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admin@buildinganatomy.com.au
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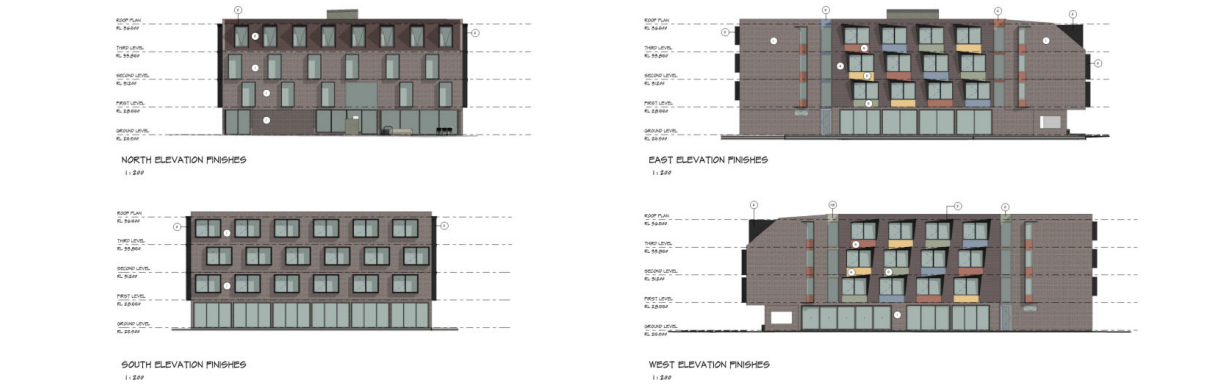
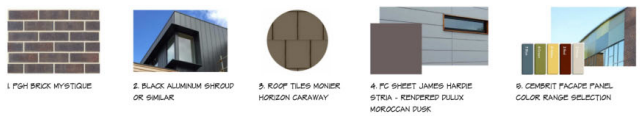
BCA 2019.1 AND ACCESS INDICATIVE COMPLIANCE REPORT FOR DA ASSESSMENT

10-11 Railway Street
Werrington NSW





Prepared for:	**George Wehbe**
	C/- Level Architects
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PWA CONSULTING PTY LTD TRADING AS BUILDING ANATOMY
PO BOX 102
SPIT JUNCTION NSW 2088
OFFICE 02 9158 3930
ABN 83 620 269 847

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This report is to be read in conjunction with the BCA and supporting design documentation.

Document History

Date	Issue	Status	Prepared by
21.11.2020	Draft v0.1	Initial document created	Peter Antcliffe
21.07.2021	Draft v0.2	Review comments	Peter Antcliffe
13.09.2021	Client Issue v1.0	Client review comments	Peter Antcliffe
20.09.2021	Client Issue v2.0	Final DA Submission	Peter Antcliffe

Table of Contents

Executive summary

In summary, selected upgrade works have been recommended in relation to

- Health and amenity
- Occupant Safety
- Fire resisting construction & separation
- Egress and construction of exits
- Fire services and equipment

DTS Design Non-Compliances / Further Information – CC Plans to be Updated.

The following list are items which specifically required additional information as to how compliance will be demonstrated. Please advise as to the final or intended design to close out these items to the satisfaction of the Certifier. *(**See Appendix E,** for a full Clause by Clause Assessment)*

Table 1. DTS Departures

Item	Description of Clause	Issue	Recommended Solution	CC Plans to reflect
123	**C2.12** Separation of Equipment **and** **E1.3 –** Fire Hydrants	The designer needs to confirm. 1. Pump room location.	1. Confirm form consultants if a pump room is required, if required, provide an additional space within the building. 2. Obtain a Performance Solution to recognise the booster assembly is not in line with the building main entry.	Update TBA
44	**C3.11 –** Bounding construction: Class 2, 3, 4 and 9 Buildings	3 SOU's open onto the foyer part of the building which contain a *Pubic Corridor*, this part of a residential *Pubic Corridor* is also connected to the 'common room' which is not separated from the residential *Pubic Corridor.*	Performance Solution to allow as is with additional Fire Safety	Performance Solution
74	**D1.7 –** Travel via fire-isolated exits	A minor technical non-compliance where the discharge of the isolated exits are not strictly 2/3 open on the level of discharge.	Performance Solution to allow as is with additional Fire Safety	Performance Solution
88	**D2.4 –** Separation of rising and descending stair flights	A Smoke Door is required to separate Rising and Descending Stairs.	Adjust plans to show a smoke door separating rising and descending door. This includes smoke separation within the stair itself between the two (2) separate flights.	CC is to recognise all design requirements.
111 and 112	**D3.1 –** General BuildingAccess Requirements And **D3.2 –** Access to Buildings	As higher end dimensions are not provided for DA plans, it is difficult to confirm compliance.	Final dimensions to all doors and corridors is required, small internal adjustment and the inclusion of Performance Solutions.	CC is to recognise all design requirements or Performance Solution.
123	**E1.3 –** Fire Hydrants	Additional space should be reserved in the building for a pump room with direct access to the fire isolated exits serving the building.	Contractor to confirm the final location of the required Booster assembly.	CC is to recognise all design requirements.
155	**FP1.4 –** Weatherproofing (Performance Requirement)	Full details as to the makeup of the buildings external walls are to be presented.	Performance Solution provided	CC is to recognise all design requirements.

