

# Food Business Construction Guide



City of  
Mount Gambier

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## AIM

This guide is a brief overview of food safety requirements in South Australia, provided to assist food business owners and operators to meet the requirements of the overarching legislation; *Food Act 2001* and other related acts, regulations, standards and guidelines at the time of printing.

Council endeavours to provide comprehensive advice but the onus is on the food proprietors to familiarise themselves with their legal obligations and act accordingly.

If using this document as a guide outside of City of Mount Gambier, check your local requirements.

The City of Mount Gambier acknowledge the contribution made by Envirand Pty Ltd in creating this guide.



## 1. STRUCTURAL

### 1.1 FLOORS

Floors within the food storage and preparation area should be:

- Suitable for the processes to be undertaken in the premises,
- Able to be effectively cleansed,
- Unable to absorb grease, oil, food particles or water,
- Laid so that there is no ponding of water,
- To the extent that is practical does not provide harbourage for pests,
- Smooth, impervious and free of cracks and crevices.

- In the interest of safety they should be non-slip and non-abrasive,
- Where possible, floors should be light in colour to aid cleaning.

In any room where liquid is likely to be spilled, or where, due to the nature and volume of the work carried out large amounts of water are required for cleaning, the floor may need to be graded and drained to an outlet in accordance with the appropriate building and plumbing regulations.

Carpet and timber joined surfaces are usually not complying. See the table below.

Floor Finish	Wet Areas	Food	Vegetable	Servery	Store Room	Chillers/Freezer	Bin Store	Eating Areas	Comments
Stainless steel non-slip profile	✓	✓	✓	✓	✓	✓	✓	✓	Welded joints
Ceramic tiles	✓	✓	✓	✓	✓	✓	✓	✓	Epoxy grout
Quarry tiles	✓	✓	✓	✓	✓	✓	✓	✓	Sealed
Steel trowel case hardened concrete			✓		✓	✓	✓	✓	Smooth sealed finish, no joints
Carpet / carpet tiles								✓	
Wooden flooring								✓	Sealed
Commercial-grade Poly vinyl sheet	✓	✓	✓	✓	✓	✓	✓	✓	Heat welded joints (not suitable adjacent hot fat appliance)

## 1.1 FLOORS continued

Floor Finish	Wet Areas	Food	Vegetable	Servery	Store Room	Chillers/Freezer	Bin Store	Eating Areas	Comments
Commercial-grade vinyl tiles			✓	✓	✓	✓	✓	✓	Laid over a solid impervious base or an approved underlay is acceptable providing they are laid strictly in accordance with the manufacturer's specifications.
Epoxy resins	✓	✓	✓	✓	✓	✓	✓	✓	

Table 1. Suitability of floor finishes for food premises areas. (Based upon AS 4674-2004 Design, construction and fit-out of food premises Table 3.1)

## 1.2 WALLS

Walls should be designed and constructed in a way that is appropriate for the activities conducted at the food business. All walls in food preparation areas are to be of an impervious material.

All wall surfaces, including doors and their surrounding fittings in the food preparation, handling and storage areas are required to be smooth, impervious, hard wearing and capable of being readily cleansed. Any intersections between walls and ceilings are to be tightly joined, sealed and dustproof. They must be unable to provide harbourage for pests. Walls should be finished in a light colour to easily monitor cleanliness.



*Non-complying - wall cannot be effectively cleaned as not smooth and impervious.*

