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Building Code of Australia Capability Report

Geagea Capital
31 Telopea Street, Punchbowl

28 November 2024

Our reference #:	**2024069**
Report number:	01
Report date:	28 November 2024
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Revision History

Report number	Comments	Report date
01	Final issued	28 November 2024

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Building Code of Australia Capability Report

1. Executive Summary

(a) This report presents the findings of an assessment of the early childhood centre at 31 Telopea Street, Punchbowl, against the Deemed-to-Satisfy (**DTS**) provisions of Volume 1 of the Building Code of Australia, Edition 2022 (the **BCA**).

(b) In addition to the requirements outlined in Parts 4 and 5, the assessment identified the following variations with the DTS provisions of the BCA:

(i) C2D2 – Type of construction required

(ii) C2D10 - Non-combustible building elements

(iii) C3D6 - Class 9 buildings

(iv) C3D9 - Separation of classifications in the same storey

(v) C4D3 – Protection of openings in external walls

(vi) C4D4 – Separation of external walls and associated openings in different fire compartments

(vii) C4D5 – Acceptable methods of protection

(viii) C4D6 – Doorways in fire walls

(ix) C4D10 - Service penetrations in fire-isolated exits

(x) D2D3 - Number of exits required

(xi) D2D4 - When fire-isolated stairways and ramps are required

(xii) D2D5 – Exit travel distances

(xiii) D2D12 – Travel via fire-isolated exits

(xiv) D2D16 - Horizontal exits

(xv) D3D9 - Enclosure of space under stairs and ramps

(xvi) E1D3 - Fire hose reels

(xvii) F4D4 - Facilities in Class 3 to 9 buildings

(xviii) F6D3 - Methods and extent of natural light

(c) In summary, the assessment found that compliance with the BCA is capable, subject to compliance with Parts 4-7. Hence, no impediments to the issuing of a modified development consent from a BCA perspective.

2. Introduction

2.1. General

This report presents the findings of an assessment of the early childhood centre at 31 Telopea Street, Punchbowl, against the DTS provisions of the BCA.

2.2. Report Basis, Limitations & Assumptions

(a) The purpose of this is to provide an assessment of the development against the DTS provisions of the BCA.

(b) It is conveyed that this report should not be construed to infer that an assessment for compliance with the following has been undertaken:

(i) The following provisions of the BCA:

(A) Accessibility;

(B) Fire precautions during construction;

(C) Provision for special hazards;

(D) Energy efficiency;

(ii) Work Health & Safety Act and Regulations;

(iii) SafeWork NSW requirements;

(iv) Structural and services documentation;

(v) The individual requirements of service authorities (i.e. Telecommunication Carriers, Sydney Water, Energy Providers);

(vi) The Disability Discrimination Act 1992;

(vii) The requirements of the Australian Standards (**AS**) and Australian/New Zealand Standards (**AS/NZS**);

(ii) Determining full compliance with the DTS provisions of the BCA;

(iii) Any performance solutions relating to the development.

(c) The following assumptions and/or interpretations have been used in the assessment:

(i) All stairways are non-fire-isolated except the eastern stairway serving the basement;

(ii) The space that Doors D02a / G-46 and G-47 provide access to form part of the eastern stairway;

(iii) The building is not a designated bushfire prone area;

(iv) There are no wire barriers;

(v) The spiral stairway is a non-requried stairway;

(vi) The outdoor play spaces are occupiable outdoor spaces;

(vii) The basement has not been counted in the rise in storeys;

(viii) The early childhood centre will include up to 72 children; and

(ix) The early childhood centre will include up to 13 female employees; and

(x) The kitchen is not a commercial kitchen pursuant to F6D12.

2.3. Regulatory Framework

The following has been considered in the formulation of this report:

(a) Environmental Planning and Assessment Act 1979; and

(b) Environmental Planning and Assessment Regulation 2021; and

(c) Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

2.4. Information Sources

The following information has been used in the formulation of this report:

(a) Architectural plans prepared by Place Studios dated 18 October 2024; and

(b) Plan of management prepared by Early Education Solutions dated 1 October 2024.

3. Development Description

3.1. General

In accordance with the BCA, the assessment undertaken relates to the early childhood centre.

3.2. Building Description

Table below outlines key classification criteria for the building in accordance with the BCA.

BCA clause		
Schedule 1	Effective Height	3.325m
A6	Classification	▪ Class 7a (carpark) ▪ Class 9b (early childhood centre)
C2D2	Type of Construction	Type B Construction
C2D3	Rise in Storeys	Rise in storeys of 2

Table 1 – DTS criteria

4. BCA Assessment Summary

4.1. General

(a) The following table summarises the compliance status of the design in terms of each applicable DTS provision of the BCA and indicates a capability for compliance with the BCA.

(b) For those instances where compliance is not demonstrated, commentary and recommendations are provided within Parts 5-7.

4.2. Section B – Structure

BCA Clause		Status
B1D2	Resistance to actions	Refer to Part 5
B1D3	Determination of individual actions	Refer to Part 5
B1D4	Determination of structural resistance of materials and forms of construction	Refer to Part 5

4.3. Section C – Fire Resistance

BCA Clause		Status
C2D2	Type of construction required	Refer to Parts 5 and 6
C2D9	Structural tests for lightweight construction	Refer to Parts 5-7
C2D10	Non-combustible building elements	Refer to Part 5
C2D11	Fire hazard properties	Refer to Part 5
C2D14	Ancillary elements	Refer to Part 5
C2D15	Fixing of bonded laminated cladding panels	Refer to Part 5
C3D3	General floor area and volume limitations	Complies
C3D6	Class 9 buildings	Refer to Part 5
C3D8	Separation by fire walls	Refer to Part 5
C3D9	Separation of classifications in the same storey	Refer to Part 5
C3D10	Separation of classifications in different storeys	Refer to Part 5
C3D11	Separation of lift shafts	Refer to Part 5
C3D12	Stairways and lift in one shaft	Complies
C3D13	Separation of equipment	Refer to Parts 5 and 7
C3D14	Electricity supply system	Refer to Parts 5 and 7
C4D3	Protection of openings in external walls	Refer to Part 5

C4D4	Separation of external walls and associated openings in different fire compartments	Refer to Parts 5 and 7
C4D5	Acceptable methods of protection	Refer to Parts 5 and 7
C4D6	Doorways in fire walls	Refer to Parts 5 and 7
C4D8	Protection of doorways in horizontal exits	Refer to Part 5
C4D9	Openings in fire-isolated exits	Refer to Part 5
C4D10	Service penetrations in fire-isolated exits	Refer to Part 5
C4D11	Openings in fire-isolated lift shafts	Refer to Parts 5 and 7
C4D13	Openings in floors and ceilings for services	Refer to Part 5
C4D15	Openings for service installations	Refer to Parts 5 and 7
C4D16	Construction joints	Refer to Parts 5 and 7
C4D17	Columns protected with lightweight construction to achieve an FRL	Refer to Parts 5 and 7
Spec 12	Fire doors, smoke doors, fire windows and shutters	Refer to Parts 5 and 7

4.4. Section D – Access and Egress

BCA Clause		Status
D2D3	Number of exits required	Complies
D2D4	When fire-isolated stairways and ramps are required	Refer to Part 5
D2D5	Exit travel distances	Refer to Part 5
D2D6	Distance between alternative exits	Complies
D2D7	Heights of exits, paths of travel to exits and doorways	Refer to Part 5
D2D8	Width of exits and paths of travel to exits	Refer to Part 5
D2D9	Width of doorways in exits or paths of travel to exits	Refer to Part 5
D2D10	Exit width not to diminish in direction of travel	Refer to Part 5
D2D12	Travel via fire-isolated exits	Refer to Parts 5 and 7
D2D14	Travel by non-fire-isolated stairways or ramps	Complies
D2D15	Discharge from exits	Refer to Part 5
D2D16	Horizontal exits	Refer to Part 5
D2D17	Non-required stairways, ramps or escalators	Complies
D2D22	Access to lift pits	Refer to Part 5
D3D3	Fire-isolated stairways and ramps	Refer to Part 5
D3D8	Installations in exits and paths of travel	Refer to Part 5
D3D9	Enclosure of space under stairs and ramps	Refer to Part 5
D3D14	Goings and risers	Refer to Part 5
D3D15	Landings	Refer to Part 5
D3D16	Thresholds	Refer to Part 5
D3D17	Barriers to prevent falls	Refer to Part 5
D3D18	Height of barriers	Refer to Part 5
D3D19	Openings in barriers	Refer to Part 5
D3D20	Barrier climbability	Refer to Part 5
D3D22	Handrails	Refer to Part 5
D3D24	Doorways and doors	Refer to Part 5
D3D25	Swinging doors	Complies
D3D26	Operation of latch	Refer to Part 5
D3D28	Signs on doors	Refer to Parts 5 and 7