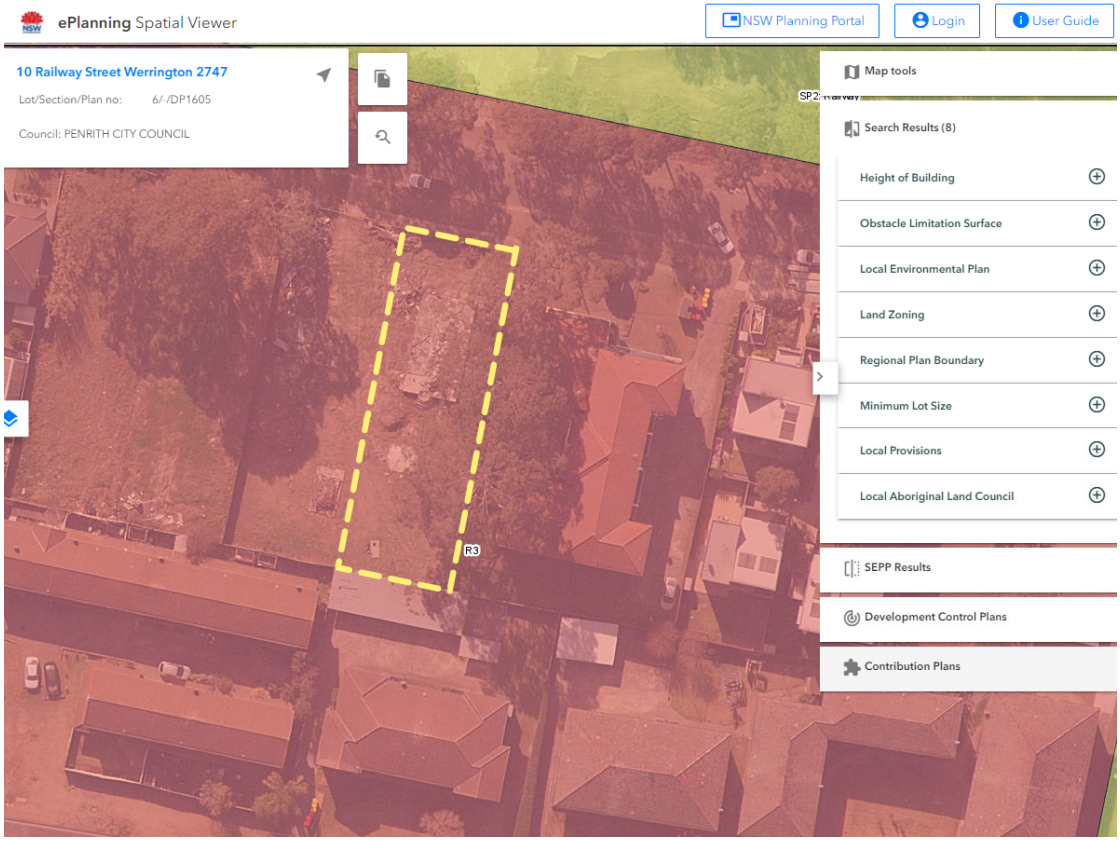
1.0. INTRODUCTION

1.1. Location and Description

Building Anatomy has been engaged to review the proposed works at the subject address. This review is undertaken against the **National Construction Code (NCC) 2019.1** and is to assist the Consent Authority consider whether the proposal, as lodged, is indicatively capable of complying with the NCC and without significant modification to those plans for which approval is sought.

Location:

The legal address is 10-11 Railway Street Werrington NSW.



Source: ***[ePlanning Spatial Viewer (nsw.gov.au)]***

Description:

Work involves the erection of a new building consisting of 69 Rooms, common facilities and a 2-level basement carparking.

The client is to confirm as the proposed 'Use', please confirm either a Class 2 or 3, the report is prepared for both yet a **Class 3** *Boarding House* building and **class 7a** *Carpark is drafted.*

Final classification or a mixture of the 2 is to be confirmed prior to Construction Certificate.

A6.2 Class 2 buildings

(1) A Class 2 building is a building containing two or more *sole-occupancy units*.

(2) Each *sole-occupancy unit* in a Class 2 building is a separate dwelling.

A6.3 Class 3 buildings

A Class 3 building is a residential building providing long-term or transient accommodation for a number of unrelated persons, including the following:

(1) A boarding house, guest house, hostel, lodging house or backpacker accommodation.

(2) A residential part of a hotel or motel.

(3) A residential part of a *school*.

(4) Accommodation for the aged, children, or people with disability.

(5) A residential part of a *health-care building* which accommodates members of staff.

(6) A residential part of a *detention centre*.

(7) A *residential care building*.

Limitation 1:

For A6.3, a Class 3 building is not a Class 1 or 2 residential building. However, a building could be a mixture of Class 3 and another Class.

1.2. Report Purpose

This review is undertaken against the **National Construction Code (NCC) 2019.1** and amendment 1 (Final BCA to be advised by the Certifier pending Construction Lodgement date) has been considered, parts C, D and E to the internal and immediate external parts of the building and is to assist the consent authority consider whether the proposal, as lodged, is indicatively capable of complying with those fire and life safety provisions of the NCC and without significant modification to those plans for which approval is sought.

Additionally, we cite clause 93 and 94 of the Environmental Planning and Assessment Regulation 2000 (Regulation), obliging the consent authority to consider whether the fire protection and structural capacity of the building will be appropriate to the building's proposed use; and whether the building complies (or will comply) with such Category 1[1] fire safety provisions1 applicable to the new use. This report looks to satisfy the consent authority of the matters outlined in clause 93 and 94.

Under a Construction Certificate assessment, the Certifier is also to consider clause 143 of the Regulations.

143 Fire protection and structural capacity

(1) A certifier must not issue a construction certificate for building work under a development consent that authorises a change of building use unless—

(a) the fire protection and structural capacity of the building will be appropriate to its new use, and

(b) the building will comply with such of the Category 1 fire safety provisions as are applicable to the new use,

assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.

(2) Subclause (1)(b) does not apply to the extent to which an exemption is in force under clause 164B, 187 or 188, subject to the terms of any condition or requirement referred to in clause 164B(4), 187(6) or 188(4).

(3) In the case of building work that involves the alteration, enlargement or extension of an existing building in circumstances in which no change of building use is proposed, a certifier must not issue a construction certificate for the work unless, on completion of the building work, the fire protection and structural capacity of the building will not be reduced, assuming that the building work is carried out in accordance with the plans and specifications to which the construction certificate relates and any conditions to which the construction certificate is subject.

[1] ***Category 1 fire safety provision*** means the following provisions of the *Building Code of Australia*, namely, EP1.3, EP1.4, EP1.6, EP2.1, EP2.2 and EP3.2 in Volume One of that Code

(4) This clause does not apply to building work required by a consent authority as a condition of a development consent that authorises a change of building use.

Addition benchmarks will need to be demonstrated at the Construction Certificate (CC) Application, yet for the purposes of this report, compliance yes or no is afforded as to not be design advice, and where relevant, Compliance Readily Achievable - It is considered that the increased level of detail included in the CC drawings and specification will satisfy the Certifying Authority as to compliance matters in the future.

1.3. Basis of Report

This report is based upon and limited to:

- An assessment of design documentation referenced in Appendix B of this report.
- The Deemed-to-Satisfy provisions of the **Building Code of Australia 2019 Amendment 1** (BCA) including the NSW variations where applicable.

1.4. Referenced Documents

The following documentation was relied upon when preparing this report:

- Assessment of design documentation referenced in Appendix B of this report.
- The performance and deemed-to-satisfy provisions of the Building Code of Australia (BCA) incorporating the NSW Appendices where applicable.
- Guide to the Building Code of Australia.
- Disability (Access to Premises — Buildings) Standards 2010.
- Environmental Planning & Assessment Act 1979.
- Environmental Planning & Assessment Regulation 2000.
- Design and Building Practitioners Act 2020.
- Design and Building Practitioners Regulation 2021

In anticipation for Class 3 building to be captured under the Design and Building Practitioners Act and Regulation, reference are within this document for future reference if needed.

Schedule 1 Classes of registration

Part 1 Preliminary

1 Classes of registration as design practitioner

For the purposes of section 42 of the Act, the following classes of registration as a design practitioner are prescribed—

(a) design practitioner—architectural,

(b) design practitioner—body corporate

(c) design practitioner—building design (low rise),

(d) design practitioner—building design (medium rise),

(e) design practitioner—civil engineering,

(f) design practitioner—drainage,

(g) design practitioner—drainage (restricted),

(h) design practitioner—electrical engineering,

(i) design practitioner—facade,

(j) design practitioner—fire safety engineering,

(k) design practitioner—fire systems (detection and alarm systems),

(l) design practitioner—fire systems (fire hydrant and fire hose reel),

(m) design practitioner—fire systems (fire sprinkler),

(n) design practitioner—fire systems (mechanical smoke control),

(o) design practitioner—geotechnical engineering,

(p) design practitioner—mechanical engineering,

(q) design practitioner—structural engineering,

(r) design practitioner—vertical transportation.

2 Classes of registration as principal design practitioner

For the purposes of section 42 of the Act, the following classes of registration as a principal design practitioner are prescribed—

(a) principal design practitioner—body corporate,

(b) principal design practitioner—general.

3 Classes of registration as building practitioner

For the purposes of section 42 of the Act, the following classes of registration as a building practitioner are prescribed—

(a) building practitioner—body corporate,

(b) building practitioner—body corporate nominee,

(c) building practitioner—general.

