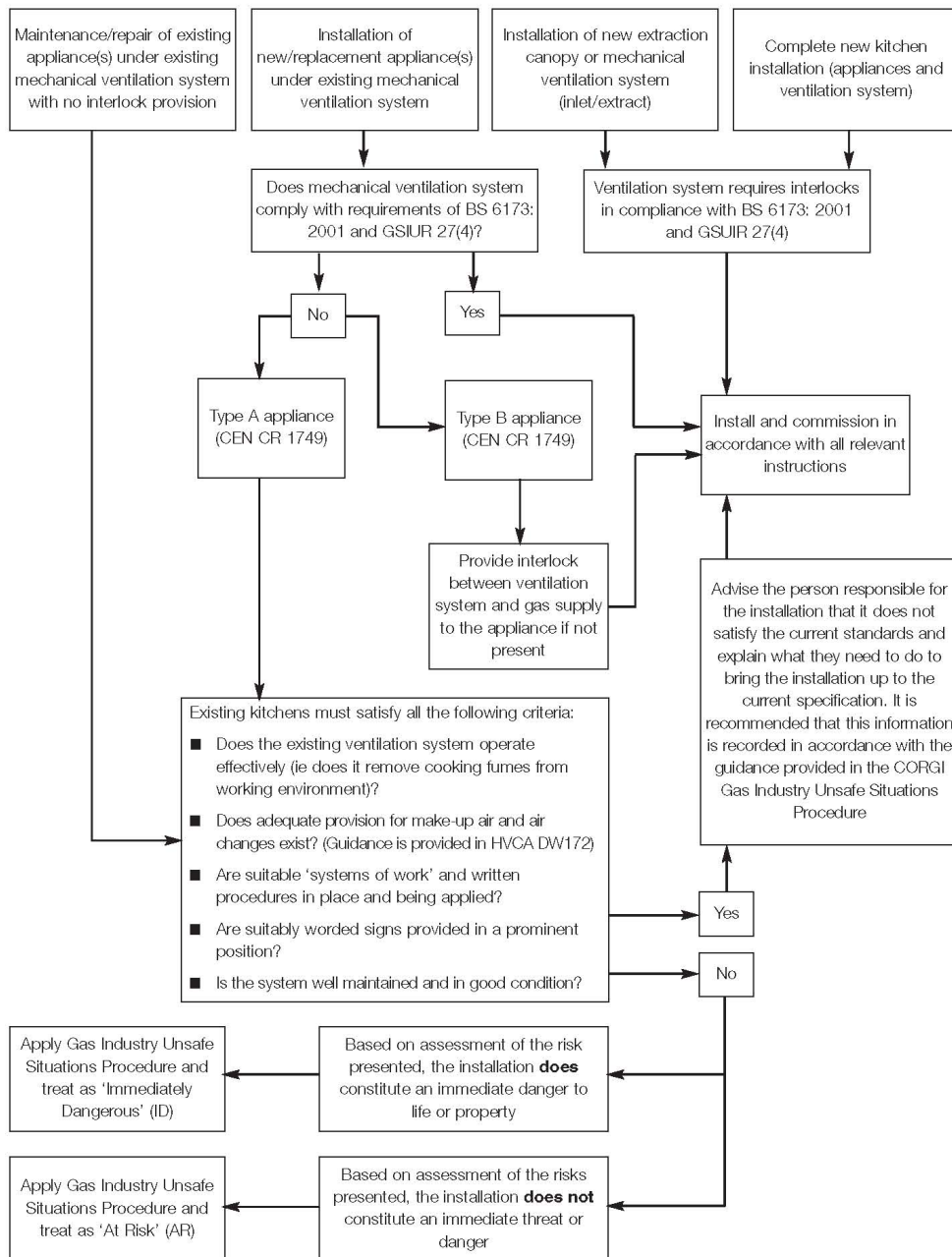
Specification for installation of gas-fired catering appliances for use in all types of catering establishments (BS6173:2001)

# Appendix A

## Interlocking of mechanical ventilation system and gas supplies

**Health and Safety  
Executive**

**Figure 1** Interlocking of mechanical ventilation system and gas supplies



**Note:** Type A appliances are normally a flueless type. Type B appliances are normally designed to be connected to a flue or be installed below a device, which will evacuate the products of combustion (mechanical ventilation system)