## 1.2 WALLS continued

Wall Finish	Wet Areas	Food	Vegetable	Servery	Store Room	Chillers/Freezer	Bin Store	Eating Areas	Comments
Stainless steel non-slip	✓	✓	✓	✓	✓	✓	✓	✓	Welded joints. Waterproof screw covers
Ceramic tiles	✓	✓	✓	✓	✓	✓	✓	✓	Epoxy grout
Vinyl sheet	✓	✓	✓	✓	✓	✓	✓	✓	Heat welded joints
Painted plaster					✓		✓	✓	Smooth finish
Feature brick								✓	
Steel sheet							✓		Welded or sealed joints
Aluminum sheet	✓	✓	✓	✓	✓	✓	✓	✓	Welded or sealed joints
Toweled cement			✓	✓	✓	✓	✓	✓	Polished surface
Wood paneling								✓	Wood sealed
Painted brickwork					✓		✓	✓	Flush joints and solid surfaces
Concrete					✓		✓	✓	Smooth finish, sealed joints
Pre-formed panels	✓	✓	✓	✓	✓	✓	✓	✓	H bar joints mastic sealed. In wet areas/ food preparation must be integrated into a dwarf wall or set on plinth.

Table 2. Suitability of wall finishes for food premises areas. (Based upon AS 4674-2004 Design, construction and fit-out of food premises Table 3.2)

### 1.3 CEILINGS

Ceilings should be designed and constructed in a way that is appropriate for the activities conducted at the food business. The ceilings in areas where food is stored, prepared, manufactured or packed should be of a rigid, dustproof, non-absorbent material and free from any cracks or openings. Ceilings must be smooth and should be finished in a light coloured washable paint to allow easier monitoring of cleanliness and extraction effectiveness.



*Non-complying - ceiling panel dislodged and surface is not smooth and impervious.*

Panel ceilings are not complying for new food premises as not smooth and impervious.

Existing food businesses with panel ceilings may need to mitigate the risk of cross-contamination and pest entry.

### 1.4 WATER SUPPLY



There must be an adequate supply of potable water for all activities conducted at the food business. Where the water source comes from a rainwater tank or bore, the proprietor must ensure that the water complies with the Safe Drinking Water Act 2011. Refer to [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au) for further information regarding requirements.

### 1.5 SEWERAGE AND WASTEWATER DISPOSAL

All wastewater from the premises (including dishwashers) must be drained directly to the sewer and/or an approved onsite wastewater treatment system. See 'grease trap' section 2.14 (page 12) for further detail.

### 1.6 STRUCTURAL CERTIFICATION

A Certificate of Occupancy may be required from Council's Building Officers prior to operation (see 2.17).



*Complying - kitchen surfaces are smooth, impervious and in good repair to allow effective cleaning.*



## 2. FIXTURES & FITTINGS

### 2.1 COUNTERS, BENCHES AND SHELVING

All food preparation areas such as tables, benches, shelves, trays, fittings or appliances should be constructed of an impervious durable material and be free from cracks and crevices.

Cabinets and shelving should be designed so that they are capable of being readily cleansed. Suitable surfaces include stainless steel, timber sealed with an approved sealant and other approved materials such as plastic laminate (APDL).

It is recommended that if benches and shelving cannot be fixed directly to the wall that they are located a sufficient distance from the wall to enable effective cleaning to take place.

If shelving is not fixed directly to the wall it should be located approximately 150mm clear of the wall. The lowest shelf should not be less than 150mm from the floor to allow cleaning of floor surfaces.



*Complying - shelving which is in good repair, smooth and impervious.*

### 2.2 COVING

Coving relates to the intersections of the floors with the wall and/or exposed plinth. The provision of coving within wet areas and food preparation areas will assist floor cleansing requirements. The coving material must be impervious and of a material that is suitable for the level of food activity undertaken. The coving material usually extends up the wall to a height of not less than 70mm.



*Complying - floor coving.*

### 2.3 EQUIPMENT

The term fixtures and fittings apply to items such as benches, shelves, sinks, wash basins, cupboards, light fittings, garbage chutes and ventilation ducts.

Equipment refers to those items used in the food preparation, food manufacture and/or the sale of food such as pots, blenders and chopping boards.

Self-serve food displays such as salad bars must have adequate sneeze-guard protection from cross-contamination.