D3D29	Protection of openable windows	Refer to Part 5

4.5. Section E – Services and Equipment

BCA Clause		Status
E1D2	Fire hydrants	Refer to Parts 5 and 7
E1D3	Fire hose reels	Refer to Parts 5 and 7
E1D4	Sprinklers	Refer to Parts 5 and 7
E1D11	Where sprinklers are required: Class 9b buildings	Refer to Parts 5 and 7
E1D14	Portable fire extinguishers	Refer to Parts 5 and 7
E2D3	General requirements	Refer to Parts 5 and 7
E2D12	Class 7a buildings	Refer to Parts 5 and 7
E2D16	Class 9b – assembly buildings: all	Refer to Parts 5 and 7
E2D19	Class 9b – assembly buildings: other assembly buildings (not listed in E2D16 to E2D18)	Refer to Parts 5 and 7
E3D2	Lift installations	Refer to Part 5
E3D4	Warning against use of lifts in fire	Refer to Part 5
E3D6	Landings	Comply
E4D2	Emergency lighting requirements	Refer to Parts 5 and 7
E4D3	Measurement of distance	Refer to Part 7
E4D4	Design and operation of emergency lighting	Refer to Part 5
E4D5	Exit signs	Refer to Parts 5 and 7
E4D6	Direction signs	Refer to Parts 5 and 7
E4D8	Design and operation of exit signs	Refer to Part 7

4.6. Section F – Health and Amenity

BCA Clause		Status
F1D3	Weatherproofing	Refer to Part 5
F1D4	Exposed joints	Refer to Part 5
F1D5	External waterproofing membranes	Refer to Part 5
F1D6	Damp-proofing	Refer to Part 5
F1D7	Damp-proofing of floors on ground	Refer to Part 5
F2D2	Wet area construction	Refer to Part 5
F2D4	Floor wastes	Refer to Part 5
F3D2	Roof coverings	Refer to Part 5
F3D3	Sarking	Refer to Part 5
F3D4	Glazed assemblies	Refer to Part 5
F3D5	Wall cladding	Refer to Part 5
F4D4	Facilities in Class 3 to 9 buildings	Refer to Part 5
F4D8	Construction of sanitary compartments	Refer to Part 5
F5D2	Height of rooms and other spaces	Refer to Part 5
F6D2	Provision of natural light	Refer to Part 5
F6D3	Methods an extent of natural light	Refer to Part 5
F6D5	Artificial lighting	Refer to Part 5
F6D6	Ventilation of rooms	Refer to Part 5

F6D7	Natural ventilation	Refer to Part 5
F6D9	Airlocks	Refer to Part 5
F6D11	Carparks	Refer to Part 5

4.7. Section G – Ancillary Provisions

BCA Clause		Status
G1D4	Outdoor play spaces	Refer to Part 5
G6D2	Fire hazard properties	Refer to Part 5

5. Commentary and Recommendations

5.1. General

(a) With reference to the 'BCA Assessment Summary' contained within Part 4, the following commentary and recommendations are provided.

(b) This commentary and recommendations are formulated for demonstrating compliance with the relevant provisions of the BCA.

5.2. Section B – Structure

B1D2

The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where:

(a) The most critical action effect on a building or structure is determined in accordance with B1D3 and the general design procedures contained in AS/NZS1170.0-2002; and

(b) The resistance of a building or structure is determined in accordance with B1D4.

In this regard, it is recommended that details demonstrating compliance with the above be provided at construction certificate stage.

B1D3

The magnitude of individual actions must be determined in accordance with this clause (i.e. permanent actions, imposed actions, wind, snow & ice and earthquake actions as appropriate).

In this regard, it is recommended that details demonstrating compliance with the above be provided at construction certificate stage.

B1D4

The structural resistance of materials and forms of construction must be determined in accordance with the following, as appropriate:

(a) Masonry – AS 3700-2018.

(b) Concrete – AS 3600-2018.

(c) Steel – AS4100-2020 or AS/NZS4600-2018.

(d) Timber – AS1720.1-2010.

(e) Piling – AS2159-2009.

(f) Glazed assemblies in an external wall – AS2047-2014.

(g) Glazed assemblies not in an external wall – AS1288-2021.

(h) Termite risk management (where a primary building element is subject to attack by subterranean termites) – AS3660.1-2014.

In this regard, it is recommended that details demonstrating compliance with the above be provided at construction certificate stage.

5.3. Section C – Fire Resistance

C2D2

(a) The minimum type of fire-resisting construction of a building must be that specified in C2D2 and Specification 5 (see Part 6 for specific fire-resisting requirements for the building), noting that the FRL for each building element for each storey must be not less than that listed in the Table under Part 6 for the particular Class of building as shown below:

(i) Basement – Class 7a (carpark)

(ii) Ground floor – Class 9b (early childhood centre)

(iii) Level 1 – Class 9b (early childhood centre)

(b) Attention is directed (but not limited to) the FRL of building elements inaccordance with Specification 5.

(c) In this regard, it is recommended to pursue a Fire Engineering Report (**FER**) for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C2D9

(a) Any lightweight construction must comply with Specification 6 if it is used in a wall system:

(i) That is required to have an FRL; or

(ii) For a service shaft or an external wall bounding a public corridor.

(b) If lightweight construction is used to achieve an FRL for steel columns or the like, and if:

(i) The covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and

(ii) The column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C2D10

(a) The following building elements and their components must be non-combustible:

(i) External walls, including all components incorporated in them including the facade covering, framing and insulation.

(ii) The flooring and floor framing of lift pits.

(iii) Non-loadbearing internal walls having an FRL.

(b) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction.

(c) A loadbearing internal wall, including those that are part of a loadbearing shaft, must comply with Specification 5.

(d) The requirements of (a) and (b) do not apply to:

(i) Gaskets.

(ii) Caulking.

(iii) Sealants.

(iv) Termite management systems.

(v) Glass (including laminated glass) and associated adhesives, including tapes.

(vi) Thermal breaks associated with glazing systems or external wall systems, where the thermal breaks are no larger than necessary to achieve thermal objectives; and do not extend beyond one storey; and do not extend beyond one fire compartment.

(vii) Damp-proof courses.

(viii) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50mm.

(ix) Isolated:

(A) Construction packers and shims;

(B) Blocking for fixing fixtures;

(C) Fixings, including fixing accessories; or

(D) Acoustic mounts.

(x) Waterproofing materials applied to the external face, used below ground level and up to 250mm above ground level.

(xi) Joint trims and joint reinforcing tape and mesh of a width not greater than 50mm.

(xii) Weather sealing materials, applied to gaps not wider than 50mm, used within and between concrete elements.

(xiii) Wall ties and other masonry components complying with AS2699.1-2020 and AS2699.2-2020 as appropriate and associated with masonry wall construction.

(xiv) Reinforcing bars and associated minor elements that are wholly or predominantly encased in concrete or grout.

(xv) A paint, lacquer or a similar finish or coating.

(xvi) Adhesives, including tapes, associated with stiffeners for cladding systems.

(xvii) Fire-protective materials and components required for the protection of penetrations.

(e) The following materials when entirely composed of itself, are combustible and may be used wherever a non-combustible material is required:

(i) Concrete.

(ii) Steel, including metallic coated steel.

(iii) Masonry, including mortar.

(iv) Aluminium, including aluminium alloy.

(v) Autoclaved aerated concrete, including mortar.

(vi) Iron.

(vii) Terracotta.

(viii) Porcelain.