4 Classes of registration as professional engineer

For the purposes of section 42 of the Act, the following classes of registration as a professional engineer are prescribed—

(a) professional engineer—civil,

(b) professional engineer—electrical,

(c) professional engineer—fire safety,

(d) professional engineer—geotechnical,

(e) professional engineer—mechanical,

(f) professional engineer—structural.

1.5. Limitations and Exclusions

The limitations and exclusions of this report are as follows:

- The plans are assessed indicatively to the extent necessary to proceed to construction certificate stage whereby assessment will be undertaken pursuant to Part 4A of the Environmental Planning and Assessment Act 1979. This means that the design has been assessed to be able to comply with the BCA (i.e. the submitted plans are consistent with the BCA but certain design details may not be specified at this stage due to the plans and specifications being at DA stage).

- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA only. An assessment against Disability (Access to Premises — Buildings) Standards 2010 and AS 1428.1 is outside the scope of this report. A detailed report prepared by a suitably qualified access consultant may need to be prepared to verify compliance with AS 1428 prior to the issue of a construction certificate.

- This Report does not address issues in relation to the following:
  a) The structural adequacy of the building including the Fire Resistance Levels (FRL's) of any building elements (unless specifically referred to).
  b) The design, maintenance or operation electrical, mechanical, hydraulic or fire protection services.
  c) Environmental Planning and Assessment Act and Regulations (unless specifically referred to).
  d) Local Government Act and Regulations.
  e) Occupational Health and Safety Act and Regulations.
  f) WorkCover Authority requirements.
  g) Requirements of other Regulatory Authorities including, but not limited to, Telstra, Sydney Water, Electricity Supply Authority, RTA, Council and the like.
  h) Disability Discrimination Act.
  i) Construction Safety Act.
  j) Conditions of Development Consent issued by the relevant Local Council.

- This assessment does not incorporate the detailed requirements of the Australian Standards.

- PWA Consulting Pty Ltd Trading as Building Anatomy cannot guarantee acceptance of this report by the Local Council, NSW Fire Brigades or other approval authorities.

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1.6. Legislative Framework

Section 4.15 of the Environmental Planning and Assessment Act provides the matters of consideration that the consent authority must take into account in the determination of a development application.

Once development consent is granted, and pursuant to Clause 145 of the Environmental Planning and Assessment Regulations 2000, a certifying authority must not issue a construction certificate for building work unless:

(a1) the plans and specifications for the building include such matters as each relevant BASIX certificate requires, and

(a) the design and construction of the building (as depicted in the plans and specifications and as described in any other information furnished to the certifying authority under clause 140) are not inconsistent with the development consent, and

(b) the proposed building (not being a temporary building) will comply with the relevant requirements of the Building Code of Australia (as in force at the time the application for the construction certificate was made).

Compliance with the Building Code of Australia

The BCA is a performance-based document whereby compliance can be achieved by satisfying the deemed to satisfy requirements or by formulating an alternative solution to address the relevant performance requirements.

As indicated above, the requirements of the Environmental Planning and Assessment Regulations 2000 requires all new building works to comply with the relevant requirements of the BCA (as in force at the time the application for the construction certificate was made).

This means that the plans and documentation submitted with the *construction certificate* application must demonstrate full compliance with the relevant provisions of the Building Code of Australia.

Clause 143 Fire protection and structural capacity

If your development incorporates a Change of Use, Category 1 fire safety measures must be considered and implemented into the design as applicable:

EP1.3: A fire hydrant system
EP1.4: An automatic fire suppression system
EP1.6: Suitable facilities must be provided to the degree necessary in a building to co-ordinate fire brigade intervention
EP2.1: Sleeping Accommodation, occupants must be provided with automatic warning
EP2.2: Conditions in any evacuation route must be maintained for the period of time occupants take to evacuate
EP3.2: One or more passenger lifts fitted as emergency lifts to serve each floor served by the lifts in a building must be installed to facilitate the activities of the fire brigade and other emergency services personnel

Details of the above will need to be identified on the Building Fire Safety Schedule/Statement as present, if not present; these measures will need to be installed into the building if applicable.

Clause 144, 144A and 152 Referral of certain plans and specifications to New South Wales Fire Brigades

Under the Environmental Planning and Assessment Regulations Clause 144, Clause 144A has specific requirements for any Fire Engineering which identifies Category 2 fire safety provisions which form part of a building being more than 6,000m² and/or within a Fire Compartment more than 2,000m².

Category 2 means the following provisions of the Building Code of Australia, namely, CP9, EP1.3, EP1.4, EP1.6, EP2.2 and EP3.2 in Volume One of that Code

If this building has a floor area of more than 6,000m2 or an alternative solution is proposed within a fire compartment more than 2,000m², any Alternative Solution which identifies one or more of the above performance provisions, Fire Brigade approval is required in the form of a Clause 144 Approval along with a required Engineering Statement under Clause 144A and following the completion of the building a Clause 152 Report from the Fire Commissioner is required, a final fire safety report for a building means a written report specifying whether or not the Fire Commissioner is satisfied:

(a) that the building complies with the Category 2 fire safety provisions, and

(b) that the fire hydrants in the fire hydrant system will be accessible for use by New South Wales Fire Brigades, and
(c) that the couplings in the fire hydrant system will be compatible with those of the fire appliances and equipment used by New South Wales Fire Brigades.

Fulfilment of BASIX Commitments (Residential only)

Clause 154A of the Environmental Planning and Assessment Regulations 2000 requires a certifying authority to monitor fulfilment of any commitments listed on the BASIX certificate, where the BASIX requires the certifying authority to monitor those commitments.

A certifying authority must not issue an occupation certificate (whether interim or final) for any building resulting from, or any building that becomes a BASIX affected building because of, BASIX affected development or BASIX optional development to which this clause applies, or for any part of such a building, unless each of the commitments whose fulfilment it is required to monitor in relation to the building or part has been fulfilled.

For the purpose of satisfying itself as to the fulfilment of any such commitment, a certifying authority may rely on the advice of any properly qualified person (i.e. Energy Efficiency Consultant).

Special Requirements for Residential Flat Developments

Clause 143A of the Environmental Planning and Assessment Regulations 2000 requires a qualified designer to provide a statement that verifies that the plans and specifications that form part of construction certificate application achieve or improve the design quality of the development having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of a Construction Certificate.

Clause 154A of the Environmental Planning and Assessment Regulations 2000 requires a qualified designer to provide a statement that verifies that the residential flat development achieves the design quality of the development as shown in the plans and specifications having regard to the design quality principles set out in Part 2 of the State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development prior to the issue of an Occupation Certificate.

Disability (Access to Premises — Buildings) Standards 2010

Disability (Access to Premises — Buildings) Standards 2010 has been introduced and is applicable to this building. It is noted that an access Consultant may be ben engaged at the CC stage to provide specific comments as to compliance with this standard. However, as the applicant is a tenant in a Multi tenanted building, the Premises Standard is not applicable to this application. However, its intent is recommended for best practice where possible.

In anticipation for Class 3 building to be captured under the Design and Building Practitioners Act (DBPA) and Regulation, reference to the (DBPA) within this document for future reference if needed.

Design and Building Practitioners Act 2020.

Design and Building Practitioners Regulation 2021.

The introduction of the Design and Building Practitioners Act and Regulation required the design team to be accountable for their designs. Designs for a 'Designed Building' (Currently any building with a Class 2 parts) are to be confirmed and approved via an accredited Designer.