## 2.4 FOOD PREPARATION SINK AND WASHING UP (SCULLERY) FACILITIES



*Complying - separate food preparation sink and scullery sink.*

It is advisable to separate areas for washing food from areas for washing equipment (scullery). For example, where foodstuffs need to be prepared by rinsing immersion in water a separate sink should be installed. To ensure cross contamination does not occur during food production adequate space must be provided between food preparation and the washing and drying of equipment. For example, the placement of draining boards or drying racks within an area used to wash vegetables prior to processing can be a source of cross-contamination.

All washing facilities must have a continuous supply of potable hot and cold water through a single outlet.

## 2.5 CLEANING WASTE-WATER DISPOSAL

Dirty mop water or liquid waste is not to be disposed of in food preparation, scullery or handwash sinks. Dispose of responsibly, and not into stormwater drains.

## 2.6 HAND WASHING FACILITIES FOR FOOD PREPARATION AREAS

Hand wash basins must be located and installed in the immediate area of food preparation (including serving areas). These basins should be located in a position that is easily accessible to staff (i.e. not situated behind doors, walls and/or obstructed by other equipment/items), within five metres of where hands can be contaminated and in the same room.

There must be adequate supply of hot and cold water through a single outlet e.g. Mixer tap. Although no water temperature is specified in the national food safety standards, typically a water temperature of around 40°C is deemed appropriate for hand washing for the majority of commercial and/or food business.

The hand wash basin must be continually supplied with dispensable soap and single use paper towels or other suitable hand drying equipment.



*Complying - mixer tap only at hand wash basin only.*

## 2.7 TOILETS

Toilet facilities are to be provided in accordance with the Building Code of Australia and AS 4674-2004 design, construction and fit-out of food premises.

Toilet facilities shall have self-closing doors and either automated mechanical extraction or an air lock space between the toilet cubicle and kitchen.

Hand wash facilities must be located immediately next to or adjacent to the toilets or toilet cubicles with the provision of warm running water through a single outlet available for all food handlers. A constant supply of dispensed soap and single use towel (or other approved drying facilities) must also be available.

If toilets are provided for customers, access must not be through areas where open food is handled, stored or displayed.

## 2.8 LIGHTING

The Building Code of Australia requires lighting (natural or artificial) to be in accordance with AS 1680. This means that for health, safety and cleaning purposes all areas including storage rooms, freezers and cool rooms must have adequate light.

For new businesses and for ease of cleaning, light fixtures should be recessed into the ceiling or fitted flush to the ceiling. Lights should be covered with approved shatterproof diffuser covers or sleeves to prevent light globe breakages from contaminating

any food products with glass fragments.



*Complying - lighting with shatter-proof covers.*

## 2.9 REFRIGERATION

Adequate refrigeration and/or freezer space must be provided for the storage of all perishable food on the premises. Refrigerators/display cabinets need to be able to keep the food at or below 5 °C and freezers must capable of maintaining the temperature of frozen food at minus 15 °C or below.

Food and food storage containers must not be stored directly on the floor in walk-in fridge/freezers.

Door seals must be kept clean and in good repair. Insects and cockroaches like warm, dark environments such as cracked seals. Seals in good repair allow refrigeration units to run more efficiently.

Domestic fridges and freezer are not designed for commercial use. If using domestic equipment in a food business, monitoring of suitability is required. Monitoring is required as domestic units may not cope with frequent opening and closing over service

periods, higher volumes of stock, cooling of hot food for example. Commercial grade equipment maybe needed for the food activity you are undertaking.

## 2.10 SPLASHBACKS

Splashbacks should adhere directly to the wall so that there is no gaps where pests, such as cockroaches, could harbour or where food particles including food liquids could collect. These splashbacks should not be fixed to the wall by screws and must have a smooth finish, free of any cracks or crevices which could prevent effective cleaning.

Guidelines for splashback construction:

- Ideally, splash backs should be carried to a height of 450mm above the bench tops, hand wash basins and similar fittings. Splash backs situated behind cooking equipment, such as ovens or fryers should be heat resistant. Stainless steel sheet is the preferred splashback behind commercial cooking equipment as it is heat resistant. The splash back should be laid from the floor junction to the underside of the extraction canopy.



