



## **Minister's Specification SA H3.2**

**July 2004**

# **Concessions and additional requirements for farm buildings**



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# Development Act 1993

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### PREFACE

Minister's Specification SA H3.2 has been developed because certain types of farm buildings may be classified in accordance with Part A3 of the Building Code of Australia (BCA) as Class 7 buildings or Class 8 buildings, and many of the deemed to satisfy provisions may not be appropriate. This Specification provides a standard for assessing and approving applications for Class 7 or Class 8 farm buildings that will achieve uniform and acceptable levels of safety, health, and amenity. Construction of Class 7 or Class 8 farm buildings will be able to include standard designs to the BCA and this Specification, which will satisfy the objectives of the BCA and be acceptable to relevant authorities.

This Minister's Specification does not detract from the role of the relevant authority in determining the appropriate Classification to be applied to a building, or in approving alternative solutions to the performance requirements of the BCA as may be appropriate.

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### SCOPE AND APPLICATION

This Specification applies to farm buildings that are classified as Class 7 or Class 8 buildings in accordance with Part A3 of the BCA, in which the total number of people accommodated does not exceed 1 person/200 m<sup>2</sup> of total floor area, or six people (whichever is the greater).

Design and construction of Class 7 or Class 8 farm buildings in accordance with this Minister's Specification, and other relevant requirements of Volume 1 of the BCA, is deemed-to-satisfy the relevant performance requirements of the BCA.

This Minister's Specification provides specific requirements, and concessions to some BCA requirements, as they relate to Class 7 and Class 8 farm buildings. Any relevant BCA requirements not addressed in this Minister's Specification are still applicable to the design and construction of Class 7 and Class 8 farm buildings.

### REFERENCED DOCUMENTS

Building Code of Australia (BCA), Volume 1

AS 1657 Fixed platforms, walkways, stairways and ladders—Design, construction and installation

AS/NZS 2293.1 Emergency evacuation lighting for buildings, Part 1: System design, installation and operation

AS 2419.1 Fire hydrant installations, Part 1: System design, installation and commissioning

AS 2444 Portable fire extinguishers and fire blankets—Selection and location

South Australian Fire Services Fire Safety Department Policy Number 0014 - Water storage tanks, configuration of above ground tanks used to supply fire fighting systems



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### INTERPRETATION

**Farming:** For the purpose of this Minister's Specification, farming means the use of a building for any purpose of agriculture, cropping, grazing, animal husbandry, intensive animal keeping, horticultural growing facilities or dairy.

**Farm building:** For the purpose of this Minister's Specification, a farm building is a building that is used for the purpose of farming.

**Required** means required to satisfy a Performance Requirement or a Deemed-to-Satisfy Provision of the BCA as appropriate.

### CONCESSIONS AND ADDITIONAL REQUIREMENTS

#### 1 FIRE RESISTANCE

##### 1.1 Requirement for open space around hay sheds

An open space complying with clause C2.4(a) (Requirements for open spaces and vehicular access) of Volume 1 of the BCA shall be provided around each hay shed, for a distance not less than the maximum hay storage height x 1.5.

##### Explanatory information

The open space around hay sheds is necessary for fire fighting access, and also to allow space for the hay to be pulled-apart in order to control a fire in stacked hay bales.

#### 2 ACCESS AND EGRESS

##### 2.1 Exit travel distances

The maximum distance of travel to an exit, as specified in D1.4 (Exit travel distances) of Volume 1 of the BCA, is extended to 60m for farm buildings. The maximum distance from a point on the floor to a point from which travel in different directions to 2 exits is available shall remain at 20m.

##### 2.2 Construction of exits

Thresholds of doorways in Class 7 and Class 8 farm buildings can incorporate a step not exceeding 700 mm in height, where necessary due to the operational requirements of the building.

Class 7 and Class 8 farm buildings need not comply with D2.15 (Thresholds) and D2.20(b) (Swinging doors, direction of swing) of Volume 1 of the BCA.



The path of travel to an exit can incorporate a fixed platform, walkway, stairway, ladder and riser, handrail, balustrade or other barrier attached thereto complying with AS 1657.

### Explanatory information

Some chicken keeping buildings and pig keeping buildings incorporate low-height concrete walls along the sides of the building, which enable the litter to be cleared away by a grader after each growing cycle. It is not practicable to have breaks in the wall for exit doors. In the event of an emergency, any occupants of the building are required to step over the low-height wall when using a side exit door. Therefore, a concession is provided for the requirement for a level threshold at required exits.

For maintenance and general operational reasons, it may be more practical to have exit doors in farm buildings opening inwards. The number of people likely to use an exit door in a farm building will probably be low. This minimises the risk due to delays caused by opening a door towards the person attempting to gain egress.

It is assumed that the occupants will be familiar with the building, and therefore, will be able to quickly identify exits and traverse obstacles in order to gain quick and efficient egress in case of an emergency.

## 2.3 Access for people with disabilities

In farm buildings, it is not necessary to provide access for people with disabilities to any area if access would be inappropriate because of the particular purpose for which the area is used.

### Explanatory information

This provision is based on clause D3.4 (Concessions) of Volume 1 of the BCA.