6 Content of regulated designs involving fire resisting building elements

(1) For the purposes of section 5(2) of the Act, a fire resisting regulated design must include information, whether written, in the form of a drawing or otherwise, that explains how a fire-

resistance level will be achieved and maintained in circumstances where a penetration to a building element occurs—

(a) during the installation or maintenance of services in relation to building work, or

(b) at another time during the building work.

Note— The *Building Code of Australia* specifies requirements for when a service that penetrates a building element must have a particular fire-resistance level, and other requirements for service penetrations.

(2) In this clause—

fire resisting regulated design means a regulated design that includes—

(a) a building element that is required to have a fire-resistance level under the *Building Code of Australia*, or

(b) a floor or ceiling that is required to have resistance to the incipient spread of fire under the *Building Code of Australia*.

1.7. Form and content of regulated designs involving performance solutions

Under the Design and Building Practitioners Regulation 2021

5 Form and content of regulated designs involving performance solutions

(1) For the purposes of section 5(2) of the Act, a regulated design that is prepared for a performance solution for building work, including a building element, must be in the form of a report that includes the following—

(a) relevant plans that show, or specifications that describe, the physical elements of the performance solution, if any,

(b) a description and justification of the performance solution, including—

(i) the acceptance criteria and parameters on which the justification is based, and

(ii) a description of the physical elements of the performance solution, and

(iii) restrictions or conditions of the performance solution, and

(iv) a copy of the brief on which the justification of the performance solution is based,

(c) a statement that the performance solution complies with the relevant performance requirements of the *Building Code of Australia*,

(d) information that identifies the deemed-to-satisfy provisions of the *Building Code of Australia* being varied, where relevant.

(2) A report for a regulated design that is prepared for a performance solution must comply with the applicable evidence requirements for the design specified in the *Building Code of Australia*, Volume 1, Part A2.2.

(3) In this clause—

deemed-to-satisfy provisions has the same meaning as in the *Building Code of Australia*.

1.8. Terminology

- *Building Code of Australia* - Document published on behalf of the Australian Building Codes Board. The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia and is adopted in NSW under the provisions of the Environmental Planning & Assessment Act & Regulation.

  BCA 2016 Amendment 1 *applies to this report.*

- *Fire Resistance Level (FRL)* - means the grading periods in minutes for the following criteria - (a) structural adequacy; and

(b) integrity; and
(c) insulation,
and expressed in that order.

- *Fire Source Feature (FSF)* - the far boundary of a road adjoining the allotment; or a side or rear boundary of the allotment; or an external wall of another building on the allotment which is not a Class 10 building.

- *Open space* - means a space on the allotment, or a roof or other part of the building suitably protected from fire, open to the sky and connected directly with a public road.

- *Performance Requirements of the BCA* - A Building Solution will comply with the BCA if it satisfies the Performance Requirements. A Performance requirement states the level of performance that a Building Solution must achieve.

  Compliance with the Performance Requirements can only be achieved by-
  (a) complying with the Deemed-to-Satisfy Provisions; or
  (b) formulating an Alternative Solution which-
  (i) complies with the Performance Requirements; or
  (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions; or
  (c) a combination of (a) and (b).

- *Sole occupancy unit* - means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier.

Note: **Design and Building Practitioners Regulation 2021.**

5 Form and content of regulated designs involving performance solutions

(1) For the purposes of section 5(2) of the Act, a regulated design that is prepared for a performance solution for building work, including a building element, must be in the form of a report that includes the following—
  (a) relevant plans that show, or specifications that describe, the physical elements of the performance solution, if any,
  (b) a description and justification of the performance solution, including—
    (i) the acceptance criteria and parameters on which the justification is based, and
    (ii) a description of the physical elements of the performance solution, and
    (iii) restrictions or conditions of the performance solution, and
    (iv) a copy of the brief on which the justification of the performance solution is based,
  (c) a statement that the performance solution complies with the relevant performance requirements of the *Building Code of Australia*,
  (d) information that identifies the deemed-to-satisfy provisions of the *Building Code of Australia* being varied, where relevant.
(2) A report for a regulated design that is prepared for a performance solution must comply with the applicable evidence requirements for the design specified in the *Building Code of Australia*, Volume 1, Part A2.2.
(3) In this clause—

deemed-to-satisfy provisions has the same meaning as in the *Building Code of Australia*.

BUILDING DESCRIPTION – PROPOSED DEVELOPMENT

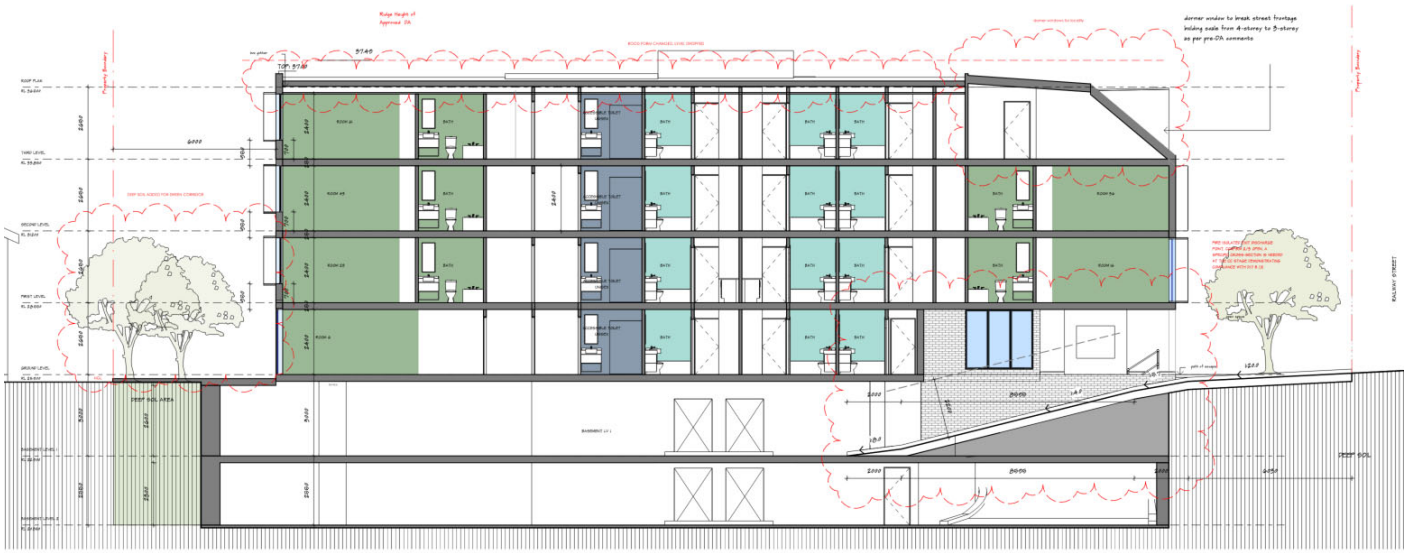
1.9. Building Code of Australia Description

For the purposes of the Building Code of Australia (BCA) the proposed development may be described as follows.

1.10. Rise in Storeys (Clause C1.2)

The overall building has a rise in storeys of **FOUR (4)**

The number of storeys contained **SIX (6)**



1.11. Building Classifications (Clause A6.0)

The proposed building, once refurbished, has been classified as follows.

Proposed classification in accordance with the below table.

