

## Building construction guidelines for dairy manufacturers

This note aims to provide manufacturers with specific and practical information that will help in planning and developing premises that are fit for the purpose of producing dairy products.

The note is applicable to those new to the industry and also manufacturers wanting to upgrade or expand their existing premises.

### Requirements for all manufacturers

Current regulation for Victorian dairy manufacturers making product for domestic sale is very broad on mandated requirements for premises design and construction. Regulatory requirements are defined in the *Code of Practice for Dairy Food Safety 2002*<sup>1</sup> (CoP) and the *Australia New Zealand Food Standards Code, Standard 3.2.3 - Food Premises and Equipment*.<sup>2</sup>

The CoP states: 'Dairy manufacturing premises and equipment must be designed, situated, constructed and maintained in a manner that prevents the introduction of hazards, contaminants and the cross-contamination of finished product and allows adequate cleaning and sanitation.' This deliberately non-prescriptive approach allows for new and innovative development within the industry, with the onus being on the manufacturer to demonstrate how they comply with the CoP.

Under the CoP, plans for any new or significantly altered manufacturing site must be submitted for review by Dairy Food Safety Victoria prior to construction. This allows for any possible oversight in complying with regulations by the manufacturer to be identified at an early stage, and could save costly modifications at some later date.

The Food Standards Code 3.2.3 mandates requirements for:

- Division 2 – Design and construction of food premises
- Division 3 – Floors, walls and ceilings
- Division 4 – Fixtures, fittings and equipment
- Division 5 – Miscellaneous (storage facilities, toilet facilities, food transport vehicles)

### Requirements for export registered premises

For manufacturers intending to make product for export, there are significant additional criteria under the Department of Agriculture, Fisheries and Forestry (DAFF)

regulations that must be met. These are documented in the *Export Control (Milk and Milk Products) Orders 2005*.<sup>3</sup>

Application for approval to become a 'registered establishment' needs to be sought and granted. The following sections of these Orders relate to the level of detail required in plans and specifications for new or altered premises:

- Schedule 1 Registration
  - Part 1 – Plans and specifications for registration
    - Division I – Application for registration
    - Division II – Alterations and additions

Further to this, the clauses listing specific structural requirements are found in:

- Schedule 3 Structural requirements
  - Part 1 – General requirements:
    - Division I – Premises, equipment and vehicles
      - Provision of facilities and equipment
      - Construction of premises
      - Construction must comply with plans and specifications
      - Immediate surrounds
      - Floors
      - Walls and ceilings
      - Fixtures, fittings and equipment — general requirement
      - Construction of fixtures, fittings and equipment
      - Food carrying compartments, container system units and vehicles
      - Measuring devices
      - Storage facilities for items other than milk and milk products
    - Division II — Cleaning and sanitising facilities
      - Cleaning and sanitising premises and equipment
      - Hand washing facilities
    - Division III — Amenities
      - Amenities
    - Division IV — Essential services
      - General requirement
      - Effluent and waste
      - Facilities for storage of waste and inedible material
      - Lighting
      - Ventilation
      - Water supply

### Further information sources

The *Guidelines for Food Safety: Dairy Food Manufacturers*<sup>4</sup>, developed by Dairy Food Safety Victoria, provides an overview on what should be considered in the construction of dairy premises. This is a useful guide, although not as detailed as the mandatory requirements for export registered premises. Topics include:

- General construction
- Internal structure and fittings
- Access points to the external environment
- Drains
- Ventilation
- Water
- Lighting
- Personal hygiene facilities and toilets.

The *Operational Guideline: Design and Construction of Dairy Premises and Equipment*<sup>5</sup> is a useful reference guide, and provides greater detail on what aspects to consider when building or altering a dairy manufacturing premise.

Topics include:

- 3.0 Layout of the site
- 4.0 Layout for buildings
- 5.0 Design and construction of buildings
- 6.0 Building services
- 7.0 General requirements for manufacturing equipment
- 8.0 Layout of manufacturing equipment
- 9.0 Process engineering
- 10.0 Requirements for specific types of equipment

The *Australian Code of Practice for Dairy Factories*<sup>6</sup>, although no longer a regulatory document, is still a very useful and practical guide. It contains specific details on topics such as the design and dimensions for the various components that comprise a production facility, recommended materials to use in construction, and a section on equipment and ancillary services.

### Further considerations

In addition to the planning and construction guidance material and regulations already outlined, further consideration should be given to the types of products that are intended to be manufactured. For example, a dried milk powder manufacturing or blending operation will have a completely different set up for effective cleaning procedures (minimal water usage) as compared to cheese manufacturing, which requires extensive drainage and surfaces impervious to moisture. In all cases, the design and construction undertaken needs to be 'fit for purpose'.

### Key points to consider

- There are specific planning and construction licence requirements that dairy manufacturers must comply with in Victoria.
- Significant differences exist, however, between those for export and domestic registered premises.
- By utilising some of the additional guidance material or suggested references, manufacturers should be able to plan and construct a premise that will meet all requirements and be 'fit for purpose'.

### References

1. Dairy Food Safety Victoria, *Code of Practice for Dairy Food Safety, Section 5.2.4: Dairy Manufacturing Premises and Equipment*, DFSV, Melbourne, 2002.
2. Food Standards Australia New Zealand, *Australia New Zealand Food Standards Code: Standard 3.2.3 Food Premises and Equipment*, Commonwealth of Australia, Canberra, 2012.
3. Department of Agriculture, Fisheries and Forestry, *Export Control (Milk and Milk Products) Orders 2005. Schedule 1: Registration*, Commonwealth of Australia, Canberra, 2005.
4. Dairy Food Safety Victoria, *Guidelines for Food Safety: Dairy Food Manufacturers. Section 6: Premises Construction*, DFSV, Melbourne, 2006.
5. New Zealand Food Safety Authority. *Operational Guideline: Design and Construction of Dairy Premises and Equipment*, NZFSA, Wellington, 2006.
6. Department of Primary Industry (superseded), *Australian Code of Practice for Dairy Factories*, Commonwealth of Australia, Canberra, 1986.

### Further information

Further food safety technical information is available at [www.dairysafe.vic.gov.au](http://www.dairysafe.vic.gov.au)

Or contact Dairy Food Safety Victoria on (03) 9810 5900 or [info@dairysafe.vic.gov.au](mailto:info@dairysafe.vic.gov.au)

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