*Non-complying - gap between basin and splashback.*

- Floor to wall splashbacks should extend to a height of 1.8 metres from the floor,
- Avoid open joints when attaching sheeting materials to walls,
- Architraves, skirting boards, picture rails should be avoided in floor preparation areas as they collect dust and add to cleaning duties,
- Suitable splashback finishes include stainless steel and laminated plastics (Formica, Laminate etc).

## 2.11 STORAGE

The area required for storage will depend on the level of food activity undertaken by the individual food business.

The storage area includes an appropriate area for cleaning products, packaging materials and dry goods.

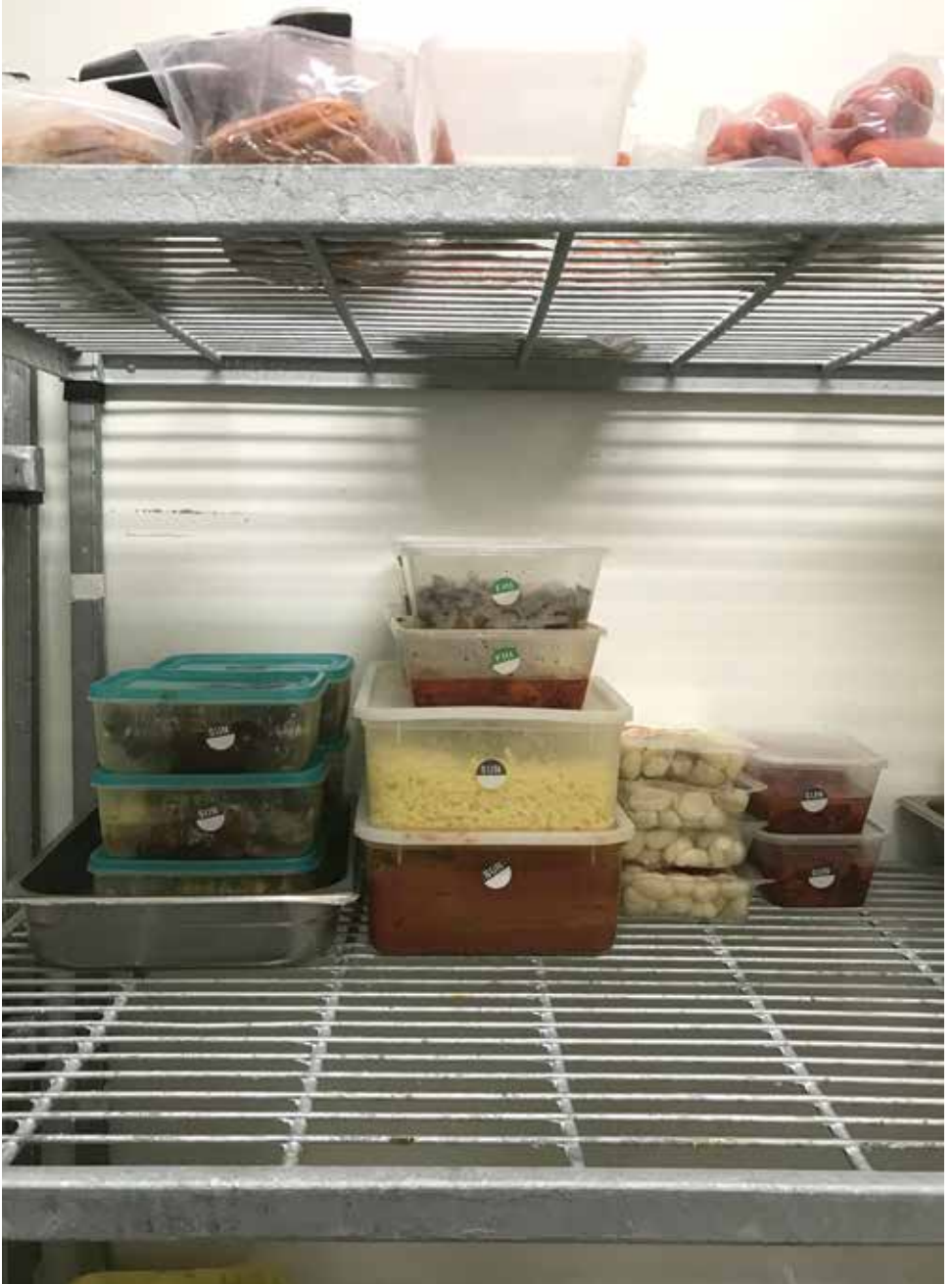
Storage rooms should be of an ambient temperature and not too hot or cold. If the dry store includes other equipment such as fridge, freezers, computer servers they can cause higher temperatures. Consideration of what is stored in this room is recommended.