Building Levels	Base Building Classification	Rise in Storeys
Basement 1	Class 7a – Carpark	-
Basement 2	Class 7a – Carpark	-
Ground Floor	Class 3 – Residential	1
Level 1	Class 3 – Residential	2
Level 2	Class 3 – Residential	3
Level 3	Class 3 – Residential	4

1.12. Effective Height (Schedule 3 - Definitions)

The building has an effective height of <12m.

As the ramp entry incorporates a technical external wall, when measured the external wall extends for 12 meters and has an average ceiling height of more than 1m. This, the lower level known as the basement is deemed as a Storey under the BCA and is to be included in the Rise-In-Storeys for the purposes of BCA C1.2(b)(ii).

Basement Level 1: **RL 22.9**
Third Level: **RL 33.85**
EH: 10.95

> **Effective height** means the vertical distance between the floor of the lowest *storey* included in the calculation of *rise in storeys* and the floor of the topmost *storey* (excluding the topmost *storey* if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).

Although it is noted that the building is <12m, it is recommended that at least one lift is a stretcher lift.

1.13. Type of Construction (Table C1.1)– 'Type A' Applies.

The building as is required to be of Type 'A' Construction as per Table C1.1.

Table C1.1 Type of construction required

Rise in storeys	Class of building 2, 3, 9	Class of building 5, 6, 7, 8
4 or more	A	A
3	A	B
2	B	C
1	C	C

It is also noted that the existing building was built pre this BCA series of building

1.14. Floor Area and Volume Limitations (Table C2.2)

The building is not subject to maximum floor area and volume limits under Type 'A' Construction of being Class 3 SOU's and the carpark Storey complies with Table C2.2.

Table C2.2 Maximum size of fire compartments or atria

Classification	Type A construction	Type B construction	Type C construction
5, 9b or 9c	Max *floor area*—8 000 m^2 Max volume—48 000 m^3	Max *floor area*—5 500 m^2 Max volume—33 000 m^3	Max *floor area*—3 000 m^2 max volume—18 000 m^3
6, 7, 8 or 9a (except for *patient care areas*)	Max *floor area*—5 000 m^2 Max volume—30 000 m^3	Max *floor area*—3 500 m^2 Max volume—21 000 m^3	Max *floor area*—2 000 m^2 Max volume—12 000 m^3

1.15. Fire Compartments (Clause C2.2)

The following fire compartments have been assumed:

1. Basement Car Park.

Note: Class 3 parts of the building are not deemed to be a 'Fire Compartment' per say as bounding construction or Units and Public Corridors are fire separated from each other via other design means.

Fire compartment means—

(a) the total space of a building; or

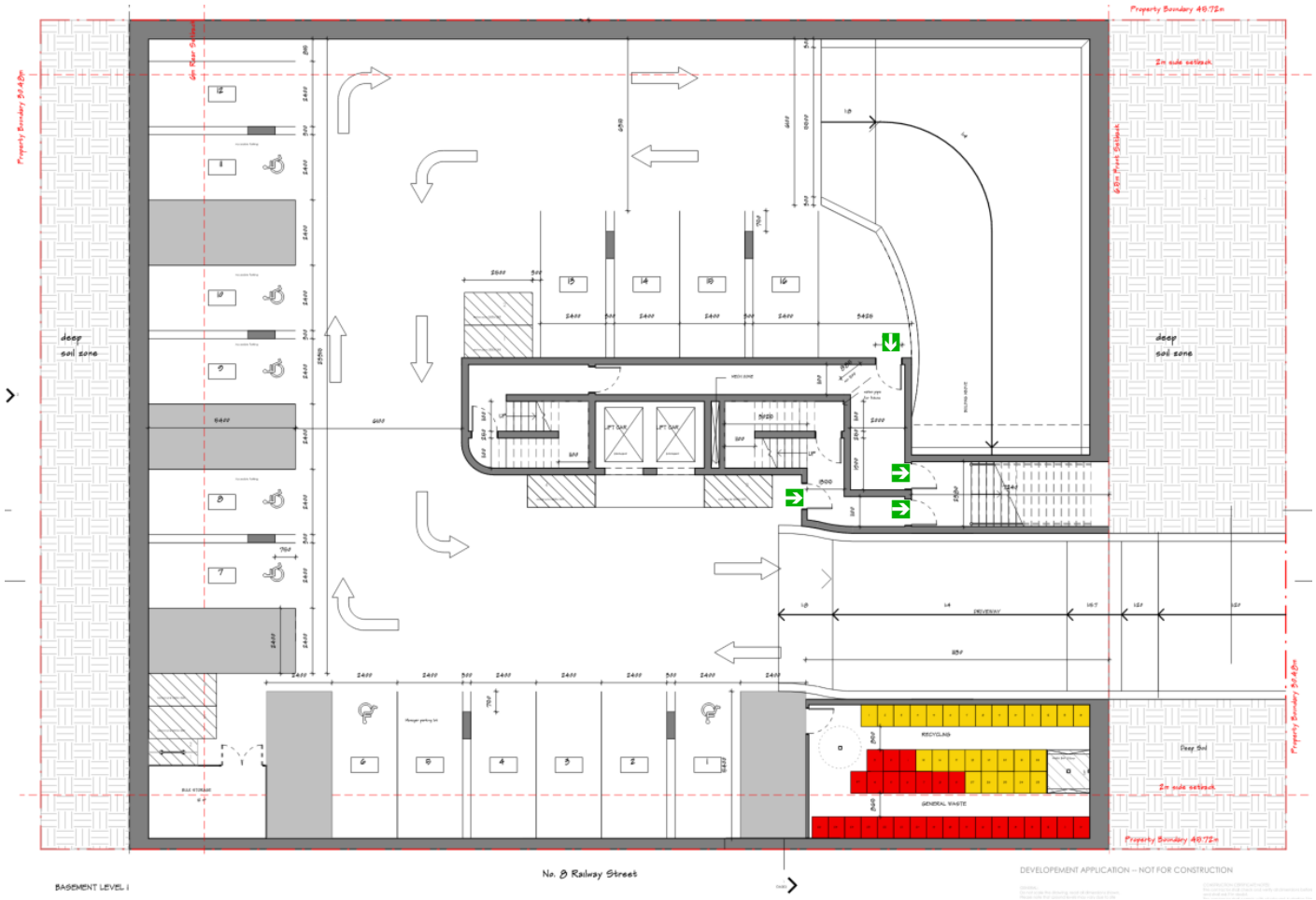
(b) when referred to in—

(i) the *Performance Requirements* — any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or

(ii) the *Deemed-to-Satisfy Provisions* — any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that *required* for a *fire wall* for that type of construction and where all openings in the separating construction are protected in accordance with the *Deemed-to-Satisfy Provisions* of the relevant Part.

1.16. Exits (Clause D1.2)

The following points in the building have been considered as the exits: assumed:



Exit means—

(a) any, or any combination of the following if they provide egress to a road or *open space*:

(i) An internal or external stairway.

(ii) A ramp.

(iii) A *fire-isolated passageway*.

(iv) A doorway opening to a road or *open space*.

(b) A *horizontal exit* or a *fire-isolated passageway* leading to a *horizontal exit*.

1.17. Climate Zone (Clause A1.0)

The building is located within **Climate Zone 6 (Penrith City Council)**

1.18. Location of Fire-Source Features (Clause C3.2)

The building is set back >3m from East and West Elevations

Fire-source feature means—

(a) the far boundary of a road, river, lake or the like adjoining the allotment; or

(b) a side or rear boundary of the allotment; or

(c) an *external wall* of another building on the allotment which is not a Class 10 building.

