

Australian Standard™

Design, construction and fit-out of food premises

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The following are represented on Committee BD-095:

Australian Building Codes Board
Australian Industry Group
Australian Institute of Environmental Health
Australian Local Government Association
Catering Institute of Australia
Food Standards Australia New Zealand
Health Department of Western Australia
Queensland Health
Restaurant and Catering New South Wales

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PREFACE

This Standard was prepared by Standards Australia Committee BD-095, Retail Food Premises, in response to a request from the Food Standards Australia New Zealand (formerly ANZFA), to provide the food industry, the construction industry and governments across Australia with uniform criteria for the hygienic design, construction and fit-out of food premises.

The objective of this Standard is to provide criteria for architects, the construction industry and health and building regulators to cooperatively ensure that buildings used by food businesses are designed, constructed and fitted out in compliance with the requirements of the Australian Food Standards Code, Standard 3.2.3, *Food Premises and Equipment*, which will assist food businesses to produce safe food.

The scope of the Standard is limited to permanent buildings used by the food service industry, by food retailers and by small-scale food manufacturers. The Australian Building Codes Board (ABCB) is also considering including specific requirements for food premises in the Building Code of Australia (BCA).

When preparing plans for new food premises or alterations to existing premises, advice should be sought from the appropriate government agency responsible for food safety in the area where the premises is located.

Notes to clauses in this Standard do not form a mandatory requirement for compliance with this Standard.

The Committee wishes to acknowledge the assistance of the Australian Institute of Environmental Health in the preparation of this document, particularly for permission to use their publication *The National Code for the Construction and Fitout of Food Premises*, which is superseded by this Standard. Valuable assistance was also given by organizations experienced in the design and construction of food premises and the Committee acknowledges their help.

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FOREWORD

It is essential for Australian consumers that food is safe to eat and free from contaminants. Experience has shown that food prepared and sold from food premises that are clean and provided with essential services and equipment for preparing and holding food will enable food businesses not only to meet legal obligations to handle food safely but make it easier for them to do so.

Food businesses are required under State and Territory food legislation to use premises and equipment that comply with Standard 3.2.3, *Food Premises and Equipment*, of the Australia New Zealand Food Standards Code.

This Australian Standard provides criteria on design and construction to assist with compliance with Standard 3.2.3 for new buildings and alterations to existing buildings. Specifically, this Standard aims to ensure that food premises—

- (a) are easy to clean and maintain clean;
- (b) have sufficient space, facilities and suitable equipment to produce safe food;
- (c) are provided with services such as potable water, effective sewage disposal and sufficient light and ventilation for the food handling operations;
- (d) provides facilities for staff to maintain standards of personal hygiene and equipment cleanliness that will protect food from contamination; and
- (e) are proofed against entry by and harbourage of pests.

Food businesses should also be aware of obligations under the other food safety standards that will impact on the design and construction of their premises. Accordingly, they should consult their local health departments prior to alterations or new works. Standard 3.2.2, *Food Safety Practices and General Requirements of the Australia New Zealand Food Standards Code*, specifies obligations in relation to food handling operations. Businesses will have to ensure that the equipment or facilities that are necessary to carry out their specific food handling operations are provided on their premises.

This Standard reflects long established design and construction criteria for food premises. Therefore, most well designed and constructed premises will already meet the obligations under this Standard and the food safety standards.

The Standard will ensure that design, construction and fit-out of food premises are maintained at high standards to facilitate the production of safe food.

STANDARDS AUSTRALIA

Australian Standard

Design, construction and fit-out of food premises

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides design, construction and fit-out criteria for new food premises and for the renovation or alteration of existing food premises. The scope of the Standard is limited to permanent buildings used by the food service industry, by food retailers and by small-scale food manufacturers.

