

## Fire safety in early childhood centres

### 1 Purpose

This technical information sheet is to provide Fire & Rescue NSW (FRNSW) advice safeguarding occupants of an early childhood centre (ECC) from illness or injury during a fire emergency event, and provide suitable measures to assist conduct firefighting operations.

### 2 Scope

This technical information sheet details:

- (a) the fire safety provisions required by legislation applicable to an ECC
- (b) the additional fire safety systems recommended by FRNSW to support firefighting operations
- (c) the minimum egress provisions recommended by FRNSW to safeguard ECC occupant evacuation during an emergency.

### 3 Application

This document applies to an ECC located, or proposed to be located, not more than 12m or four storeys above ground level, or not more than one storey below ground level.

**Note:** Where an ECC is proposed to be located higher than 12m or four storeys above ground level, the proposal should be discussed with both the regulatory authority and FRNSW and assessed on a case-by-case basis.

This document is intended to be used by fire safety engineers, certifiers, and Local Government Authorities (LGAs) for planning new ECCs or redevelopment of existing ECCs within NSW.

The considerations within this document do not overrule any national, state or local government requirements.

**Note:** For further information, refer to the relevant legislation and DCP of the LGA applicable to the ECC.

### 4 Background

#### 4.1 Classification of an ECC

The classification of an ECC by the *National Construction Code (NCC)*<sup>1</sup> is determined through the application of the following clauses:

- Clause NSW A1.1 of the *NCC* defines an ECC as 'a preschool, kindergarten or child-minding centre for the care or training of more than 5 children'.
- Clause NSW A1.1 of the *NCC* also identifies an ECC as an assembly building.
- Clause A3.2 of the *NCC* classifies an assembly building as a Class 9b building.

<sup>1</sup> In this document, *NCC* means the *National Construction Code Series Volume One, Building Code of Australia Class 2 to Class 9 Buildings*, as amended from time to time

## 4.2 FRNSW view on classification

With the classifying of an ECC as a Class 9b assembly building, the *NCC* deems an ECC to have a similar set of risks (or risk profile) to that of other assembly buildings such as a library, theatre, public hall, a primary or secondary school, cinema or sports stadium.

Due to the need to provide assisted evacuation of occupants in the event of an emergency, an ECC has a higher risk profile to that of other assembly buildings identified by the *NCC*. An ECC may also include provision for temporary sleeping by occupants unlike other assembly buildings.

FRNSW therefore considers that an ECC should be treated differently. This document addresses the higher risk profile of an ECC, therefore some recommendations may exceed the minimum standards for regulatory compliance.

## 5 General provisions required for all ECCs

- 5.1 The ECC must be provided with a smoke alarm system or smoke detection system installed throughout all areas of the ECC, except:
  - (a) toilets and bathrooms
  - (b) storerooms/cupboards with a floor area less than 3m<sup>2</sup>
  - (c) storerooms/cupboards containing electrical equipment with a floor area less than 1m<sup>2</sup>.

**Note:** Heat alarms or detectors should be considered in kitchen/cooking and laundry areas where smoke alarms may produce nuisance alarms.
- 5.2 Any smoke alarm system must:
  - (a) consist of photoelectric smoke alarms complying with *AS 3786:2014*
  - (b) have all smoke alarms interconnected to provide a common alarm throughout the ECC
  - (c) be powered from the 240 Volt AC power supply.
- 5.3 Any smoke detection system must:
  - (a) comply with *AS 1670.1-2004*
  - (b) activate a building occupant warning system installed throughout the ECC.
- 5.4 A fire blanket complying with *AS 2444-2001* must be kept adjacent to all cooking facilities.
- 5.5 Portable fire extinguishers must be selected, located and distributed in accordance with Table E1.6 of the *NCC* and Sections 1, 2, 3 and 4 of *AS 2444-2001*.
- 5.6 A written emergency plan complying with *AS 3745-2010* must be developed, maintained and implemented for the facility, and must:
  - (a) identify a safe and secure assembly area away from the evacuated building including method of safe transfer of all children to that area (e.g. carriage of babies and infants)
  - (b) compatible with any existing emergency and evacuation procedures for the whole building, where the ECC forms part of that building
  - (c) be rehearsed every 3 months by all persons occupying the ECC at the time of rehearsal, and documented as required by the *Education and Care Services National Regulations 2011*.
- 5.7 The ECC must be equipped with a phone or radio that allows an ECC staff member to communicate with emergency services any time that an emergency occurs.
- 5.8 All fire safety measures within this document that are implemented into the ECC must be listed as an essential fire safety measure on the building's fire safety schedule, and must be serviced and maintained in accordance with the requirements of the *Environmental Planning and Assessment Regulation 2000*.

## 6 Automatic fire sprinkler systems

### 6.1 FRNSW position

- 6.1.1 In the same manner that automatic fire sprinkler systems are required to protect occupants of an aged care facility, FRNSW recommend automatic fire sprinkler systems be installed to protect occupants of an ECC who likewise have a high risk profile.