(ix) Ceramic.

(x) Natural stone.

(xi) Copper.

(xii) Zinc.

(xiii) Lead.

(xiv) Bronze.

(xv) Brass.

(f) The following materials maybe used where a non-combustible material is required:

(i) Plasterboard.

(ii) Perforated gypsum lath with a normal paper finish.

(iii) Fibrous-plaster sheet.

(iv) Fibre-reinforced cement sheeting.

(v) Prefinished metal sheeting with a combustible surface finish not exceeding 1mm thickness and where the Spread-of-Flame Index of the product is not greater than 1.

(vi) Sarking-type materials that do not exceed 1mm in thickness and have a Flammability Index is not greater than 5.

(vii) Bonded laminated materials where:

(A) Each lamina, including any core, is non-combustible;

(B) Each advise layer does not exceed 1mm in thickness and the total thickness of adhesive layers does not exceed 2mm; and

(C) The Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectfully.

(D) When located externally, are fixed in accordance with C2D15.

(g) Attention is directed (but not limited to) the timber clad double width garage door.

(h) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C2D11

The fire hazard properties for materials must be as follows:

(a) Floor linings and floor coverings

(i) A critical radiant flux not less than 1.2kW/m^2 excluding fire-isolated exits;

(ii) A critical radiant flux not less than 2.2kW/m^2 for fire-isolated exits; and

(iii) A Group 1 or 2 material for any portion of the floor covering that continues more than 150mm up a wall.

(b) Wall ceiling linings

(i) A Group 1 material for fire-isolated exits;

(ii) A Group 1 or 2 for public corridors in the Class 9b early childhood centre; and

(iii) Be a Group 1, 2 or 3 material for other areas.

(c) Air-handling ductwork

(i) Rigid and flexible ductwork complying with the fire hazard properties set out in AS4254-2012.

(d) Lift car

(i) A critical radiant flux not less than 2. 2kW/m^2 for floor linings and floor coverings; and

(ii) A Group 1 or 2 material for wall and ceiling linings.

(e) Other materials

(i) Fire-isolated exits, other than a sarking-type material used in a ceiling or used as an attachment or part of an attachment to a building element having a Spread-of-Flame Index of not more than 0 and a Smoke-Developed Index of not more than 2.

Note: In a fire-isolated stairway, a material used as an attachment or part of an attachment to a building element, if combustible, be attached directly to a non-combustible substrate and not exceed 1mm finished thickness.

(ii) Sarking-type materials in a fire-isolated exit having a Flammability Index of not more than 0.

(iii) Sarking-type materials in other locations having a Flammability Index of not more than 5.

Note: A material, other than one located within a fire-isolated exit may be covered on all faces by concrete or masonry not less than 50 mm thick, as an alternative to meeting the specified indices.

(iv) Other materials and insulation materials having a Spread-of-Flame Index of not more than 9 and a Smoke-Developed Index of not more than 8 if the Spread-of- Flame Index is more than 5.

Notes:

(A) A material may be covered on all faces by concrete or masonry not less than 50mm thick, as an alternative to meeting the specified indices.

(B) In the case of a composite member or assembly, the member of assembly must be constructed so that when assembled as proposed in a building:

i. Any material which does not comply with the above is protected on all sides and edges from exposure to the air;

ii. The member or assembly, when tested to Schedule 6 has a Spread-of-Flame Index and a Smoke-Developed-Index not exceeding this presented above; and

iii. The member of assembly retains the protection in position so that it prevents ignition of the material and continues to screen it from access to free air for a period of not less than 10 minutes.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C2D14

An ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:

(a) An ancillary element that is non-combustible.

(b) A gutter, downpipe or other plumbing fixture or fitting.

(c) A flashing.

(d) A grate or grille not more than $2m^2$ in area associated with a building service.

(e) An electrical switch, socket-outlet, cover plate or the like.

(f) A light fitting.

(g) A required sign.

(h) A sign other than one provided under (a) or (g) that:

(i) Achieves a group number of 1 or 2;

(ii) Does not extend beyond one storey;

(iii) Does not extend beyond one fire compartment; and

(iv) Is separated vertically from other signs permitted under (h) by at least 2 storeys.

(i) An awning, sunshade, canopy, blind or shading hood other than one provided under (i) that:

(j) Meets the requirements of Table S7C7 as for an internal element; and

(k) Serves a storey:

(i) At ground level; or

(ii) Immediately above a storey at ground level; and

(l) Does not serve an exit, where it would render the exit unusable in a fire.

(m) A part of a security, intercom or announcement system.

(n) Wiring.

(o) Waterproofing material installed in accordance with AS4654.2-2012 and applied to an adjacent floor surface, including vertical upturn, or a roof surface.

(p) Collars, sleeves and insulation associated with services installations.

(q) Screens applied to vents, weepholes and gaps complying with AS3959-2018.

(r) Wiper and brush seals associated with doors, windows or other openings.

(s) A gasket, caulking, sealant or adhesive directly associated with (a) to (r).

Limitations

(a) The above does not apply to ancillary elements fixed, installed or attached to the internal face or lining of an external wall.

Notes

(a) Ancillary elements fixed, installed or attached to the internal face or lining of an external wall may be subject to other provisions such as C2D11.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C2D15

(a) In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.

(b) An externally located bonded laminated cladding panel need not comply with (a) if it is one of the following:

(i) A laminated glass system.

(ii) Layered plasterboard product.

(iii) Perforated gypsum lath with a normal paper finish.

(iv) Fibrous-plaster sheet.

(v) Fibre-reinforced cement sheeting.

(vi) A component of a garage door.

Notes

(a) For (a), mechanical support or restraint means fixing that does not solely rely on chemical adhesive and includes concealed fixing systems such as cassette fixing, channel-type fixing and face fixing.

Explanatory Information

(a) For structural requirements relating to the fixing of cladding, refer to Section B. For most cladding systems, the requirements of Section B will necessitate mechanical fixing of the cladding panel to the supporting frame.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D6

(a) The Class 9b early childhood centre:

(i) Must be separated from the remainder of the building by walls and/or floors with an FRL not less than that required for a fire wall; and

(ii) Each storey within the Class 9b early childhood centre must contain not less than 2 fire compartments.

(b) Attention is directed (but not limited to) the following:

(i) The Class 9b early childhood centre not being adequately separated from the Class 7a carpark due to the entrance doorway to the lift shaft having fire doors without an insulation level of at least 30.

(ii) Each storey of the Class 9b early childhood centre not containing 2 fire compartments.

(c) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D8

(a) A fire wall must be constructed in accordance with the following:

(i) The fire wall has the relevant FRL prescribed by Specification 5 for each of the adjoining parts, and if these are different, the greater FRL;

(ii) Any openings in a fire wall must not reduce the FRL required by Specification 5 for the fire wall, except where permitted by the DTS provisions of Part C4; and

(iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not pass through or cross the fire wall unless the required fire-resisting performance of the fire wall is maintained.

(b) A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of:

(i) A floor having an FRL required for a fire wall; or

(ii) The roof covering.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D9

(a) If a building has parts of different classifications located alongside one another in the same storey, the parts must be separated in that storey by a fire wall.

(b) Attention is directed (but not limited to) the separation of the Class 9b early childhood centre from the Class 7a carpark part at the basement to satisfy C3D6 above.

(c) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D10

The intermediate floors must have an FRL of not less than 120/120/120 to satisfy the fire protection for a support of another part clause under Specification 5 and C3D6 above.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D13

(a) The lift must be separated from the remainder of the building by enclosure in a shaft in which the walls have an FRL of not less than 120/120/120 (if loadbearing) or -/120/120 (if non-loadbearing) to satisfy C3D6 above

(b) Openings for lift landing doors and services must be protected in accordance with Part C4.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D14

(a) The following equipment must be separated from the remainder of the building with construction complying with (d), if that equipment comprises:

(i) Lift motors and lift control panels;

(ii) Emergency generators used to sustain emergency equipment operating in emergency mode;

(iii) Central smoke control plant;

(iv) Boilers; or

(v) A battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200kWh or more.