This Standard does not provide criteria for the design, construction and fit-out of the following premises:

- (a) Temporary food premises.
- (b) Mobile food premises.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1319 Safety signs for the occupational environment
- 1345 Identification of the contents of pipes, conduits and ducts
- 1680 Interior lighting
- 1680.2.0 Part 2.0: Recommendations for specific tasks and interiors
- 2945(Int) Batch-type washer/disinfectors for health care facilities
- 3554 Adhesives—Epoxy—For raised pavement marker installation
- 3958 Ceramic tiles
- 3958.1 Part 1: Guide to the installation of ceramic tiles
- 3958.2 Part 2: Guide to the selection of a ceramic tiling system

AS/NZS

- 1668 The use of ventilation and airconditioning in buildings
- 1668.1 Part 1: Fire and smoke control in multi-compartment buildings
- 1668.2 Part 2: Ventilation design for indoor air contaminant control
- 1680 Interior lighting
- 1680.1 Part 1: General principles and recommendations
- 1680.2.4 Part 2.4: Industrial tasks and processes
- 3500 National Plumbing and Drainage Code
- 3500.1.2 Part 1.2: Water supply—Acceptable solutions
- 3500.2.2 Part 2.2: Sanitary plumbing and drainage—Acceptable solutions
- 3500.4.2 Part 4.2: Hot water supply systems—Acceptable solutions

BCA Building Code of Australia

ANZFA Food Standards Code of Australia

1.3 DEFINITIONS

1.3.1 Open food

Open food is—

- (a) food not protected by packaging; or
- (b) fruit and vegetables that have been cut or otherwise prepared for eating and are not intended to be further washed, peeled, hulled or shelled before being consumed.

1.3.2 Wet washed areas

Areas in food premises where the walls, floors and ceilings resist frequent contact with steam, water or other liquids.

NOTE: Wet areas may be areas of the premises that are cleaned using chemicals and are hosed down or washed with water. Areas where equipment and utensils are washed would also likely to be 'wet areas'. It also includes areas where the walls and floors are in contact with liquid from cooking processes.

1.3.3 Rinsing baskets

Containers, usually of wire or heat-resistant plastic, that can be submerged in very hot water to sanitize utensils.

1.3.4 Potable water

Water that is acceptable for human consumption.

SECTION 2 DESIGN AND CONSTRUCTION REQUIREMENTS FOR FOOD PREMISES

2.1 GENERAL REQUIREMENTS

2.1.1 Appropriate for purpose

The premises shall be designed so that food flow is in one direction from receipt, to storage, to preparation, to packaging/serving/dispatch (see Figure 2.1).