Note: ***Under Spec C1.1 - 2.1***: A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that–

(i) has an FRL of not less than 30/–/–; and

(ii) is neither transparent nor translucent.

1.19. Fire protection and structural capacity (Clause 143 of the EP&A Regulation)

If your development incorporates a Change of Use, Category 1 fire safety measures must be considered and implemented into the design as applicable.

These items will be included as good measure.

EP1.3:	***A fire hydrant system (required)***
EP1.4:	***An automatic fire suppression system (required)***
EP1.6:	*Suitable facilities must be provided to the degree necessary in a building to co-ordinate fire brigade intervention*
EP2.1:	***Sleeping Accommodation, occupants must be provided with automatic warning (required)***
EP2.2:	***Conditions in any evacuation route must be maintained for the period of time occupants take to evacuate (required)***
EP3.2:	*One or more passenger lifts fitted as emergency lifts to serve each floor served by the lifts in a building must be installed to facilitate the activities of the fire brigade and other emergency services personnel*

1.20. Fire Brigade referral (Clause 144 of the EP&A Regulation)

This building requires Fire Engineering which **would not need** NSW Fire Brigades referral. However, a Fire Engineering Brief is recommended.

Total Building size <2,000m2 fire compartments and the building total size is <6,000m2.

Note: Regardless of size, other triggers as listed below if triggered.

144 Referral of certain plans and specifications to New South Wales Fire Brigades

(1) This clause applies to the following buildings, or parts of buildings, that are the subject of an application for erection, rebuilding, alteration, enlargement or extension—

(a) a class 9a building that is proposed to have a total floor area of 2,000 square metres or more, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(b) a building (other than a class 9a building) that is proposed to have a fire compartment with a total floor area of more than 2,000 square metres, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(c) a building (other than a class 9a building) that is proposed to have a total floor area of more than 6,000 square metres, where the plans and specifications for the work provide for a performance solution to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions,

(d) a class 2, class 3 or class 9 building of 2 or more storeys, or the class 4 part of any class 9 building of 2 or more storeys, where—

(i) the plans and specifications for the work provide for a performance solution to meet performance requirement CP2 in Volume 1 of the *Building Code of Australia*, to the extent that it relates to external combustible cladding, and

(ii) the performance solution does not apply the verification method CV3 in Volume 1 of the *Building Code of Australia* in its entirety,

(e) a class 5, class 6, class 7 or class 8 building of 3 or more storeys, or the class 4 part of any class 5, class 6, class 7 or class 8 building of 3 or more storeys, where—

(i) the plans and specifications for the work provide for a performance solution to meet performance requirement CP2 in Volume 1 of the *Building Code of Australia*, to the extent that it relates to external combustible cladding, and

(ii) the performance solution does not apply the verification method CV3 in Volume 1 of the *Building Code of Australia* in its entirety,

(f) a class 2 or class 3 building of 4 or more storeys where the plans and specifications for the work provide for a performance solution to meet performance requirement EP1.4 in Volume 1 of the *Building Code of Australia*,

(g) a class 9b early childhood centre where the plans and specifications for the work do not meet requirement D1.18(a) in Volume 1 of the *Building Code of Australia*.

2.0. FIRE SAFETY SCHEDULES

Details on the existing and proposed fire safety schedules are included in the following schedules.

2.1. Proposed Fire Safety Schedule

As a result of the works proposed under this development application, the draft proposed fire safety schedule for the site will be as follows; this is based on existing fire services and required services due to this development:

2.2. Certification of Essential Fire Safety Measures

Pursuant to Section 169 of the Environmental Planning and Assessment Regulations 2000, it will be necessary for the owner of the building, on completion of work to furnish a Final Fire Safety Certificate with regard to each essential fire safety measure identified in the proposed Fire Safety Schedule listed above.

The final fire safety certificate must state that each essential fire safety measure specified in the fire safety schedule for the building to which the certificate relates:

(a) has been assessed by a properly qualified person, and
(b) was found, when it was assessed, to be capable of performing to at least the standard required by the current fire safety schedule for the building for which the certificate is issued.

Every year, the owner(s) will need to sign and submit an Annual Fire Safety Statement to the Local Council and the NSW Fire Brigades, which confirms that all essential fire safety measures have been tested and maintained and perform to the original design and installation standard. A copy of the Annual Fire Safety Statement must also be displayed in a prominent area of the buildings (i.e. the main entrance foyers).

2.3. Draft - Fire Safety Schedule

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Clause 168 of the Environmental Planning and Assessment Regulation 2000, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA Year 2019 (Amdt 1)
Type of Construction A
RIS = 4
Effective height = <1
Classifications: Class 3 and Class 7a
Uses: Residential Boarding House

NOTES
*** Indicates whether the measure is new (N), Existing (E) or Modified (M)**
****Date (DD-MM-YYYY) measure was assessed by a properly qualified person**

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
	General – Fire Resistance (Floors – Walls - Doors – Shafts)					
1.	Access panels & doors/hoppers (fire rated)	**N**	**BCA 2019 (Amdt 1) C3.13** (Openings in Shafts) **BCA 2019 (Amdt 1) Spec C3.4** AS 1905.1 -2015 (Fire Resistant Door sets)	12 Months		
2.	Construction Joints - Fire Walls, shafts and internal walls and floor between compartments only.	**N**	**BCA 2019 (Amdt 1) C1.1, Spec C1.1** **BCA 2019 (Amdt 1) C3.16** AS1530.4 - 2014	12 Months		
3.	Fire doors	**N**	**BCA 2019 (Amdt 1) C3.8** (Openings in Fire Isolated Exits) **BCA 2019 (Amdt 1) C3.10** (Opening in Fire Isolated Lift Shafts) AS 1735.11 - 1986 **BCA 2019 (Amdt 1) C3.11** (Bounding Construction) **BCA 2019 (Amdt 1) D1.7** (Travel Via Fire Isolated Exits) **BCA 2019 (Amdt 1)** Spec C3.4 AS/NZS 1905.1 – 2015	3 Monthly (Sliding Fore Doors Only) 6 Monthly (Fire Doors and Smoke Doors) 12 Months		
4.	Smoke doors - Smoke Seals - Solid Core or fire rated - Swing in direction of egress/or both ways - Connected to AS1670.1 if held open Smoke detectors within 1.5m both sides - Fail close on power failure - Signage under D2.23 - Rising and Descending Stairs	**N**	**BCA 2019 (Amdt 1) C2.14** (Public Corridors Class 3) Clause 2 of Spec C2.5 **BCA 2019 (Amdt 1) D2.4** (Separation of Rising and Descending Stair Flights) **BCA 2019 (Amdt 1) Spec. C3.4** AS1670.1:2018	12 Months		
5.	Fire seals	**N**	**BCA 2019 (Amdt 1) C3.15,** **BCA 2019 (Amdt 1) C3.16,** **BCA 2019 (Amdt 1) Spec C3.15** AS4072.1-2005	12 Months		
6.	Lightweight construction - Equipment enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. - Switchboards	**N**	**BCA 2019 (Amdt 1) C1.1, Spec. C1.1** **BCA 2019 (Amdt 1) A C1.8, Spec C1.8** **BCA 2019 (Amdt 1) D2.7** (Insulations in Exits and Paths of Travel) **BCA 2019 (Amdt 1) C3.11** (Bounding Construction) AS1530.4 – 2005	12 Months		