(b) Equipment need not be separated in accordance with the above if the equipment comprises:

(i) Smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification 21;

(ii) Stair pressurising equipment installed in compliance with the relevant provisions of AS1668.1-2015;

(iii) A lift installation without a machine room; or

(iv) Equipment otherwise adequality separated from the remainder of the building.

(c) Separation of on-site fire pumps must comply with the requirements of AS2419.1-2021.

(d) Separating construction must have:

(i) Except as provided by (ii):

(A) An FRL of not less than 120/120/120;

(B) Any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; and

(ii) When separating a lift shaft and lift motor room, an FRL of not less than 120/–/–.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C3D14

(a) A main electrical switchboard within a building which sustains any emergency equipment operating in emergency mode must:

(i) Be separated from any other part of the building with construction having an FRL of not less than 120/120/120; and

(ii) Have any doorway in that construction protected with a self-closing fire door having an FRL of not less than -/120/30.

(b) Where emergency equipment is required in a building, all switchboards in the electrical installation, which sustain the electricity supply to the emergency equipment, must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of a fault from the non-emergency switchgear.

(c) For the purposes of the above, emergency equipment includes:

(i) Fire hydrant booster pumps;

(ii) Pumps for automatic sprinkler systems or the like;

(iii) Air handling systems designed to exhaust and control the spread of fire and smoke;

(iv) Emergency lifts;

(v) Control and indicating equipment; and

(vi) Emergency warning and intercom systems.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D3

(a) Eastern allotment boundary

(i) Various openings in external walls are less than 3m from the eastern allotment boundary.

(ii) Openings in external walls occupy more than 1/3 of the area of the external wall of the storey in which they are located.

(b) Western allotment boundary

(i) Various openings in external walls are less than 3m from the western allotment boundary.

(c) In this regard:

(i) For items (a)(i) and (b)(i) above, refer to C4D5 below for recommendations; and

(ii) For item (a)(i) above, it is recommended to pursue a FER for the variation with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D4

(a) The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must not be less than 4m, unless:

(i) Those parts of each wall have an FRL not less than 60/60/60; and

(ii) Any openings are protected in accordance with C4D5.

(b) Attention is directed (but not limited to) the following:

(i) Garage door to the Class 7a carpark and Class 9b early childhood centre on the ground floor; and

(ii) Doorway leading from western stairway to the Class 7a carpark and Class 9b early childhood centre on the ground floor.

(c) In this regard:

(i) For item (b)(i) above, it is recommended to pursue a FER for the variation with this clause at construction certificate stage; and

(ii) For item (b)(ii) above, it is recommended to address within the design to satisfy the requirements of this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D5

Where protection is required, doorways, windows and other openings must be protected as follows:

(a) Generally

(i) Fire doors, fire windows and fire shutters must comply with Specification 12.

(b) Doorways

(i) External wall-wetting sprinklers used with doors that are self-closing or automatic closing; or

(ii) Fire doors having an FRL of not less than -/60/30 that are self-closing or automatic closing.

(c) Windows

(i) External wall-wetting sprinklers used with windows that are automatic closing or permanently fixed in the closed position;

(ii) Fire windows having an FRL of not less than -/60/- that that are automatic closing or permanently fixed in the closed position; or

(iii) Fire shutters having an FRL of not less than -/60/- that are automatic closing.

(d) Other openings

(i) Excluding voids — internal or external wall-wetting sprinklers, as appropriate; or

(ii) Construction having an FRL not less than -/60/-.

(e) FER

(i) Pursue a FER for the omission of methods of protection prescribed by this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D6

(a) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed ½ of the length of the fire wall, and each doorway must be protected by:

(i) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than ½ that required by Specification

5 for the fire wall except that each door or shutter must have an insulation level of at least 30; or

(ii) A fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or

(iii) A single fire door or fire shutter which has an FRL of not less than that required by Specification 5 for the fire wall except that each door or shutter must have an insulation level of at least 30.

(b) A fire door or fire shutter required by (a) must be self-closing, or automatic closing in accordance with (c) and (d).

(c) The automatic closing operation required by (b) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1-2018 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS1670.1-2018 and located on each side of the fire wall not more than 1.5m horizontal distance from the opening.

(d) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.

(e) Attention is directed (but not limited to) the Class 9b early childhood centre not being adequately separated from the Class 7a carpark due to the entrance doorway to the lift shaft having fire doors without an insulation level of at least 30.

(f) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D8

(a) A doorway that is part of a horizontal exit must be protected by either:

(i) A single fire door that has an FRL of not less than that required by Specification 5 for the fire wall except that the door must have an insulation level of at least 30; or

(ii) In a Class 7 or 8 building — 2 fire doors, one on each side of the doorway, each with an FRL of not less than ½ that required by Specification 5 for the fire wall except that each door must have an insulation level of at least 30.

(b) Each door required by (a) must be self-closing, or automatic-closing in accordance with the following:

(i) The automatic-closing operation must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1-2018 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5m horizontal distance from the opening.

(ii) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system

in either fire compartment separated by the fire wall must also initiate the automatic-closing operation.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D9

(a) Doorways that open to fire-isolated stairways and are not doorways opening to a road or open space, must be protected by –/60/30 fire doors that are self-closing, or automatic closing in accordance with (b) and (c).

(b) The automatic-closing operation required by (a) must be initiated by the activation of a smoke detector, or any other detector deemed suitable in accordance with AS1670.1-2018 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1-2018 and located not more than 1.5m horizontal distance from the approach side of the doorway.

(c) Where any other required suitable fire alarm system, including a sprinkler system (other than a FPAA101D system) complying with Specification 17, is installed in the building, activation of the system must also initiate the automatic-closing operation.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D10

(a) A fire-isolated exit must not be penetrated by any services other than:

(i) Electrical wiring associated with lighting, fire services or surveillance equipment;

(ii) Ducting associated with a pressurisation system if it:

(A) Is constructed of material having an FRL of not less than -/120/60 where it passes through any other part of the building; and

(B) Does not open into any other part of the building; or

(iii) For fire services, water supply and test drain pipes.

(b) Attention is directed (but not limited to) the fire-isolated stairway serving the basement being penetrated by a strip drain.

(c) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

C4D11

(a) The entrance doorways to the lift shaft must be protected by fire doors having an FRL of not less than -/60/- that:

(i) Comply with AS1735.11-1986; and

(ii) Are set to remain closed except when discharging or receiving passengers, goods or vehicles.

(b) A lift call panel, indicator panel or other panel in the wall of a lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35000mm^2 in area.

	Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
C4D13	(a) Where a service passes through: (i) A floor that is required to have an FRL with respect to integrity and insulation; or (ii) A ceiling required to have a resistance to the incipient spread of fire, the service must be installed in accordance with (b). (b) A service must be protected: (i) By a shaft that will not reduce the fire performance of the building elements it penetrates; or (ii) In accordance with C4D15. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
C4D15	Where an electrical, electronic, plumbing, mechanical ventilation, air conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL or a resistance to the incipient spread of fire, that installation must comply with this clause. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
C4D16	(a) Construction joints, spaces and the like in and between building elements required to have an FRL with respect to integrity and insulation must be protected in a manner: (i) Identical with a prototype tested in accordance with AS4072.1-2005 and AS1530.4-2014 to achieve the required FRL; or (ii) That differs from a prototype in accordance with Section 4 of AS4072.1-2005 and achieves the required FRL. (b) Control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
C4D17	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
Spec. 12	(a) Fire doors (i) A required fire door must:

(A) Comply with AS1905.1-2015; and

(B) Not fail radiation through any glazed part during the period specified for integrity in the required FRL.

(b) Fire shutters

(i) A required fire shutter must:

(A) Be a shutter that:

i. Is identical with a tested prototype that has achieved the required FRL;

ii. Is installed in the same manner and in an opening that is not larger than the tested prototype; and

iii. Did not have a rise in average temperature on the side remote from the furnace of more than 140K during the first 30 minutes of the test; or

(B) Be a steel shutter complying with AS 1905.2-2005 if a metallic fire shutter is not prohibited by C4D6.