**Note:** The NSW Government introduced laws requiring automatic fire sprinkler systems be installed in aged care facilities, following the 2011 Quakers Hill nursing home fire, which resulted in the tragic loss of 21 lives.

### 6.2 Single occupancy building

- 6.2.1 Where a single occupancy ECC building has a total internal floor area of more than 500m<sup>2</sup> and a rise in storeys of not more than four, the building should be provided with:
- (a) an AS 2118.5-2008 (domestic) sprinkler system installed throughout the building if the building has a rise in storeys of not more than two
  - (b) an AS 2118.4:2012 (residential) sprinkler system installed throughout the building if the building has a rise in storeys of more than two.
- 6.2.2 For the purpose of clause 6.2.1, a single occupancy ECC is considered to be:
- (a) a building where all parts of the building are classified as 9b
  - (b) a building incorporating both Class 9b and Class 7a parts, only where the Class 7a carpark is used solely by occupants of the ECC.

### 6.3 Mixed occupancy building

- 6.3.1 Where an existing building with multiple occupancies incorporates an ECC, a sprinkler system complying with AS 2118.1-1999 should be installed throughout the ECC, and if possible, throughout the storey containing the ECC and all storeys below the ECC.
- Note:** When building works will facilitate a change in use for an ECC, FRNSW considers it best practice to sprinkle the building to the same level of protection as for a new building (refer to clause 6.3.2) at the time such building works are being undertaken.
- 6.3.2 Where a new building with multiple occupancies incorporates an ECC, a sprinkler system complying with AS 2118.1-1999 should be installed throughout the storey containing the ECC and all storeys below the ECC.
- Note:** The provisions of Clause E1.5 (sprinklers) of the NCC override the requirements of this clause when they exceed these requirements (e.g. a fully sprinklered building).
- 6.3.3 The ECC should not be located above any occupancy classified special or high hazard (as defined in Appendix A of AS 2118.1-1999).

## 7 Egress from multi-storey buildings

- 7.1 FRNSW recommends that the evacuation of ECC occupants from a multi-storey building does not impact upon the evacuation of other building occupants, and vice-versa.
- 7.2 Where any part of an ECC is located above or below ground level, the ECC (or part of) should be provided with either a dedicated fire stairway or a safe haven on that level.
- Note:** Clause D1.2 (d)(iv) of the NCC requires not less than 2 exits from each storey of the ECC. A dedicated fire stairway is used solely by occupants of the ECC and provides egress to open space independent from other building occupants.

- 7.3 The dedicated fire stairway provided to the ECC (or part) should only serve the ECC (or part).

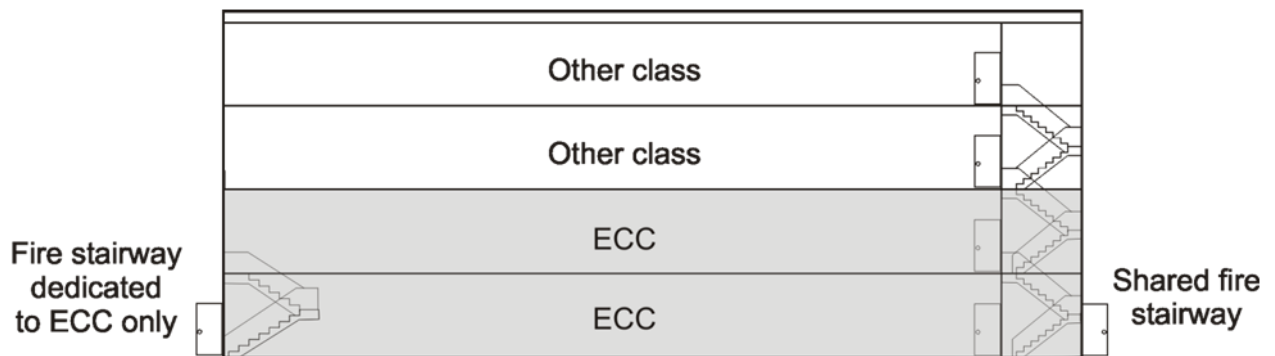


Figure 1 Example of dedicated fire stairway serving ECC part only

- 7.4 All fire stairways serving the ECC, or the storey on which an ECC is located, should:
- (a) be provided with handrails installed on both sides at a height suitable for use by children
  - (b) not contain any opening that allows a 125mm sphere to be able to pass through.
- 7.5 The safe haven for the ECC (or part) should:
- (a) open directly into a fire stairway
  - (b) be separated by construction with a fire resistance level (FRL) equivalent to the fire stairway
  - (c) have a free floor area that accommodates the total population of the ECC, allowing not less than 0.25m<sup>2</sup> per person
  - (d) allow staff to re-enter the ECC from the fire stairway (e.g. key, security coded touch pad)
  - (e) not contain any combustible (e.g. storage, furniture, furnishings) with the exception of cots that contain sleeping infants.