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
			(**Note**: Type A and B Construction must have non-combustible wall system if no concessions apply)			
7.	Equipment enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure	**N**	**BCA 2019 (Amdt 1) D2.7** (Insulations in Exits and Paths of Travel)	12 Months		
			General			
8.	Fire Hazard Properties	**N**	**BCA 2019 (Amdt 1)** C1.10 and Spec C1.10	12 Months		
9.	Portable fire extinguishers	**N**	**BCA 2019 (Amdt 1) E1.6** AS 2444 – 2001	Six Monthly		
			General – Egress			
10.	Operation of Door latches - Bollards	**N**	**BCA 2019 (Amdt 1) D2.21** (Operation of Latch) AS1670.1 -2018	12 Months		
11.	Path of travel for stairways, passageway, and ramps	**N**	EP&A Reg. 2000 Clauses 184-186	12 Months		
12.	Warning & operational signs	**N**	**BCA 2019 (Amdt 1) D2.23** (Signs on Fire and Smoke Doors) **BCA 2019 (Amdt 1) D3.6** (Braille Exit Signs) *(Note: E4.5 (Exit Signs))* **BCA 2016 (Amdt 1) E3.3** (Lift Signs),	12 Months		
			Lifts			
13.	Access to Lift Pits - Located at lowest level or if >3m provided through an access door	**N**	**BCA 2019 (Amdt 1) D1.17** (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'	12 Months		
14.	Lifts - >12m Fire Service Controls (Recommended) - >12m Recall Operation (Recommended) - Drive Control Switch - 2 copies of Fire Service Recall Switch Keys shall be secured in the Buildings FIP	**N**	**BCA 2019 (Amdt 1) C2.10** (Fire resistance Shaft) **BCA 2019 (Amdt 1) E3.2** (Stretcher Lifts) (Recommended) **BCA 2019 (Amdt 1) E3.3** (Warning Against Use of Lifts in Fire) **BCA 2019 (Amdt 1) E3.7** (Fire Service Controls) (Recommended) **BCA 2019 (Amdt 1) E3.9** (Fire Service Recall Operation Switch) **BCA 2019 (Amdt 1) E3.10** (Lift Car Fire Service drive control switch) **BCA 2019 (Amdt 1) Spec E3.1** AS1735.11-1986 (Fire rated landing doors)	12 Months		
			Electrical Services			
15.	Smoke Hazard Management Systems Automatic fire detection & alarm: - Clause 3 - AS3786, interconnected Smoke Alarm systems powered from consumer mains to all residential SOU's Fire Brigade Lock Box - Keys for Lift, and other systems. **Note: Add Sign if building does not have an ASE – 'Alarm does Not Call the Fire Brigade – Call 000 if there is an Emergency'**	**N**	**BCA 2019 (Amdt 1) E2.2, NSW Table E2.2a, Table 2.2b, Spec E2.2a** **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 3 (Smoke alarm system) **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 4 (Smoke detection system) **BCA 2019 (Amdt 1)** Spec E2.2a - Clause 7 (BOWS) AS3786 – 2014 (Amdt 1-4) AS1670.1- 2018 Fire Detection and Warning AS1670.3 – 2018 (Fire Alarm Monitoring)	Monthly, and Six Monthly		
16.	BOWS	**N**	**BCA 2019 (Amdt 1)** Spec E2.2a - Clause 7 (BOWS) **BCA 2019 (Amdt 1)** Spec E1.5a - Clause 8 (BOWS) AS1670.1 -2015	Monthly, and Six Monthly		
17.	Emergency lighting	**N**	**BCA 2019 (Amdt 1) E4.2, E4.4** AS/NZS 2293.1 –2005	12 Months		
18.	Exit signs	**N**	**BCA 2019 (Amdt 1) E4.5** (Exit Signs) **BCA 2019 (Amdt 1) E4.6** (Direction Signs) **BCA 2019 (Amdt 1) E4.8** (Design and Operation - Exits) AS/NZS 2293.1 –2005	12 Months		

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/ Fail
19.	System Monitoring	**N**	**BCA 2019 (Amdt 1) E1.5a, Clause 2** AS 1670.3 - 2004	12 Months		
	Hydraulic Services					
20.	Automatic fire suppression systems	**N**	**BCA 2019 (Amdt 1) E1.5** **Please chose -** - **AS2118.1 – 2017 (Recommended)** - AS2118.4 - 2012 - FPAA101D - FPAA101H **Hydraulic Consultant to confirm design infrastructure complies.** **TBA**: BCA Spec E1.5 Sprinkler valve enclosures - Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space. - All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade. - Sprinkler in Carparks – Independent from other parts of the building or able to be isolated,	Monthly, and Six Monthly		
21.	Fire hydrant systems - NSW Storz Couplings Note: Booster Location Note: Pump Room Location	**N**	**BCA 2019 (Amdt 1) E1.3** **BCA 2019 (Amdt 1) C2.12 (Separation of Equipment)** AS 2419.1 – 2005 FRNSW Guide Sheet No. 4 'Fire Brigade Hose Couplings' (current version 03 dated 22 Feb 2012)	Monthly, and Six Monthly		
22.	Hose reel systems - Carpark Only	**N**	**BCA 2019 (Amdt 1) E1.4** AS 2441 – 2005	Six Monthly		
	Mechanical Services					
23.	Fire dampers - Mechanical Fire Dampers (Thermally Released) - Motorized Fire Dampers - Intumescent Fire Dampers - Smoke Dampers Details as to Location TBA	**N**	**BCA 2019 (Amdt 1) E2.2, Spec E2.2a, Spec E2.2b** **BCA 2019 (Amdt 1) C3.15, Spec C3.15** AS 1668.1 – 2015 AS1682.1 and AS1682.2	12 Months		
24.	Mechanical air handling systems 1. Mechanical ventilation to carpark. Fire Fan Control Panel (FFCP) on FBP	**N**	**BCA 2019 (Amdt 1) E2.2, Table E2.2a, and Table E2.2b** **BCA 2019 (Amdt 1) Spec E2.2a,** AS/NZS 1668.1 – 2015 and AS1670.1:2018 Section 7 Smoke Control Systems **Note: 5.5.3 Override control** To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point. **NOTE**: Signage should be located at the car park entry indicating the location of the control switches.	Monthly, and Six Monthly		
	Performance Solutions					
25.	**Alternative Solution** **Fire Engineering Report Ref No. XXX prepared by XXX dated XXX**	**N**	**Fire Engineering Report Issues:**			

Fire Safety Schedule
(During Construction)

Item No.	Essential Fire and Other Safety Measures	Status*	Standard of Performance	Nature of Inspection or Test & Frequency AS1851-2012	Sec 164B Exemption	Pass/Fail
1.	Fire hydrant systems - @ >12 - Dry Line - Booster Must be connected - Hydrants Connected up to the upper 2 storeys	**N**	**BCA 2019 (Amdt 1) BCA E1.9 - During Construction** **E1.3 - Hydrants** After the building reaches an effective height of 12m. The required Fire Hydrants and Hose Reels must be operational in at least every storey that is covered by the roof or floor structure above, except the 2 uppermost storeys and, any required booster connections must be installed.	N/A		
2.	Hose reel systems	**N**	**BCA 2019 (Amdt 1) BCA E1.9 - During Construction** **BCA 2016 (Amdt 1) BCA E1.4 – Hose Reels** AS 2441 – 2005	N/A		
3.	Portable fire extinguishers	**N**	**BCA 2019 (Amdt 1) BCA E1.9, During Construction** **E1.6 –** Portable fire extinguishers **Not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must always be provided on each storey adjacent each required exit or temporary stairway or exit.**	N/A		