(c) Fire windows

(i) A required fire window must be:

(A) Identical in construction with a prototype that has achieved the required FRL; and

(B) Installed in the same manner and in an opening that is not larger than the tested prototype.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

5.4. Section D – Access and Egress

D2D3

(a) The fire pumproom to the basement contains access to a single exit;

(b) The western stairway to the basement does not lead to a road or open space as occupants are to pass under a roof; and

(c) The western stairway to the basement does not lead to a road or open space as occupants are to pass under a roof.

(d) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D2D4

(a) The stairways serving L1 of the Class 9b early childhood centre are not fire-isolated stairways.

	(b) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D5	(a) The travel distance in the basement to a point from which travel in different directions to 2 exits is available is greater than 20m. (b) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D7	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980mm. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D8	The unobstructed width of each required exit or path of travel to an exit (except for ladders provided inaccordance with D2D21, D2D23 or I3D5 and doorways) must be not less than 1m. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D9	The unobstructed width of a doorway in a required exit or path of travel to an exit (excluding where it opens to sanitary compartment or the like) must be not less than 750mm. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D10	The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
D2D12	(a) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, the following applies: (i) That part of the wall must have: (A) An FRL of not less than 60/60/60; and (B) Any openings protected internally in accordance with C4D5; and (b) The protection required by (a) must extend for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. (c) Attention is directed (but not limited to) the path of travel from the point of discharge of the eastern stairway serving the basement.

(d) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D2D15

(a) If an exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than 1m (including gates).

(b) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by:

(i) A ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by Part D4; or

(ii) A stairway complying with the DTS provisions.

(c) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D2D16

(a) Each fire compartment required by C3D6 must be served by not less than 2 horizontal exits, each located not less than 9 m from:

(i) At least one other horizontal exit; and

(ii) An exit other than a horizontal exit.

(b) Attention The protection required by (a) must extend for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser.

(c) Attention is directed (but not limited to) the Class 9b early childhood centre noting containing any horizontal exits.

(d) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D2D22

(a) Where the lift pit depth is not more than 3m, access to a lift pit must be through the lowest landing doors; or

(b) Where the lift pit depth is more than 3m, access to the lift pit must be through an access doorway complying with the following:

(i) In lieu of D2D7 – D2D11, the doorway must be level with the pit floor and not be less than 600 mm wide by 1980 mm high clear opening, which may be reduced to 1500 mm where it is necessary to comply with (ii).

(ii) No part of the lift car or platform must encroach on the pit doorway entrance when the car is on a fully compressed buffer.

(iii) Access to the doorway must be by a stairway complying with AS 1657-2018.

(iv) In lieu of D3D26, doors fitted to the doorway must be:

(A) Of the horizontal sliding or outwards opening hinged type; and

(B) Self-closing and self-locking from the outside; and

(C) Marked on the landing side with the letters not less than 35 mm high:

"DANGER LIFTWELL − ENTRY OF UNAUTHORISED PERSONS PROHIBITED − KEEP CLEAR AT ALL TIMES"

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D3

A stairway or ramp (including any landings) that is required to be within a fire-isolated shaft must be constructed:

(a) Of non-combustible materials; and

(b) So that if there is local failure it will not cause structural damage to or impair the fire-resistance of the shaft.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D8

(a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the DTS provisions of Section E, must not be provided from a fire-isolated stairway.

(b) An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a required exit or any corridor, hallway, lobby or the like leading to an exit.

(c) Gas or other fuel services must not be installed in an exit.

(d) Services or equipment enclosed in accordance with (e) may be installed in an exit, or in any corridor, hallway, lobby or the like leading to an exit, where that service or equipment comprises:

(i) Electricity meters, distribution boards or ducts;

(ii) Central telecommunications distribution boards or equipment; or

(iii) Electrical motors or other motors serving equipment in the building.

(e) An enclosure for the purposes of (d) must be suitably sealed against smoke spreading from the enclosure and be:

(i) Non-combustible construction; or

(ii) A fire-protective covering (i.e. 1 layer of 13mm fire-protective grade plasterboard).

(f) Electrical wiring may be installed in a fire-isolated exit if the wiring is associated with:

(i) A lighting, detection, or pressurisation system serving the exit;

(ii) A security, surveillance or management system serving the exit;

(iii) An intercommunication system or an audible or visual alarm system in accordance with D3D27; or

(iv) The monitoring of hydrant or sprinkler isolating valves.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D9

(a) The space below a required non fire-isolated stairway (including an external stairway) or non fire-isolated ramp must not be enclosed to form a cupboard or other enclosed space unless:

(i) The enclosing walls and ceilings have an FRL of not less than 60/60/60; and

(ii) Any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door.

(b) Attention is directed (but not limited to) the accessible unisex sanitary facility below the stairway serving Level 1.

(c) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

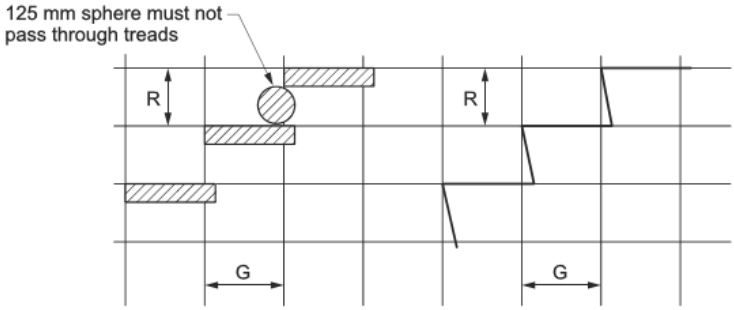
Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D14

A stairway must have:

(a) Not more than 18 and not less than 2 risers in each flight.

(b) Going (G), riser (R) and quantity (2R + G) in accordance with the below:



Riser (R)		Going (G)		Slope Relationship (2R+G)	
Max	**Min**	**Max**	**Min**	**Max**	**Min**
190	115	355	250 (public)	700	550

Note:

(i) The going in tapered treads (except winders in lieu of a quarter or half landing) in a curved or spiral stairway is measured:

(A) 270 mm in from the outer side of the unobstructed width of the stairway if the stairway is less than 1 m wide (applicable to a non-required stairway only); and

(B) 270 mm from each side of the unobstructed width of the stairway if the stairway is 1 m wide or more.

(c) Constant goings and risers throughout each flight, except as permitted by below, and the dimensions of goings (G) and risers (R) in accordance with the above are considered constant if the variation between:

(i) Adjacent risers, or between adjacent goings, is no greater than 5mm; and

(ii) The largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10mm.

(d) Treads, which have a surface or nosing edge strip achieving a slip-resistance classification of P3 or R10 in dry or P4 or R11 in wet tested in accordance with AS4586-2013.

(e) Where a stairway discharges to a sloping public walkway or public road:

(i) The riser (R) may be reduced to account for the slope of the walkway or road; and

(ii) The quantity (2R+G) may vary at that location.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D15

In a stairway:

(a) Landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each flight and each landing must:

(i) Be not less than 750 mm long, and where this involves a change in direction, the length is measured 500mm from the inside edge of the landing; and

(ii) Have:

(A) A surface with a slip-resistance classification of not less than P3 or R10 in dry or P4 or R11 in wet when tested in accordance with AS4586-2013; or

(B) A strip at the edge of the landing with a slip-resistance classification of not less than P3 or R10 in dry or P4 or R11 in wet when tested in accordance with AS4586-2013, where the edge does not lead to a stairway flight below.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D16

(a) The threshold of a doorway is not permitted to incorporate a step or ramp at any point closer to the doorway than the width of the door leaf.

(b) That is unless:

(i) In a building required to be accessible by D4, the doorway:

(A) Opens to a road or open space; and

(B) Is provided with a threshold or step ramp in accordance with AS1428.1-2009; or

(ii) In other cases:

(A) The doorway opens to a road or open space, external stair landing or external balcony; and

(B) The door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

(c) Attention is directed (but not limited to) the threshold of the doorway to the western stairway serving Level 1 that contains a change in level of 30mm.

(d) In this regard, it is recommended to address within the design to satisfy the requirements of this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D17

A continuous barrier is to be constructed along the side of

(a) A roof to which general access is provided;

(b) A stairway or ramp;

(c) A floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and

(d) Any delineated path of access to a building,

if the trafficable surface that is 1m or more the surface beneath.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D18

(a) The height of a barrier required by D3D17 must be not less than:

(i) For stairways or ramps with a gradient of 1:20 or steeper - 865mm.