All food storage areas must be located so that there is no likelihood of non-food items contaminating food or food contact surfaces.

All food storage areas must be adequately pest proofed to ensure that there is no risk of



*Complying - shelving is in good repair and can be cleaned effectively.*



contamination by pests. This would include ensuring that all dry ingredients are kept in impervious airtight food grade containers with tight fitting lids on shelves or on castors.

Adequate food storage space is required to prevent the need for storing food or food storage containers on the floor. This prevents containers being moved from the floor to food preparation areas such as benches which is a potential cause for cross-contamination. Items stored on the floor can also hinder cleaning standards and provide areas for pest harbourage. Storage areas must be organised and clean.

Storage facilities for chemicals/cleaning products and equipment, staff personal effects, office supplies and waste should be kept separate from food storage and preparation areas.

## 2.12 STORAGE OF GARBAGE AND RECYCLABLE MATTER

A separate area with a bin wash facility is to be provided for the storage of rubbish bins and recycling materials.

The storage area should be paved, graded and drained to the sewer or approved wastewater treatment system. Ideally this area is provided with a hot and cold water supply to assist the daily cleansing operations.

This area must be kept clean to prevent pest attraction and

minimise odour complaints.

All storage bins must be capable of being effectively cleaned and liquid waste must not be transferred into food premises (e.g. via foot traffic).



*Non-complying - liquid waste can be transferred via foot traffic into food premise.*

## 2.13 MECHANICAL EXHAUST SYSTEMS

If your food business process involves a cooking and/or heating process, mechanical ventilation is usually required to remove the fumes, smoke, steams and vapours produced. This includes steam produced by commercial dishwashers.

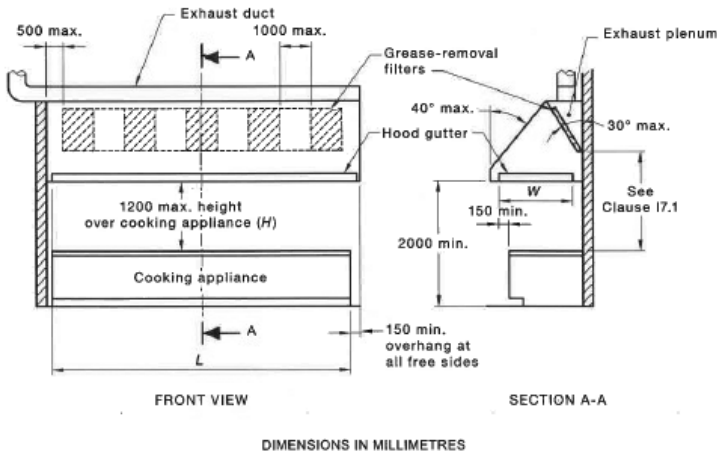
The AS 1668.2-2012 prescribes the requirements for commercial mechanical exhaust systems.

For the majority of food businesses a commercial grade mechanical exhaust canopy that extends 150mm beyond the area occupied by all cooking appliances should be sufficient to capture all cooking vapours including grease laden vapours.

