

KITCHEN VENTILATION:

OUR POLICY AND
WHO SETS THE RULES.



Version 1.0



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NELSON CERTIFICATE: NUMBER 186497

KITCHEN VENTILATION: WHO MAKES THE RULES?

As a Gas-Safe registered company, Nelson is 'bound by duty' to have sound knowledge of and, to abide by all relevant legislation regarding the safe and legal installation of gas fired appliances and ventilation systems. Our company would be at risk from prosecution and would have our Gas-Safe certification terminated if we were to install appliances illegally.

In our (Nelson) role as consultants / specialists, it is our duty to ensure that what we design, what we draw and what we propose in writing to our clients will comply at all times with all related regulations and does not acknowledge or indicate acceptance of any breach of regulations. This is regardless of what any given client may request or instruct.

There are four governing bodies which we are to comply with and satisfy regarding gas installations and kitchen ventilation. These are:

- Gas-Safe Register (formerly CORGI).
- HVCA (Heating and Ventilation Contractors Association).
- HSE (Health & Safety Executive).
- BSI (British Standards Institute).

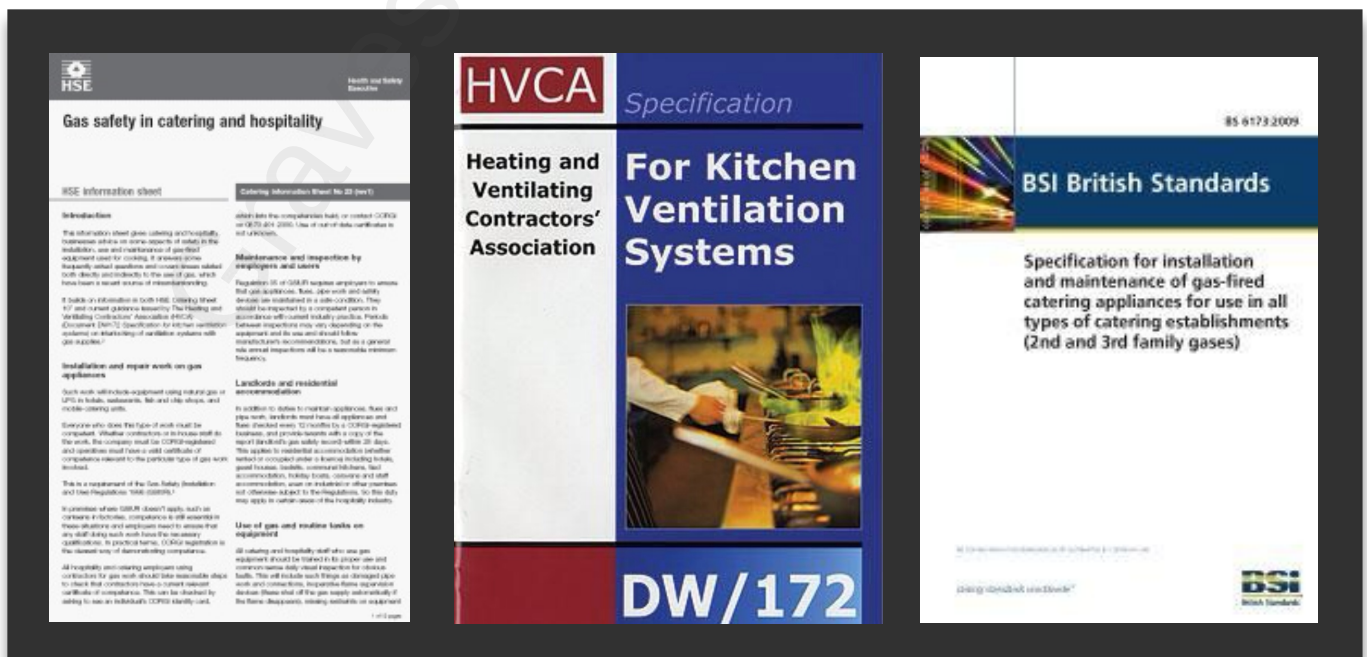
On occasions, the fire safety officer and building control representative may also stipulate actions regarding the ventilation system.