(ii) For landings to a stair or ramp where the barrier is provided along the inside edge of the landing and does not exceed 500mm in length – 865mm.

(iii) For all other locations - 1m.

(b) For the purpose of the above, barrier heights are measured vertically from the surface beneath, except that for stairways the height must be measured above the nosing line of the stair treads.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D19

(a) Openings in a required barrier must not allow a 125mm sphere to pass through it.

(b) For the purpose of the above, the maximum 125mm barrier opening for a stairway is measured above the nosing line of the stair treads.

(c) Where a required barrier is fixed to the vertical face forming an edge of a landing, balcony, deck or stairway or the like, the opening formed between the barrier and the face must not exceed 40mm.

(d) For the purposes of the above, the opening is measured horizontally from the edge of the trafficable surface to the nearest internal face of the barrier.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D20

A barrier required by D3D17, located on a floor more than 4m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D22

Handrails are to be constructed as follows:

(a) Be located along one side of each stairway flight and ramp;

(b) Be located along each side if the total width of the stairway or ramp is 2m or more;

(c) Have one fixed at a height of not less than 865mm and have a handrail with a cross sectional; dimension not less than 16mm and not greater than 45mm as measured in any direction across its centre, fixed at a height between 450mm and 700mm; and

(d) Be continuous between stairway flight landings and have no obstruction on or above them will tend to break a hand hold.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D24

(a) A doorway serving as a required exit or forming part of a required exit:

(i) Must not be fitted with a sliding door unless:

(A) It leads directly to a road or open space; and

(B) The door is able to be opened manually under a force of not more than 110N.

(ii) If fitted with a door which is power-operated:

(A) It must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and

(B) If it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

(b) A power-operated door in a path of travel to a required exit must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D26

Any door in a required exit, forming part of a required exit or in the path of travel to a required exit (including any gate or door in the path of travel to the road) must be readily openable without a key from the side that faces a person seeking egress, by:

(a) A single hand downward action on a single device which is located between 900mm and 1100mm from the floor and if serving an area required to be accessible by D4:

(i) Be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and

(ii) Have a clearance between the handle and the back plate or door face at the centre grip section of the handle of not less than 35mm nor more than 45mm; or

(b) A single hand pushing action on a single device which is located between 900mm and 1.2m above the floor.

The above requirements do not apply to a door that:

(a) Serves a sanitary compartment or the like; or

(b) Serves a space which is otherwise inaccessible to persons at all times when the door is locked;

(c) Serves the Class 9b early childhood centre and it can be immediately unlocked:

(i) By operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or

(ii) By hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire.

(d) Is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system (other than a FPAA101D system) complying with Specification 17 or smoke, or any detector system deemed suitable in accordance with AS1670.1-2018 installed throughout the building and is readily openable when unlocked.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D28

(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on or adjacent to:

(i) A fire door providing direct access to a fire-isolated exit; and

(ii) Any door leading from a fire-isolated exit to a road or open space.

(b) A sign required by (i) must be fixed on the side of the door that faces a person seeking egress and, if the door is fitted with a device for holding it in the open position, either a sign must be fixed on the wall adjacent to the doorway, or signs must be fixed to both sides of the door.

(c) A sign required by (ii) must be fixed on each side of the door.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

D3D29

(a) Window openings within the Class 9b early childhood centre require protection, if the floor below the window is 2m above the surface beneath.

(b) Protection need not be provided where the lowest level of the window is 1.7m or more above the finished floor level.

(c) Protection can be in the form of the following:

(i) The openable portion of the window must be protected with a device to restrict the window opening or a screen with secure fittings;

(ii) The device or screen must not permit a sphere greater than 125mm is permitted to pass through;

(iii) Resist the outward horizontal action of 250N against the window or screen; and

(iv) Have a child resistant release mechanism can be removed, unlocked or overridden.

(d) A barrier with a height of not less than 865mm above the floor is required to an openable window:

(i) In addition, to window protection as per (c) above; and

(ii) Where the floor below the window is 4m or more above the floor or if the window is not covered above.

(e) The above barrier must not:

(i) Permit a 125mm sphere to pass through it; and

(ii) Any horizontal or near horizontal elements between 150mm and 760mm must not facilitate climbing.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

5.5 Section E – Services and Equipment

E1D2

(a) A fire hydrant system complying with AS2419.1-2021 must serve the building.

(b) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E1D3

(a) A fire hose reel system must be provided:

(i) To serve the whole building where one or more internal fire hydrants are installed;

(ii) When internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m^2.

(b) The fire hose reel system must have fire hose reels installed inaccordance with AS2441-2005.

(c) Fire hose reels must be located internally, externally or in combination, to achieve the system coverage specified in AS2441-2005.

(d) In achieving system coverage, one or a combination of the following criteria for individual internally located fire hose reels must be met in determining the layout of any fire hose reel system:

(i) Fire hose reels must be located adjacent to an internal fire hydrant (other than one within a fire-isolated exit) except that a fire hose reel need not be located adjacent to every fire hydrant, provided system coverage can be achieved.

(ii) Fire hose reels must be located within 4m of an exit, except that a fire hose reel need not be located adjacent to every exit, provided system coverage can be achieved.

(iii) Where system coverage is not achieved by compliance with (i) and (ii), additional fire hose reels may be located in paths of travel to an exit to achieve the required coverage.

(e) Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire doors except for doorways in walls referred in C3D13 C3D14 separating equipment or electrical supply systems.

(f) Where the normal water supply cannot achieve the flow and pressures required by AS 2441, or is unreliable:

(i) A pump; or

(ii) A water storage facility; or

(iii) Both a pump and water storage facility,

must be installed to provide the minimum flow and pressures required by Clause 6.1 of AS 2441.

(e) Attention is directed (but not limited to) the omission of fire hose reel coverage to the fire pumproom.

(f) In this regard, it is recommended to pursue a FER for any variations with this clause at construction certificate stage.

(g) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) as complying with the above at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E1D4 & E1D11

(a) A sprinkler system complying with Specification 17 and AS2118.1-2017 must be installed in the building.

(b) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) as complying with the above at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E1D14

Portable fire extinguishers complying with AS2444-2001 must be installed as follows:

(a) To cover Class AE or E fire risks associated with emergency services switchboards;

(b) To cover Class B fire risks (if more than 50L excluding vehicle fuel tanks is stored);

(c) To cover Class F fire risks involving cooking fats and oils; and

(d) To cover Class A fire risks in normally occupied fire compartments less than 500m^2 not provided with fire hose reels (excluding open-deck carparks).

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E2D3

(a) An air-handling system which does not form part of a smoke hazard management system and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must be designed and installed:

(i) To operate as a smoke control system in accordance with AS 1668.1-2015; or

(ii) Such that it:

(A) Incorporates smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and

(B) Is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with Clause 7.5 of AS 1670.1-2018.

(b) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) as complying with the above.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E2D12

The Class 7a carpark, including a basement, provided with a mechanical ventilation system in accordance with AS1668.2-2012, must comply with clause 5.5 of AS1668.1-2015.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E2D16

(a) The Class 9b early childhood centre must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1-2015) which does not form part of the smoke hazard management system, on the activation of:

(i) Smoke detectors installed complying with S20C6; and

(ii) Any other installed fire detection and alarm system, including a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17.

(b) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) as complying with the above.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

E2D19

(a) The building must be provided with an automatic smoke detection and alarm system complying with S20C4 of the BCA and AS1670.1-2018 throughout the whole building.

(b) The plans and specifications are to be endorsed by a suitably accredited practitioner (fire safety) as complying with the above.

	Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
E3D2	An electric passenger lift installation or electrohydraulic passenger lift installation must comply with Specification 24. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
E3D4	Warning signage must be displayed near every call button for the passenger lift. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
E4D2	Emergency lighting complying with AS/NZS2293.1-2018 must be installed throughout the building (including outdoor play spaces). Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
E4D5	An exit sign complying with AS/NZS2293.1-2018 must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each: (a) Door providing direct egress from a storey to: (i) An enclosed stairway serving as a required exit; (ii) An external stairway serving as a required exit; (iii) An external access balcony leading to a required exit (b) Door from an enclosed stairway at every level of discharge to a road or open space; and (c) Door serving as, or forming part of, an exit in a storey required to be provided with emergency lighting in accordance with E4D2. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
E4D6	If an exit is not clear to persons occupying or visiting the building (including outdoor play spaces), then exit signs complying with AS/NZS2293.1-2018 must be installed in appropriate positions in corridors, hallways, lobbies and the like, indicating the direction to a required exit. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

5.6 Section F – Health and Amenity

F1D3	Stormwater drainage must comply with AS/NZS 3500.3-2021. Details demonstrating compliance with the above for the development to be provided at construction certificate stage.
F1D4	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must:

(a) Be protected in accordance with Section 2.9 of AS 4654.2-2012; and

(b) Not be located beneath or run through a planter box, water feature or similar part of the building.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F1D5

A roof, balcony, podium or similar horizontal surface part of a building must be provided with a waterproofing membrane:

(a) Consisting of materials complying with AS4654.1-2012; and

(b) Designed and installed in accordance with AS4654.2-2012.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F1D6

Where a damp-proof course is provided, it must consist of:

(a) A material that complies with AS/NZS2904-1995; or

(b) Impervious termite shields in accordance with AS3660.1-2014.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F1D7

A floor laid directly onto ground or fill must be provided with a vapour barrier complying with AS2870-2011.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F2D2

Building elements in bathrooms or shower rooms, a slop hopper or sink compartment, a laundry or sanitary compartment must be water-resistant or waterproof in accordance with Specification 26 and comply AS3740-2021.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F2D4

Where a floor waste is installed:

(a) The minimum continuous fall of a floor plane to the waste must be 1:80; and

(b) The maximum continuous fall of a floor plane to the waste must be 1:50.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F3D2

A roof must be covered with:

(a) Roof tiles complying with AS2049-2002, fixed in accordance with AS 2050-2018;

(b) Metal sheet roofing complying with AS1562.1-2018;

(c) Plastic sheet roofing designed and installed in accordance with AS1562.3-2006;

(d) Terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS4597-1999, except in cyclonic areas; or

(e) An external waterproofing membrane complying with F1D5.

Any roof covering not mentioned above may require a performance solution from an appropriately qualified person such as a facade engineer at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F3D3

Sarking type material used for weatherproofing of roofs and walls must comply with AS4200-2017.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F3D4

(a) The following glazed assemblies in an external wall must comply with the requirements of AS2047-2014 for resistance to water penetration:

- (i) Windows.
- (ii) Sliding and swinging glazed doors with a frame, including French and bi-fold doors with a frame.
- (iii) Adjustable louvres.
- (iv) Shopfronts.

(b) The following glazed assemblies need not comply with the above:

- (i) All glazed assemblies not in an external wall.
- (ii) Revolving doors.
- (iii) Fixed louvres.
- (iv) Skylights, roof lights and windows in other than the vertical plane.
- (v) Sliding and swinging glazed doors without a frame.
- (vi) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS2047-2014.
- (vii) Second-hand windows, re-used windows and recycled windows.
- (viii) Heritage windows.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F3D5

External wall cladding must comply with one or a combination of the following:

(a) Masonry, including masonry veneer, unreinforced and reinforced masonry - AS 3700-2018.

(b) Autoclaved aerated concrete - AS 5146.3-2018.

(c) Metal wall-cladding - AS1562.1-2018.

Any external wall cladding not mentioned above may require a performance solution from an appropriately qualified person such as a façade engineer at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F4D4

(a) The Class 9b early childhood centre must be provided with:

(i) A kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with:

(A) The facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and

(B) The ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old.

(ii) One bath, shower or shower-bath.

(iii) If the centre accommodates children younger than 3 years old:

(A) A laundry facility comprising a washtub and space in the same room for a washing machine;

(B) A bench type baby bath, which is within 1 m of the nappy change bench; and

(C) A nappy changing bench which:

i. Is within 1 m of separate adult hand washing facilities and bench type baby bath;

ii. Must be not less than 0.9 m^2 in area and at a height of not less than 850 mm, but not more than 900mm above the finished floor level;

iii. Must have a space not less than 800 mm high, 500 mm wide and 800 mm deep for the storage of steps; and

iv. Is positioned to permit a staff member changing a nappy to have visibility of the play area at all times.

(b) Sanitary facilities for children must be accessible from both indoor and outdoor play areas.

(c) Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by female employees (including within the accessible unisex sanitary facility).

(d) Attention is directed (but not limited to) the following:

(i) The kitchen is not located in a position that has the ability to facilitate supervision of children;

(ii) The kitchen does not contain separate hand washing facilities;

(iii) Non-provision of one bath, shower or shower bath not for use by employees;

(iv) The nappy changing benches are not provided with a space of not less than 800mm high, 500mm wide and 800mm deep for the storage of steps;

(v) The nappy changing benches are not positioned to permit a staff member changing a nappy to have visibility of the corresponding play areas at all times; and

(vi) The sanitary facilities for children are not accessible from both indoor and outdoor play areas.

(e) In this regard:

(ix) For (c)(i) and (vi) above, it is recommended to pursue a performance solution for the variations with this clause at construction certificate stage; and

(x) For all other variations above, it is recommended that these be addressed within the design to satisfy the requirements of this clause at construction certificate stage.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F4D8

(a) Unless there is a clear space of at least 1.2 m, between the closet pan within the sanitary compartment and the doorway, the door to a fully enclosed sanitary compartment must:

(i) Open outwards;

(ii) Slide; or

(iii) Be readily removable from the outside of the sanitary compartment.

(b) Facilities for use by children must have each sanitary compartment screened by a partition which, except for the doorway, is opaque for a height of at least 900 mm but not more than 1200 mm above the floor level.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F5D2

The heights of rooms and other spaces must be not less than:

(a) A bathroom, shower room, sanitary compartment, tea preparation room, pantry, store room, carparking area or the like – 2.1m;

(b) Above a stairway, ramp, landing or the like – 2m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and

(c) A corridor or part within the Class 9b early childhood centre that accommodates less than 100 persons – 2.4m.

Attention is directed (but not limited to) the height of the accessible unisex sanitary facility below the stairway serving Level 1.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F6D2

Provision of natural light must be provided in all playrooms or the like for use of children in the early childhood centre.

Refer F6D3 for methods and extent of natural light.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F6D3

(a) Required natural light must be provided by:

(i) Windows, excluding roof lights, that:

(A) Have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and
(B) Are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or

(ii) Roof lights, that:

(A) Have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and
(B) Are open to the sky; or

(iii) A proportional combination of windows and roof lights required by (i) and (ii).

(b) A required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of:

(i) Generally — 1 m; and

(ii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.

(c) The sills of 50% of windows in childrens rooms must be located not more than 500mm above the floor.

(d) Attention is directed (but not limited to) ensuring the sills of 50% of windows in childrens rooms must be located not more than 500mm above the floor.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F6D5

Artificial lighting complying with AS/NZS1680.0-2009 must be installed:

(a) In required stairways.

(b) To all rooms that are frequently occupied, all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F6D6

A habitable room, office, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have:

(a) Natural ventilation complying with F6D7 below; or

(b) Mechanical ventilation complying with AS1668.2-2012.

Details demonstrating compliance with the above for the development to be provided at construction certificate stage.

F6D7

Natural ventilation must consist of permanent openings, windows, doors or other devices which can be opened:

(a) With an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and

(b) Open to:

(i) Suitably sized court, or space open to the sky; or

(ii) An open verandah, carport, or the like.

F6D11

Every storey of the Class 7a carpark must have:

(a) A system for mechanical ventilation complying with AS1668.2-2012; or

(b) A system of natural ventilation complying with Section 4 of AS1668.4-2012.