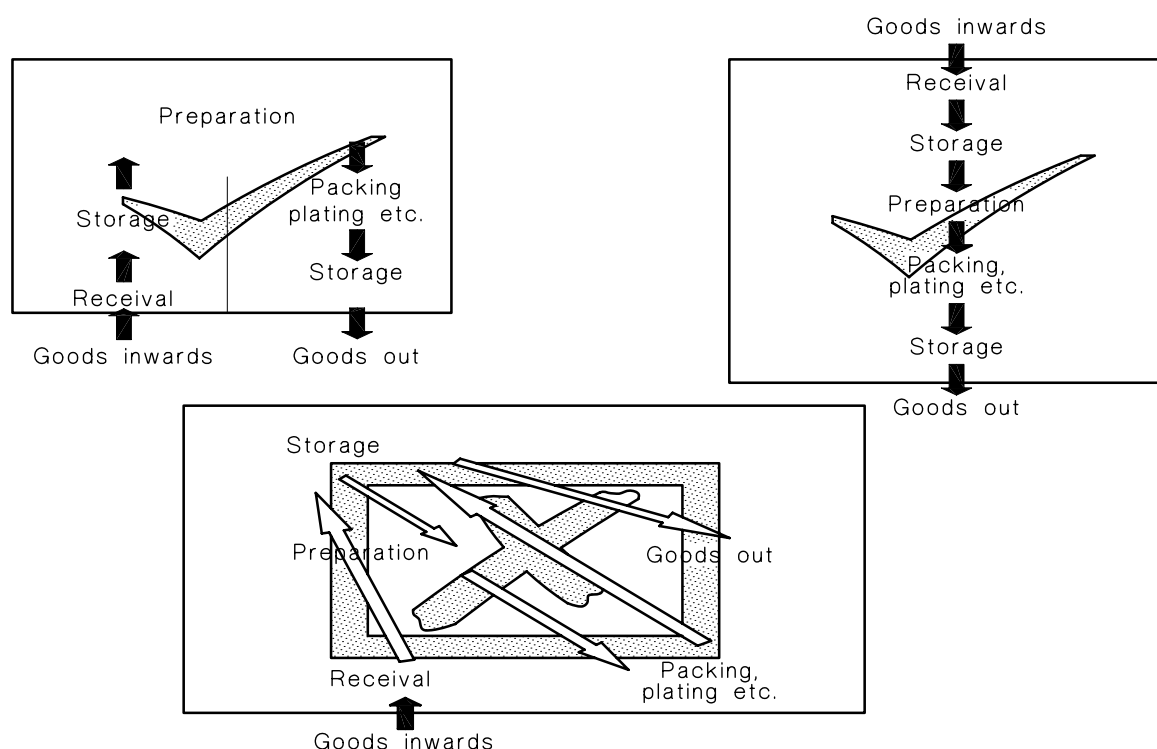


FIGURE 2.1 TYPICAL EXAMPLES OF CORRECT FLOW OF FOOD THROUGH PREMISES

2.1.2 Separation of areas

Areas intended to be used for storing or preparing food or for storing food packing and equipment used for food preparation shall be designed and constructed to be physically separated from—

- (a) chemical storage areas;
- (b) living and sleeping areas;
- (c) toilets and change rooms;
- (d) garbage and recyclable material storage areas/compactor areas;
- (e) areas where animals are permitted (under food safety law or other law); and
- (f) areas used for activities which could contaminate food or food preparation surfaces, e.g., receipt of soiled laundry.

2.1.3 Provision for adequate space

Adequate space shall be provided on the premises for food handlers and other staff to handle food and perform other activities that are part of the food business.

Space shall be provided for—

- (a) food preparation and service;
- (b) separation, preparation and storage of raw food, from preparation and storage of cooked, and other ready to eat foods; and
- (c) washing and sanitizing operations for utensils and equipment.

Space shall be provided for storage of—

- (d) dry goods;
- (e) chilled and frozen food;
- (f) fresh fruit and vegetables;
- (g) returned/recalled food;
- (h) packaging material;
- (i) utensils, equipment;
- (j) cleaning equipment and chemicals;
- (k) clothing and personal belongings of staff;
- (l) garbage and recyclable material;
- (m) hot water (and cold water if storing on site); and
- (n) any other goods or materials that are associated with operating the food business on the premises.

The amount of space required will depend on the food operations proposed for the premises.

Coolroom, refrigerator and freezer capacity (including display equipment) and storage and display capacity for hot food shall be adequate for the business to—

- (i) comply with Food Safety Standard 3.2.2 of the Food Standard Code for the storage and display of potentially hazardous foods; and
- (ii) ensure that there is sufficient additional capacity for any other foods that the business stores chilled, frozen or hot.

2.1.4 Cleaning and sanitizing of premises

The layout and design of premises shall provide access for cleaning and for sanitizing, if required.

2.1.5 Proofing against pests

Where premises are enclosed, windows shall be protected against the entry of pests by being—

- (a) tight-fitting and permanently fixed closed;
- (b) fitted with mesh screens that can be removed for cleaning; or
- (c) protected by a permanent mesh screen that can be cleaned in place.

Entrances/exits, serving hatches and similar openings to food premises shall be protected against the entry of pests by—

- (a) tight-fitting solid self-closing doors, roller shutters or other means of closing off the entrance; or
- (b) tight-fitting self-closing mesh screen doors.

Where doors and windows (and other openings) need to be pest-proofed against flying insects only, door and windows may be protected by—

- (i) air curtains that effectively prevent insects entering the premises (restaurants and similar);
- (ii) being fitted with plastic strip curtains that effectively exclude flying insects;
- (iii) opening into vestibules with self-closing doors; or
- (iv) fitting the bottom edge of doors or bottom sash of windows (where practicable) with a seal.