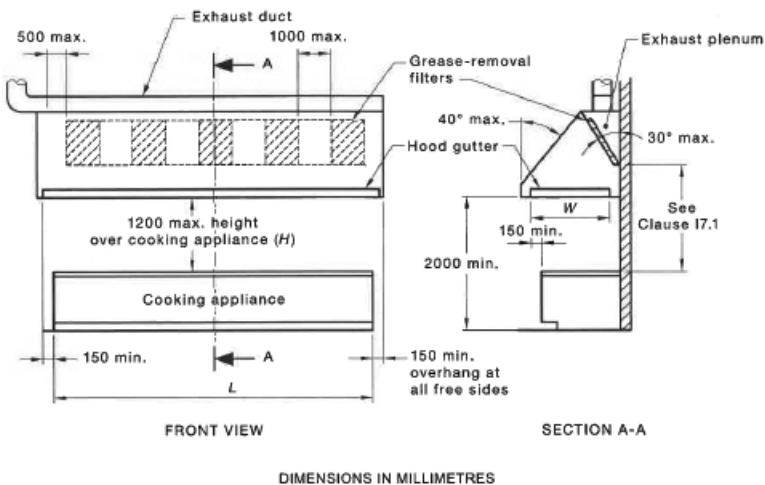
Exhaust hoods shall be provided with approved metal washable dry type grease filters in accordance with AS 1668.2-2012 Appendix E.

For new installations, mechanical exhaust canopies should be 'boxed in' to the ceiling to eliminate an additional ledge or void on the top of the canopy which would require an additional area to cleanse on a routine basis. *Note: Galvanised metal rusts over time and is not recommended.*

The following diagrams are taken from the AS 1668.2-2012, these provide details of clearance height from the floor to the underside of the canopy (two metres) plus the distance from a naked flame to the underside of a canopy (1200mm).



**FIGURE E4 TYPICAL CORNER-MOUNTED HOOD TYPE 2—INCORPORATING GREASE-REMOVAL DEVICES \***



**FIGURE E5 TYPICAL TYPE 3 SIDEWALL HOOD CANOPY INCORPORATING GREASE-REMOVAL DEVICES \***

\* AS/NZS AS 1668.2-2012  
 Figures E4 and E5. © Standards Australia Limited.  
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## 2.14 SERVICE FITTINGS

To ease cleaning activity and to avoid creating hiding places for insect/pests, service fittings such as pipes or electrical conduits, where practicable, should either be concealed in walls or fixed on brackets that are approximately 25mm from the wall.

Service pipes are to be kept at a sufficient height above the floor to make cleansing under and around the equipment and food storage areas easy. The distance that these fittings should be above the floor will vary for each premises as it depends on the food processing activity being undertaken.



*Non-complying - not able to be cleaned effectively.*

If service pipes and fixtures cannot be located above the floor, one option that may be effective in your food business is to box these fixtures and fittings in so cleansing is not restricted and rodents and insects pests are denied harbourage.

## 2.15 GREASE TRAPS

A grease trap is a device designed to collect fat, oils and food scraps and prevent these materials from entering the sewer and potentially blocking drains.

A grease trap may also be required for home based food businesses, depending on the food activity carried out.

The size of the grease trap plus the frequency of emptying (desludging) will be determined by SA Water with an agreement often set. Further information and contact details for SA Water Trade Waste Compliance Officers can be found at [www.sawater.com.au](http://www.sawater.com.au)

Due to the potential of cross contamination, odour generation and insect control, where possible all grease traps should be located externally and not within any food preparation or food storage areas.

## 2.16 PEST CONTROL PROGRAMS

Pest control can be undertaken by the food business and/or by a licensed pest control operator. The frequency and duration of any pest control operation will be directly related to the type of food being manufactured, the standard of hygiene within the premises and the level of activity of the food business.

Common pests usually associated with the food industry are rodents (rats and mice) and insect (cockroaches and ants).