The official stance of Gas-Safe Register on the standards and specification of commercial gas appliances and kitchen ventilation is very clear:

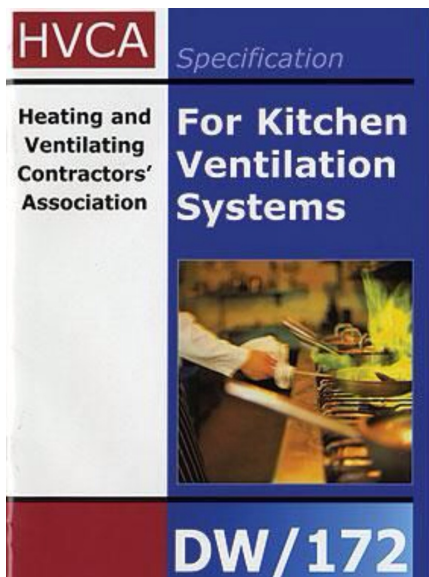
" When installing commercial gas fired appliances, the site must comply in full with all standards specified in the latest edition of HVCA publication DW/172 "

Gas-Safe also states that all CORGI regulations (last updated in 2008) still apply in full as they have not yet been updated by Gas-Safe.

They further clarify that any new installations or re-installation of any gas fired appliances whereby the ventilation system does not comply fully with DW/172 would be illegal and would likely null and void the property's insurance policies.



SO WHERE DO WE STAND?



HVCA publish the DW/172 document entitled "Specification For Kitchen Ventilation Systems". We own a copy of this document within the office. DW/172 explains at great length all aspects of kitchen extraction and air-supply systems. It is our duty without compromise to ensure that we adhere to these standards at all times in order to ensure that our installations are legal. These regulations apply in full in both new and existing catering areas.

HSE publish a document called "Catering Information Sheet no. 23" which also outlines all stipulations as required by the Health & Safety Executive regarding gas safety and ventilation. Again, this document is available within our office and affirms much of the information published in DW/172.

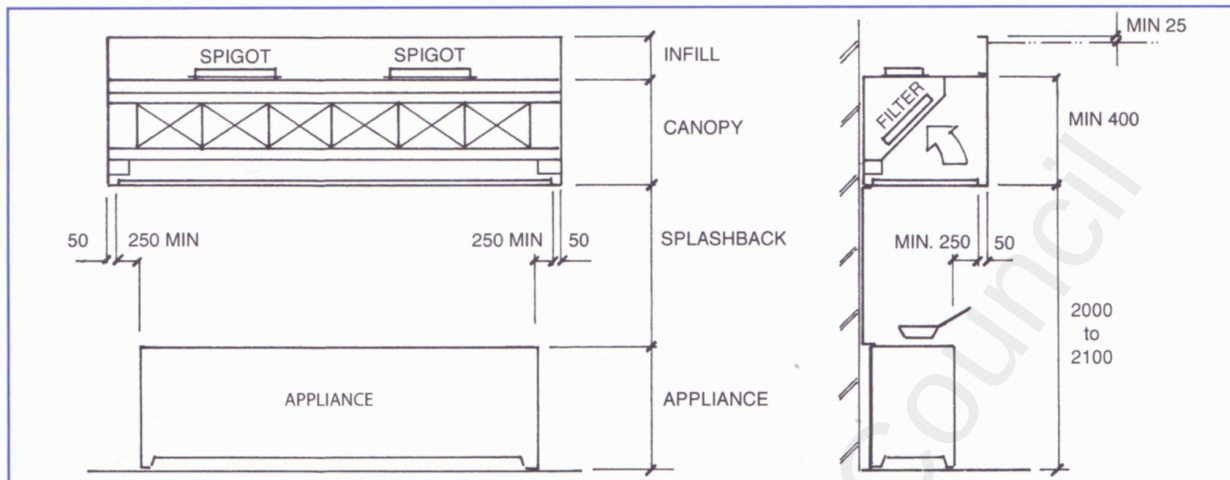
BSi publish a standards document "Standard BS6173:2009" entitled "Specification for Installation and Maintenance of Gas-Fired Catering Appliances for Use in All Types of Catering Establishments". This document

makes direct references to, and instructs that we, as the installers of gas fired appliances, adhere at all times to HVCA DW/172 and HSE Catering Sheet 23.

" Therefore by default, DW/172 becomes the document we comply with on every project we encounter. It is vital that all members of the kitchen department are aware of all such regulations and that the correct and legal action is taken on every project "

As equipment specialists, as designers, as project managers and as installers, we should all have a solid understanding of the documents named above and all regulations in which we are obliged to comply with. This knowledge is relevant on every project we encounter.

CANOPIES & OVERHANGS



" The minimum overhang at the front of equipment must be 300mm on all canopy types. Always allow space (100mm) at the rear of equipment for pipework. It is noted that the 300mm overhang includes a 50mm condensation channel at front "

Where combination ovens or steamers are installed, the overhang requirement becomes 600mm.