Due to the variable and diverse nature of farming carried out within certain types of farm buildings, together with the nature of access normally provided to and from farm buildings, it would be inappropriate to require specific compliance with the deemed-to-satisfy provisions of the BCA. Difficulties that are encountered within the site and farm buildings may include:

- Large differences in floor levels.
- Lack of designated footpaths, and lack of defined paths of travel within the buildings.
- Minimal illumination.
- Lack of public address and occupant warning systems
- Uneven internal floor surfaces
- Straw or wood shavings litter system covering the floor
- Thresholds at exit doors that are not level with the floor
- Feed and water lines suspended just above the floor
- Live animals in the building

The provision of access features for people with disabilities must be assessed in relation to the nature and inherent design features of the farm building and the anticipated tasks to be carried out in the building.



## 3 SERVICES AND EQUIPMENT

### 3.1 FIRE FIGHTING EQUIPMENT

#### 3.1.1 Fire hydrants

Where fire hydrants are required in accordance with E1.3 of Volume 1 of the BCA, they must be installed in accordance with AS 2419.1, and where relevant, South Australian Fire Services Fire Safety Department Policy Number 0014, except that the following concession is provided for minimum water supply quantity. Whereas Clause 3.2 of AS 2419.1 requires water supply quantity suitable for a duration of 4 hours, the minimum capacity of the source of water supply for a fire hydrant installation shall be not less than that necessary to satisfy the minimum flow rates specified in Clauses 4.5.1 and 4.5.2 of AS 2419.1 as appropriate for a duration of 1 hour.

#### Explanatory information

The above concession provides that, where fire hydrants are required, the farm building must have a dedicated water supply available that is sufficient to fight a fire for a duration of 1 hour. However, it should be remembered that this is a deemed to satisfy provision, not an absolute requirement. An applicant for building rules consent for a farm building can still seek approval of an alternative solution, with the support of the fire authority, as appropriate for the particular circumstances.

#### 3.1.2 Fire hose reels

Farm buildings need not comply with clause E1.4 (Fire hose reels) of Volume 1 of the BCA.

#### 3.1.3 Portable fire extinguishers

Portable fire extinguishers complying with AS 2444 shall be provided and located as follows:

- a. One extinguisher rated at not less than 4A60BE (dry chemical powder) at or adjacent to every required exit door.
- b. Where a room containing flammable materials or electrical equipment (eg a control room) is attached to the building, one extinguisher rated at not less than 5BE (carbon dioxide) in each attached room.
- c. In open-walled farm buildings (where the spaces between columns are open, and there is no specific exit point for that part of the building), one extinguisher rated at not less than 4A60BE (dry chemical powder) per 500m<sup>2</sup> or part thereof.

Portable fire extinguishers are not required in hay sheds not exceeding 500m<sup>2</sup> in floor area.



## 3.2 EMERGENCY LIGHTING AND EXIT SIGNS

### 3.2.1 Emergency lighting

Every emergency lighting system that is required by clause E4.2 of Volume 1 of the BCA to be installed in a Class 7 or Class 8 farm building, must:

- a. utilise light fittings that comply with the requirements of AS/NZS 2293.1; and
- b. utilise a 1x36W fluorescent batten light fitting, located at not more than 20m intervals, in both directions (parallel and perpendicular to the light fitting).

In Class 7 or Class 8 hay sheds, any area that is used primarily for storage of hay can be excluded when calculating the floor area of the storey or room of the building for the purpose of determining emergency lighting requirements in accordance with E4.2 of Volume 1 of the BCA.

Emergency lighting is not required in farm buildings where automatic back-up power is provided by a fuel-driven back-up generator, or where no artificial lighting is provided in the building.

Emergency lighting is not required in buildings used only for storage of farm machinery (machinery/implement sheds).

#### **Explanatory information**

Emergency lighting operates when there is a power failure. In farm buildings where automatic back-up electrical power supply is provided, it is recognised that there may be a very short delay (between 3 seconds and 1 minute) from the time of power failure to time of back-up power operating.

In some farm buildings, no artificial lighting is provided, the operations are all carried out under natural lighting conditions. In such buildings, it is not necessary to provide emergency lighting to supplement normal artificial lighting, because artificial lighting is not normally required as part of day to day operations.

It is assumed that the occupants will be familiar with the building, and therefore, will be able to quickly identify exits and traverse obstacles in order to obtain quick and efficient egress in case of an emergency, and in low lighting conditions.



### 3.2.2 Exit signs

Luminous exit signs (ie, signs that 'glow in the dark') can be used in intensive animal keeping buildings.

#### Explanatory information

There is no recognised standard for luminous exit signs. It is known that luminous signs lose their effectiveness with time. Therefore, it is important that luminous exit signs are checked at least annually, and replaced as necessary.

Luminous exit signs are permitted because it is recognised that illuminated exit signs can have adverse effects on the behaviour and welfare of the animals in the building.

Illuminated exit signs must comply with AS/NZS 2293.1.

#### Note

Part 7.5 of AS/NZS 3000:2000 'Wiring Rules' requires that electrical equipment to be installed in certain locations where general hosing down operations are carried out shall have a degree of protection of at least IPX5. The Wiring Rules define the IP Classification as being a degree of protection in accordance with AS 1939.

The purpose of this note is to draw attention to this requirement, as some types of farm buildings are subject to general hosing down operations.