NOTE: This is to allow doors of premises to be open during trading. These requirements do not apply if food premises opens into a larger structure such as a shopping mall, airport or office building, or into an attached structure and the attached or larger structure effectively protects the food premises against the entry of pests.

Where pipework, drains, cables and ducts penetrate walls, ceilings and roofs, holes shall be sealed, filled and finished to prevent the entry of pests.

Spaces between adjoining structures, such as between coolroom walls and premises walls, shall be accessible for inspection and cleaning or sealed with a suitable compound so that they are inaccessible to pests.

Spaces between the top surface of equipment or structures such as coolrooms shall be accessible for inspection and cleaning or sealed or boxed in so that they are inaccessible to pests.

2.1.6 Installation of insect control devices

Insect control devices shall be installed so that the devices are not located directly over food preparation working areas, exposed food, clean equipment and unwrapped packaging material.

Insect control devices that are used to electrocute or stun flying insects shall be designed to retain the insect within the device.

NOTE: This to reduce the likelihood that insect particles from the device may contaminate food or food contact surfaces.

2.1.7 Exclusion of dirt, dust, odours, smoke and other contaminants

Premises shall be designed and constructed to exclude, to the extent that is practicable, the introduction of outside contaminants, for example, dirt, dust, fumes, and smoke.

2.2 WATER SUPPLY

2.2.1 Use of potable water

Water used for any activities involved in the preparation of food, personal hygiene, cleaning and sanitizing shall be potable.

Non-potable water may be used for cleaning and similar uses, only where it will not compromise the safety of food on the premises.

Pipes carrying non-potable water shall be identified as containing non-potable water in accordance with AS 1345.

Taps in food handling areas discharging non-potable water shall be identified as discharging non potable water in accordance with AS 1319.

NOTE: Advice on suitability of water may be obtained from the Australian Drinking Water Guidelines.

2.2.2 Compliance with Australian Standards

The water supply shall be supplied in accordance with the requirements of AS/NZS 3500.1.2.

Heated water shall be supplied in accordance with the requirements of AS/NZS 3500.4.2.

NOTE: It is recommended that water storage tanks are designed and built in accordance with Guidance on the Use of Rainwater Tanks (National Environmental Health Forum Monographs, Water Series No. 3 1998) which provides advice on matters including water quality, construction and installation of tanks, maintenance and repairs and disinfection.

2.3 SEWAGE AND WASTE WATER DISPOSAL

2.3.1 Access opening

Access openings to the sanitary drainage system shall not be located in areas of the premises where open food is handled.

2.3.2 Grease arrestors

Grease arrestors shall not be located in areas where food, equipment or packaging materials are handled or stored.

Access to grease arrestors for emptying shall not be through areas where open food is handled or stored or where food contact equipment and packaging materials are handled or stored.

2.4 GARBAGE AND RECYCLABLE MATERIALS

2.4.1 General requirements

Provision shall be made for storage of garbage containers, containers for recyclable material and compactors in an external area of the premises or in a room specifically for that purpose.

2.4.2 External areas used for storage of putrescible material

Ground areas where garbage containers holding putrescible material and containers used for storage of putrescible recyclable material and recyclable oil are stored shall be—

- (a) provided with a hose tap connected to the water supply;
- (b) paved with impervious material; and
- (c) graded and drained to a waste disposal system in accordance with the requirements of the relevant regulatory authority.

NOTE: Regulatory requirements may vary between jurisdictions.

2.4.3 Rooms where garbage and garbage bins are stored (including refrigerated garbage rooms)

The floor of garbage rooms shall be—

- (a) impervious;
- (b) coved at the intersection with the walls with coving integral to the floor; and
- (c) graded and drained to a floor waste gully connected to the sewerage system and traps (where required) of the premises.

Walls shall be finished with a smooth, impervious surface.

NOTE: Criteria on materials is given in section on floors, walls and ceilings (cross reference).