Therefore canopy dimensions should always be calculated as follows:

- Depth of a wall mounted canopy: 100mm void for services + depth of deepest appliance + 300mm overhang at front = minimum canopy depth.
- Depth of a central island canopy: 300mm overhang + depth of deepest appliance on side one + 300mm service spine + depth of deepest appliance on side two + 300mm overhang = minimum canopy depth.
- Length of a wall mounted canopy positioned between three walls / in alcove: This would be the full length of the wall.
- Length of a wall mounted canopy positioned in a corner with rear and side walls present and one end open: 300mm overhang at open end + accumulated length of all appliances beneath hood including infill tables = minimum canopy length.

- Length of a wall mounted canopy positioned on a wall with both ends open or length of central island canopy: 300mm overhang at first open end + accumulated length from left-hand side of first appliance to right-hand side of final appliance of all appliances beneath hood including infill tables + 300mm overhang at second open end = minimum canopy length.

If an extraction canopy is installed at a height greater than 2100mm AFFL then the standard 300mm overhang must increase proportionally at a ratio of 1:1 to compensate.

To further clarify, if an extraction canopy overhangs its appliances by only 150 or 200mm for example, then this would not be deemed suitable for us to proceed with a gas appliance installation and not acceptable to acknowledge as "existing" thus implying that it is suitable. This is regardless of the age of the canopy or the legislation at the time of it's install.

Our drawings / designs should always illustrate the minimum canopy dimensions required as well as any existing canopy if relevant.

Therefore if we are working on a project where an existing canopy or a canopy-by-others is present, it is our duty to confirm that this will comply in full with DW/172 before we pledge any commitment to the installation of gas appliances beneath it and serve notices to the client where required.

EXTRACTION SYSTEM

The mechanical extraction system must produce a minimum of 40 air changes per hour. A specialist ventilation engineer should handle all aspects of this element of the system in terms of ensuring adequate flow rates, ductwork sizes, filter coverage etc. Regardless of canopy dimensions and specification of previous installation, if the extract system does not function as required then the gas interlock panel will not allow gas flow to the appliances.

Where we encounter a project or installation where an existing extraction canopy system is to be reused, then this must be inspected by a ventilation specialist at the time of design / quotation to ensure that it will perform to a standard required by the appliances being installed and to meet current legislation. Checking the canopy dimensions alone is not enough.

Where local authorities become involved with the specification, we will be obliged to ensure that our proposed system will comply with the latest DEFRA guidelines.

SUPPLY-AIR

Where air is being extracted from a catering area, this must be replaced by a fresh air supply at a replacement rate of 85%. The remaining 15% is to infiltrate the area via natural means such as gaps in doors, windows etc. The system should always ensure that the cooking areas are kept in negative pressure so as to avoid odour contamination to adjoining areas.

Supply-air may be introduced to catering areas by either natural means or by a mechanical system. A mechanical system should always be recommended and is preferred for many reasons. Non-mechanical supply-air should be avoided where possible as the air is likely to be contaminated.

Non-mechanical supply-air should only be considered for small operations where the cooking activity can be classed as "occasional"

Kitchens installed in confined spaces or kitchens which would be deemed as "in constant use", for example, in busy pubs and restaurants, non-mechanical supply air would not be suitable and a mechanical and controllable system should be installed.

GAS INTERLOCK PANEL

A gas interlock panel is required on every site where gas fired appliances are installed. The only exception to this is if the site was installed in 2001 or earlier but in such cases an interlock must be retrospectively fitted at any stage where improvement or alteration works are carried out in the kitchen. It is not permitted to install new gas equipment under an extraction canopy that is not interlocked. If a site has an existing extraction system but no interlock and new equipment is to be installed then a new gas interlock panel must be installed. This is not a stipulation that either ourselves or our clients can opt to dismiss.

" On every project we encounter, one of the following scenarios must be fulfilled and our quotations / contracts must document this very clearly at all times "

- The kitchen is new and Nelson is providing a new ventilation system which includes a gas interlock panel.
- The kitchen is new and another company is providing the ventilation system which we have confirmed includes a gas interlock panel.

- The kitchen has an acceptable existing ventilation system which is fully interlocked and is confirmed by survey.
- The kitchen has an acceptable existing ventilation system and Nelson are providing a new gas interlock panel.
- The kitchen has an acceptable existing ventilation system and we have confirmed that another company is providing a new gas interlock panel.

