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ENVIRONMENT PROTECTION

ODOUR MANAGEMENT IN RETAIL FOOD BUSINESSES

Odours from retail food businesses vary greatly depending on the cooking method used and the frequency of equipment cleaning and maintenance. No matter how good the cooking equipment and exhaust system, it will only do its job if cleaned and maintained on a regular basis.

FOOD ODOUR COMPLAINTS

Individuals in the community have different levels of sensitivity to odour. Repeated exposure to odours can become very annoying and may lead to physical symptoms such as nasal congestion, nausea, headache and nose, throat and ear irritation. Odour complaints occur when individuals consider the odour to be unacceptable and are annoyed enough to take action. As well as an individual's sensitivity, there are other factors that influence odour complaints including frequency of occurrence, intensity, duration of exposure, offensiveness and location of the odour.

FOOD ODOUR PROBLEMS

Factors that create odour problems include:

> cooking processes that produce lots of smoke and oil

> lack of regular equipment cleaning and maintenance

> no filters or inadequate filters

> exhaust stack being located too close to surrounding residences

> businesses being located in an area of mixed zoning

> barriers around the business such as large buildings that hinder the dispersion of odours.

REQUIREMENTS

Retail food businesses can comply with their environment duty under the Environment Protection Act 1997 (the Act) by acting in accordance with Australian/New Zealand Standard (AS/NZS) 1668.1, Australian Standard (AS) 1668.2, AS 4674 and the Building Code of Australia. Key requirements are summarised as follows.

VENTILATION

The term **natural ventilation** generally refers to fresh air supplied or introduced into a business from an acceptable external source such as windows, doors or vents. The use of natural ventilation is only suitable where there is little or no cooking that produces steam or 'greasy' air. Where natural ventilation is allowed it must comply with AS 1668.2.

Mechanical ventilation relies on the exhaust/canopy hood, grease filters, fan and ductwork to convey fumes, smoke and other aerosols to an acceptable external location to ensure that the grease-laden air, which is to be discharged, does not impact on nearby residents or businesses. All food preparation areas where odours, fumes, smoke and steam are produced need a mechanical ventilation system that complies with AS/NZS 1668.1 and AS 1668.2.

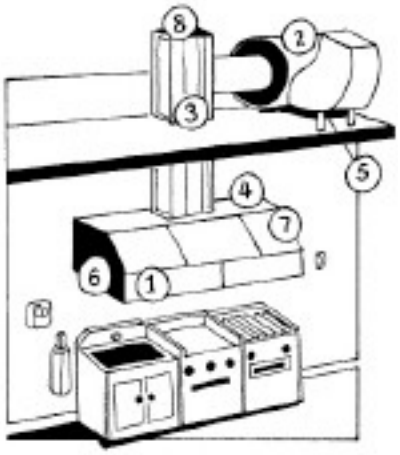
This means that:

> any deep fryer appliance or any cooking apparatus with a total maximum electrical power input exceeding 8kW or a total gas power input exceeding 29MJ/h requires a mechanical ventilation system.

> dishwashers and other washing and sanitising equipment that vent steam and/or heat to the extent that there is, or is likely to be, condensation collecting on walls and ceilings, require a mechanical system.

> If new equipment is installed in the premises after the mechanical ventilation system has been designed and installed, you must ensure the ventilation is working adequately.

A Typical Mechanical Ventilation System



Legend	
1	Exhaust Hood
2	Fan Housing
3	Exhaust Ducts
4	Plenum Chamber
5	Grease Pan
6	Grease Cup
7	Baffle Filters
8	Access Panel

DESIGN AND CONSTRUCTION

Architects, shop fitters, trades people or business operators contemplating the fit out of a **new premise** need to be aware of the requirements in AS 4674 and the Building Code of Australia. It is important that the requirements for natural and/or mechanical ventilation be incorporated into the design plans for a new business.

In the fit out of an **existing premise**, the location and type of cooking equipment is an aspect you will need to consider if contemplating changing or adding to your existing cooking capacity. This is particularly important given that installing an exhaust hood, filtration, and duct work can be both costly and difficult depending on the space constraint within a building.

DISCHARGE

The quantity of air to be exhausted will depend on a number of factors including the type of cooking and the location and size of the exhaust hood. The air should be discharged in a vertical direction at a minimum velocity of five metres per second. The point of discharge is to be at least one metre above the ridge of a pitched roof; three metres above a flat roof; six metres from a property boundary; and six metres from any air intake, natural ventilation or opening.

Exhaust ventilation for wood fired and solid fuel cooking equipment needs to be separate from other ventilation systems and shall not be combined with a system serving grease or oil generating or oil-heat appliances.

CLEANING AND MAINTENANCE

An important aspect of any mechanical ventilation exhaust system is regular and routine cleaning. All cleaning should be carried out in accordance with the manufacturer's recommendations, preferably by specialist trades people.

The frequency of cleaning of the various components of the system will vary from one business to another depending on the type and regularity of cooking.

Keep a record of all cleaning and maintenance undertaken. The records should include the person and/or company responsible for cleaning and the dates when work was conducted. A date for follow-up cleaning should be programmed with the cleaning company.

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AVOID ODOUR PROBLEMS

Filters in the exhaust hood capture a significant amount of the material released from the cooking process. Generally filters need to be cleaned every 5-14 days and it's recommended that a cleaning schedule be agreed upon with a filter cleaning company. The frequency of filter cleaning depends on many factors and will vary from one business to another. Cleaning of filters must be carried out so that no waste or waste water enters the stormwater system.

Oil and grease accumulate rapidly on the internal surfaces of the **exhaust** system. All internal surfaces of the exhaust ductwork (including the stack and hood) should be cleaned every six months for gas ovens and every three months for charcoal ovens. This will ensure the system is kept in good condition at all times. An approved mechanical ventilation cleaning company should conduct the cleaning and maintenance.

Installing an **odour control** system such as an electrostatic precipitator can minimise food shop odours. However, odour control systems quickly lose their ability to minimise emissions if not maintained and serviced as outlined by the manufacturer. When installing an odour control system, ensure the supplier customises the system to meet the specific requirements of the business. Otherwise the new system may have little or no effect in reducing odours.

LEGAL REQUIREMENTS

Under the Act it is an offence for a person to cause an environmental nuisance (i.e. odour).Contraventions of the Act can lead to an infringement penalty of $100. Penalties may also apply if waste or waste water enters the stormwater system.

For more serious offences, penalties of up to $25,000 may apply.

FOR MORE INFORMATION

Contact Access Canberra on 13 22 81.
Go to www.act.gov.au/accessCBR for more information relating to your industry.

> Retail Food Businesses Information Sheet