All food businesses should implement an efficient and effective Pest control program. This should include;

- Documented checks and activity results, including any actions undertaken,
- Pest equipment such as bug zappers and baits must not be placed in areas which may be a source of cross contamination (e.g. above food prep benches).
- Documented locations of any pest control equipment (e.g. bug zappers, baits),
- Reference to cleaning and maintenance programs for areas such as flyscreens, bug zappers, floors, walls, ceilings and fridge seals, and
- If self-managed, documentation should include manufacturer's requirements for products used.

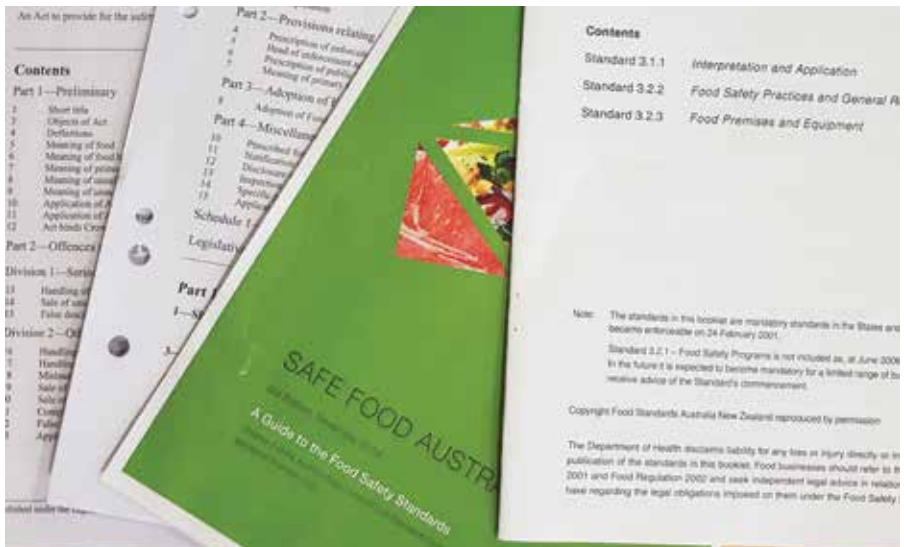
### 3. FURTHER INFORMATION

Council strongly recommends you arrange for a free onsite inspection with Building, Planning and Health Officers prior to commencing a lease or fit-out of a business. Contact can be made either by phoning (08) 8721 2555 or via email at [city@mountgambier.sa.gov.au](mailto:city@mountgambier.sa.gov.au)

Links to helpful websites and fact sheets can be accessed via the food safety page on Council's website, [www.mountgambier.sa.gov.au](http://www.mountgambier.sa.gov.au) including a food premises checklist for fit-out and Food Business Information Guide.

It is recommended that owners and operators make themselves familiar with regulatory documents, such as:

- Food Act 2011 & Food Regulations 2017 [www.legislations.sa.gov.au](http://www.legislations.sa.gov.au)



- Food Standards Australia New Zealand (FSANZ), Food Standards Code  
www.foodstandards.gov.au
- AS 4674-2004 Design, construction and fit-out of food premises
- Safe Food Australia - A Guide to the Food Safety Standards

### 3.1 ENVIRONMENTAL HEALTH OFFICER – RIGHT TO INSPECT A FOOD BUSINESS

Environmental Health Officers (EHO) are employed by local government to undertake duties in the realm of public health, including routine food safety inspections of food businesses and are often referred to as “health inspectors”.

An EHO is authorised to carry out duties under the SA Food Act 2001 (authorised officers), which includes the power to enter a food business at any

reasonable time (e.g. open for business). This means that the owner/manager does not have to be present at the time and an officer will make contact with the most senior staff member present upon arrival, introduce themselves and show their identification so that staff know who they are. Penalties can be imposed for anyone found to be obstructing an EHO during the course of their duty.

Please make all staff aware of the above and remember that an EHO will most likely carry out routine food safety inspections at an unannounced time.

Note appointments are usually made for homebased businesses and community groups unless an unannounced inspection is warranted.



# NOTES

A series of 25 horizontal dotted lines for taking notes.





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