5.7 Section G – Ancillary Provisions

G1D4

(a) Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which:

(i) Where the edge of the trafficable surface of the outdoor play space is at the same level or less than 2 m above the surface beneath complies with AS1926.1-2012; and

(ii) Where the edge of the trafficable surface of the outdoor play space is 2m or more above the surface beneath:

(A) Is not less than 1.8m high, as measured from above the trafficable surface;

(B) Is non-climbable and does not contain horizontal or other elements that could facilitate climbing;

(C) Does not have any openings or apertures through which a 100 mm or greater sphere could pass; and

(D) Is not within 1.8m, as measured directly from the top of the barrier, of any elements within the outdoor play space that facilitate climbing; and

(E) Is not within 900mm of elements in a wall that facilitate climbing.

(iii) Has strength and rigidity complying with AS1926.1-2012.

(b) For the purposes of (i), AS 1926.1-2012 is applied as if there is a swimming pool located outside the outdoor play space, so that the barrier restricts children from exiting the premises without the knowledge of staff in the centre.

(c) The requirements of (ii) do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre.

In this regard, it is recommended that details demonstrating compliance with the above be provided at construction certificate stage.

G6D2

(a) A lining, material or assembly in the outdoor play spaces must comply with C2D11 as for an internal element.

(b) The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C2D11:

(i) Average specific extinction area.

(ii) Smoke-Developed Index.

(iii) Smoke development rate.

(iv) Smoke growth rate index (SMOGRARC).

In this regard, it is recommended that details demonstrating compliance with the above be provided at construction certificate stage.

6. Construction Details

In a building required to be of Type B construction:

(a) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL that supporting part, must an FRL not less required by the part of the building being supporting and be non-combustible.

(b) A lintel must have the FRL required for that part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire window or fire shutter, and:

(i) It spans an opening in masonry which is not more than 150mm thick and:

(A) Not more than 3m wide if the masonry is non-loadbearing; or

(B) Not more than 1.8m wide if the masonry is loadbearing and part of a solid wall or one of the leaves of a cavity wall.

(c) Each building element listed in the Table below, and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the Class of building concerned as highlighted in red below.

(d) External walls, common walls including all components incorporated in them including the facade covering, framing and insulation must be non-combustible.

(e) External walls must be non-combustible including any render and achieve an FRL from both sides.

(f) The method of attaching or installing a finish, lining or ancillary element or service installation to a building must not reduce the fire-resistance of that element to below that required.

(g) Any internal wall required to have an FRL with respect to integrity and insulation must extend to:

(i) The underside of the floor next above if that floor has an FRL of at least 30/30/30; or

(ii) The underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

(iii) The underside of the roof covering if it is non-combustible and, except for roof battens with dimensions of 75 mm x 50 mm or less or sarking-type material, must not be crossed by timber or other combustible building elements; or

(iv) 450 mm above the roof covering if it is combustible.

(h) A loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be of concrete or masonry.

(i) In the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls, need not comply with the Table below.

(j) The FRLs specified in the Table below for an external wall includes any column and other building element incorporated within it or other external building element.

Building element	Class of building—FRL: (in minutes)

	Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—				
For loadbearing parts—				
less than 1.5m	90/ 90/ 90	120/ 120/ 120	180/ 180/ 180	240/ 240/ 240
1.5 to less than 3 m	90/ 60/ 30	120/ 90/ 60	180/ 120/ 90	240/ 180/ 120
3 to less than 9m	90/ 30/ 30	120/ 30/ 30	180/ 90/ 60	240/ 90/ 60
9 to less than 18m	90/ 30/ -	120/ 30/ -	180/ 60/ -	240/ 60/ -
18 m or more	- / - / -	- / - / -	- / - / -	- / - / -
For non-loadbearing parts—				
less than 1.5 m	- / 90/ 90	- / 120/ 120	- / 180/ 180	- / 240/ 240
1.5 to less than 3 m	- / 60/ 30	- / 90/ 60	- / 120/ 90	- / 180/ 120
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—				
Loadbearing	90/ - / -	120/ - / -	180/ - / -	240/ - / -
COMMON WALLS and FIRE WALLS -				
Loadbearing or non-loadbearing	90/ 90 / 90	120/ 120 / 120	180/ 180 / 180	240/ 240 / 240
INTERNAL WALLS-				
Fire-resisting lift and stair shafts—				
Loadbearing	90/ 90/ 90	120/ 120/ 120	180/ 120/ 120	240/ 120/ 120
Non-loadbearing	- / 90/ 90	- / 120/ 120	- / 120/ 120	- / 120/ 120
Bounding public corridors, public lobbies and the like—				
Loadbearing	60/ 60/ 60	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- / 60/ 60	- / - / -	- / - / -	- / - / -
Between or bounding units—				
Loadbearing	60/ 60/ 60	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- / 60/ 60	- / - / -	- / - / -	- / - / -
OTHER LOADBEARING INTERNAL WALLS and COLUMNS—	60/ - / -	120/ - / -	180/ - / -	240/ - / -
ROOFS	- / - / -	- / - / -	- / - / -	- / - / -

7. Fire Safety Measures

The fire safety measures listed below are to be installed to the commentary and recommendations contained in Parts 4 and 5.

Fire Safety Measures	Minimum Standard of Performance
1. Automatic fail-safe device (if installed)	D3D24 and D3D26 of the BCA (as appropriate)
2. Automatic fire detection and alarm system	▪ E2D3, E2D16, E2D19 and Specification 20 of the BCA (as appropriate) ▪ AS1670.1-2018

3. Automatic fire suppression system (sprinklers)	▪ E1D4, E1D11 and Specification 17 of the BCA ▪ AS2118.1-2017
4. Building occupant warning system	SC207 of the BCA
5. Emergency lighting	▪ E4D2, E4D3 and E4D4 of the BCA ▪ AS/NZS2293.1-2018
6. Exit signs	▪ E4D5, E4D6 and E4D8 of the BCA ▪ AS/NZS2293.1-2018
7. Fire dampers (if installed)	▪ C4D5 and C4D15 of the BCA (as appropriate) ▪ AS1668.1-2015 (as appropriate)
8. Fire doors	▪ C3D13 (if installed) and C3D14 (if installed) ▪ AS1905.1-2015
9. Fire hose reel system	▪ E1D3 of the BCA ▪ AS2441-2005
10. Fire hydrant system	▪ E1D2 of the BCA ▪ AS2419.1-2021
11. Fire seals protecting openings in fire-resisting components of building	▪ C3D13, C4D15, C4D16 and Specification 13 of the BCA ▪ AS4072.1-2005 and AS1530.4-2014
12. Fire shutters (if installed)	• C4D5 and Specification 12 of the BCA ▪ AS1905.2-2005
13. Fire windows (if installed)	• C4D5 and Specification 12 of the BCA ▪ AS1530.4-2014
14. Lightweight construction (if installed)	▪ C2D9, C4D17 and Specification 6 of the BCA (as appropriate) ▪ As1530.4-2014
15. Mechanical air handling system ▪ Ventilation to Class 7a carpark	E2D12 of the BCA
16. Mechanical air handling system ▪ Automatic shutdown to Class 9b early childhood centre	E2D16 of the BCA
17. Mechanical air handling system ▪ Ventilation to Class 7a carpark	E2D12 of the BCA
18. Portable fire extinguishers	▪ E1D14 of the BCA ▪ AS2444-2001
19. Smoke dampers (if installed)	▪ E2D3 of the BCA
20. Warning and operational signs	D3D28 and E3D4 of the BCA
21. Wall-wetting sprinkler and drencher system (if provided)	C4D5 of the BCA

22. FER	TBA

- C2D2
- C2D10
- C3D6
- C4D3
- C4D4
- C4D5
- C4D6
- C4D10
- D2D3
- D2D4
- D2D5
- D2D12
- D2D16
- D3D9
- E1D3

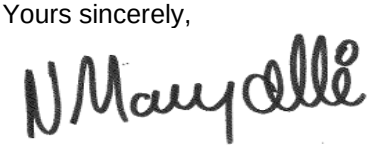
8. Conclusion

8.1. General

Having regard to the above commentary and recommendations, compliance with the BCA is capable, subject to compliance with Parts 4-7. Hence, no impediments to the issuing of a modified development consent from a BCA perspective.

If you require any further assistance or have any additional queries, please do not hesitate in contacting us directly.

Yours sincerely,



Nehme Moujalli
Director
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