Where we proceed on a project on the basis that another company is providing the interlock panel, this should be confirmed and documented and never assumed.

The interlock panel obviously cannot operate without a solenoid valve to isolate the gas supply. This valve should be supplied by the site gas plumbing contractor and never by Nelson.



NEW vs EXISTING INSTALLATIONS

All of the regulations in DW/172 fully apply to all "new" installations of gas appliances. The only scenario where an installation is not classed as "new" and the regulations do not apply is where we are replacing less than 33% of the appliances in an existing cooking line-up and on a like-for-like basis in terms of duty, size and function and whereby the business remains functioning and undisrupted throughout.

To summarise, this means a "one-in-one-out" install of like-for-like appliance(s) on an existing site where this installation is the sole extent of the work being undertaken. Even in this case, this can only be done where the Gas-Safe registered installer deems the gas and ventilation system safe and adequate.

If we are to install or replace more than 33% of appliances in a kitchen where the gas and ventilation system falls short of current standards, then the client is obliged to make the necessary improvements to the system as part of this work.

Example One: A restaurant which is trading normally that has an existing extraction system which is not interlocked and would not normally meet current standards requires a new gas 6-burner open top range to replace an old unserviceable unit of similar specification. To attend site and replace the defective appliance with the new version WOULD BE permissible without the enforcement of upgrades to the ventilation system. This is provided that the Gas-Safe registered installer carries out the appropriate safety inspection and deems the installation to be safe.

Example Two: The same restaurant is ceasing to trade for a period of two days to carry out various maintenance and improvement work in the kitchen and other areas. This work includes the hiring of a site plumbing contractor, an electrical contractor and also includes the replacement of the unserviceable oven range as per the previous example. In this instance, the provision of an interlock system and any other modifications required to ensure that the ventilation system complies with DW/172 would become

mandatory as the client would have had a) a window of opportunity to conduct the work, b) access to the relevant contracted trades and c) the presence of a Gas-Safe engineer on site. It would be incorrect for the restaurant to resume trading having not addressed the lack of compliance of the ventilation and gas system having had viable opportunity.

Matching one or more of the following criteria typifies what we would refer to as a "new installation" and therefore necessitates the ventilation and gas system to comply with all current standards:

- If the kitchen is being refurbished or improved as a whole or in part.
- If an installation of equipment is part of a larger scheme of planned maintenance.
- If all existing equipment is being uninstalled, removed and reinstalled as part of a refurbishment.
- If we are replacing more than 33% of the existing appliances in an existing line-up.
- If the existing gas pipework has to be cut or altered or replaced to accommodate the installation.
- If we are extending or adding to the cooking line-up rather than simply replacing.
- If the site is a building site and has access to or presence of the relevant trades / contractors.
- If the site has temporarily ceased trading to accommodate improvement work to be undertaken.
- Where we are producing drawings and quotations to address improvements to the kitchen.
- Where the services of a ventilation expert are utilised on site.

" It is extremely unlikely that what we class as a "project" could be treated as an existing installation and therefore we should always take steps to ensure that the ventilation and gas system complies with all current standards "

VENTILATION AND ELECTRIC APPLIANCES

Two regulations apply in relation to commercial kitchens: the Food Safety (General Food Hygiene) Regulations 1995 and The Workplace (Health, Safety & Welfare) Regulations 1992. These regulations lay a responsibility on proprietors of food businesses to ensure a safe and well ventilated environment for their employees.

Ventilation is required in commercial kitchens because:

- Considerable convective and radiant heat is given off by cooking equipment.
- Air becomes laden with odours, grease fumes and products of combustion.
- During meal preparation and washing up, humidity is increased over a wide area.
- Air replacement and consistency of temperature are required in adjoining areas.
- Air is required to dilute and replace products of combustion from gas fired appliances (CO and CO₂) *.
- Fresh air is required to ensure complete combustion of fuel and provide safe operation of gas equipment *.

Therefore the perception that by installing electrical appliances rather than gas negates the necessity to install a ventilation system is little more than a myth. All of the same principles and regulations apply other than the requirement to fit a gas interlock panel. To install electrical appliances without suitable extraction and air replacement would be a serious breach of HSE regulations.

" To suggest or acknowledge any acceptance to our clients that electrical appliances may be installed safely without the correct ventilation system being present is incorrect and leaves our company exposed to breach of regulations and legal complications associated with it "

* applies to gas equipment only.