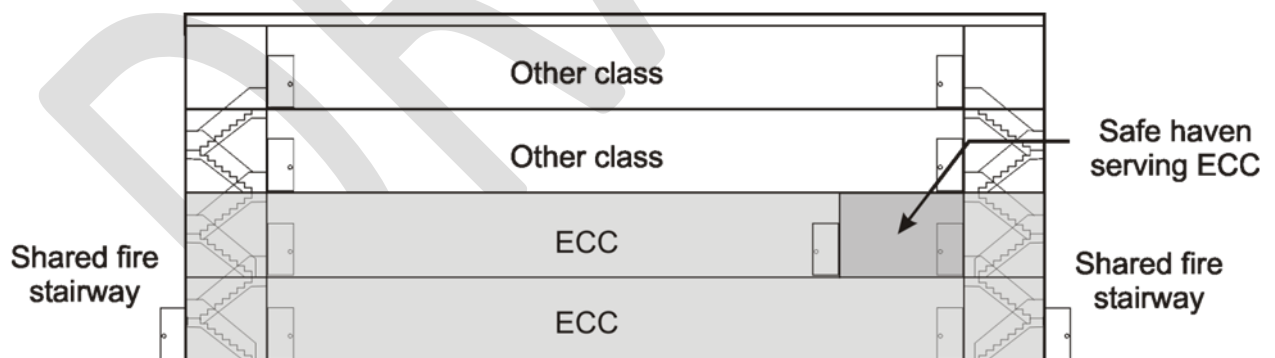


Figure 2 Example of safe haven serving ECC on storey above ground

**Note:** Providing all provisions in Clause 7.5 above are complied with, areas within an ECC that may be utilised as a safe haven include a dedicated cot room, an external play area or the main entrance lobby for the ECC. Where multiple safe havens are proposed to be provided on any given floor (i.e. a safe haven is proposed to be provided at each fire stairway) a reduction in the free floor area required by each safe haven may be considered on a case-by-case basis. For example, if an ECC has two stairways and a safe haven will be provided at both exits, each safe haven may accommodate 75% of the ECC population). Where provided, safe havens are to be identified as the assembly point for evacuation in the emergency plan for the ECC.

- 7.6 Where a building has a rise in storeys of more than two, all required fire-isolated exits serving an ECC should be provided with:
- (a) an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1:1998, or
  - (b) open access ramps or balconies in accordance with Section D2.5 of the NCC.
- 7.7 Where automatic air pressurisation system is provided for fire-isolated exits, the pressurisation system should be extended into any safe haven that is directly connected to the fire-isolated exit.
- Note:** As the safe haven should not contain combustibles, the safe haven space could be considered as an extension of the fire-isolated exit with regard to bounding construction.

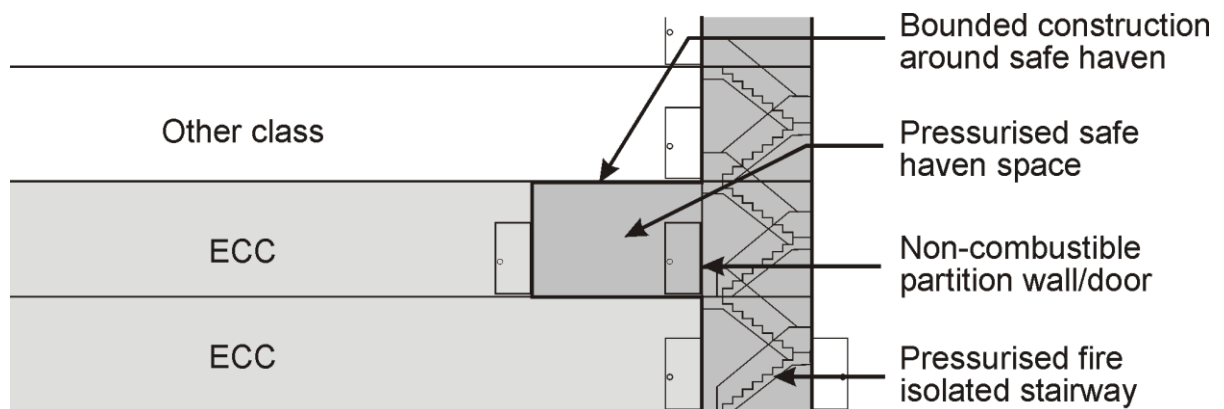


Figure 3 Example of safe haven being an extension of the fire-isolated exit

- 7.8 Any lifts serving the ECC should be provided with a smoke lobby in accordance with Clause D2.6 of the NCC.

## 8 Contact us

For further information contact the Fire Safety Branch on (02) 9742 7434 or email [firesafety@fire.nsw.gov.au](mailto:firesafety@fire.nsw.gov.au).

Confidentiality Requested: no

Submitted by a Planner: no

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Content:

Further to submission made yesterday 06/04/2017, FRNSW raise concern that there are various types of "development permitted without consent" mentioned throughout the SEPP, however there does not appear to be a requirement to comply with the DtS Provisions of the BCA.

Similarly, whilst there are some references to compliance with the BCA throughout the child care facility requirements, there appears to be no specific requirement to comply with the BCA.

FRNSW consider that all development permitted should, as a minimum, comply with the BCA.

IP Address: - [REDACTED]

Submission: Online Submission from company Fire & Rescue NSW (org\_comments)

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