TABLE 1.11(A)

ROUTINE SERVICE FREQUENCIES FOR EACH SECTION

AS 1851 Section		Monthly	Three-monthly	Six-monthly	Yearly	Five-yearly	Ten-yearly	Twenty-five-yearly	Thirty-yearly
2	Automatic fire sprinkler systems	✓		✓	✓	✓	✓	✓	✓
3	Fire pumpsets	✓		✓	✓	✓	✓		
4	Fire hydrant systems	✓*			✓	✓			
	Hydrant valves			✓	✓				
5	Water storage tanks for fire protection systems	✓		✓	✓		✓		
6	Fire detection and alarm systems	✓		✓	✓	✓			
7	Special hazard systems	✓		✓	✓		✓		
8	Delivery lay flat fire hose				✓				
9	Fire hose reels			✓	✓				
10	Portable and wheeled fire extinguishers			✓	✓	✓			
11	Fire blankets			✓					
12	Passive fire and smoke systems		✓**	✓	✓				
13	Fire and smoke control features of mechanical services	✓	✓	✓	✓	✓			
14	Emergency planning in facilities	✓		✓	✓				

*Where pumpsets are fitted.
**Where horizontal sliding doors are fitted.

NOTE: The responsible entity may elect to conduct monthly activities on a weekly frequency.

TABLE 1.11(B)

FREQUENCY TOLERANCES

Frequency	Tolerance (±)
Monthly	5 working days
Three monthly	10 working days
Six monthly	1 month
Yearly	2 months
Five yearly	3 months
Ten yearly	6 months
Twenty five yearly	6 months
Thirty yearly	6 months

NOTE: The tolerance schedule is not intended to require additional routine service activities to be carried out (e.g. six monthly routines carried out at five or seven monthly intervals).

3.0. CONCLUSION

In this instance we are confident that any modifications and advancement in level of details required to the proposal in order to satisfy the requirements of the BCA (in force at the time the Construction Certificate application is lodged) will **not** necessitate the need for any significant design changes that in turn would necessitate the submission of an application under Section 4.55 of the Environmental Planning and Assessment Act 1979 via the use of Performance Solutions to complement DTS design options.

In the same regard, we draw Council's attention to the requirements of clause 145 of the Environmental Planning & Assessment Regulation 2000 and suggest that detailed & specific BCA compliance matters shall be addressed to the satisfaction of the appointed Certifying Authority prior to the issue of the Construction Certificate.

In determining a development application to which this clause applies (Clause 94), a consent authority is to take into consideration whether it would be appropriate to require the existing building to be brought into total or partial conformity with the Building Code of Australia.

Further, it is considered that this BCA review and the additional preparation of the required Construction Certificate documentation will be sufficient to ensure that the proposed design will achieve the necessary compliance with the BCA.

This report contains a review of the subject building having regard to the deemed-to-satisfy provisions of the **National Building Code of Australia 2019.1 Parts C, D, E and F** and provides recommendations with respect to the ability of the building to comply with the BCA.

As a result of this review we are of the opinion that should the recommendations contained in the contents of this report be implemented then the measures contained in the building would be adequate to:-

- general occupant safety and amenity,
- prevent fire,
- suppress fire,
- prevent the spread of fire, and
- ensure or promote the safety of persons in the event of fire,

PREPARED BY:

Peter Antcliffe
Director
PWA Consulting Pty Ltd
Building Anatomy
B. Env Planning
Grad Dip. B Surv., MAIBS., MPIA (CPP).
Building Surveyor – Unrestricted – DBC 0009

APPENDIAX A - FIRE RESISTANCE LEVELS

3. Type A Fire-Resisting Construction

3.1 Fire-resistance of building elements

In a building *required* to be of Type A construction—

(a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and

(b) * * * * *

(c) 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; or

(ii) the underside of a roof complying with Table 3; or

(iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering 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) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and

(d) a *loadbearing internal wall* and a *loadbearing fire wall* (including those that are part of a *loadbearing shaft*) must be constructed from—

(i) concrete; or

(ii) masonry; or

(iii) *fire-protected timber*, provided that—

(A) the building is—

(aa) a separate building; or

(bb) a part of a building—

(AA) which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or

(BB) which is located above or below a part not containing *fire-protected timber* and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a *fire wall* for the lower *storey*; and

(B) the building has an *effective height* of not more than 25 m; and

(C) the building has a sprinkler system (other than a FPAA101D or FPAA101H system) throughout complying with Specification E1.5; and

(D) any insulation installed in the cavity of the timber building element *required* to have an FRL is *non-combustible*; and

(E) cavity barriers are provided in accordance with Specification C1.13; or

(iv) any combination of (i) to (iii); and

(e) * * * * *

(f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a *window* and are exposed through that *window* to a *fire-source feature*.

Table 3 Type A construction: FRL of building elements

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 within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
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/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*—				
For *loadbearing* columns—	90/–/–	120/–/–	180/–/–	240/–/–
For non-*loadbearing* columns—	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—	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	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

3.2 Concessions for floors

A floor need not comply with Table 3 if—

(a) it is laid directly on the ground; or

(b) in a Class 2, 3, 5 or 9 building, the space below is not a *storey*, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or

(c) it is a timber *stage* floor in a Class 9b building laid over a floor having the *required* FRL and the space below the *stage* is not used as a dressing room, store room, or the like; or

(d) it is within a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building; or

(e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the *required* FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

(a) the floor next above (including floor beams) may have an FRL of 90/90/90; or

(b) the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to *fire-resisting construction* if—

(a) the superimposed roof and any construction between it and the concrete slab roof are *non-combustible* throughout; and

(b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is *non-combustible* and the building—

(a) has a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 installed throughout; or

(b) has a *rise in storeys* of 3 or less; or

(c) is of Class 2 or 3; or

(d) has an *effective height* of not more than 25 m and the ceiling immediately below the roof has a *resistance to the incipient spread of fire* to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is *required* to have an FRL or its covering is *required* to be *non-combustible*, roof lights or the like installed in that roof must—

(a) have an aggregate area of not more than 20% of the roof surface; and

(b) be not less than 3 m from—

(i) any boundary of the allotment other than the boundary with a road or public place; and

(ii) any part of the building which projects above the roof unless that part has the FRL *required* of a *fire wall* and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and

(iii) any roof light or the like in an adjoining *sole-occupancy unit* if the walls bounding the unit are *required* to have an FRL; and

(iv) any roof light or the like in an adjoining fire-separated section of the building; and

(c) if a ceiling with a *resistance to the incipient spread of fire* is *required*, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the *storey* immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and *internal walls* other than *fire walls* and *shaft* walls may have—

(a) in a Class 2 or 3 building: FRL 60/60/60; or

(b) in a Class 5, 6, 7, 8 or 9 building—

(i) with *rise in storeys* exceeding 3: FRL 60/60/60; or

(ii) with *rise in storeys* not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an *open spectator stand* or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

(a) The roof if it is *non-combustible*.

(b) Columns and *loadbearing* walls supporting only the roof if they are *non-combustible*.

(c) Any non-*loadbearing* part of an *external wall* less than 3 m—

(i) from any *fire-source feature* to which it is exposed if it has an FRL of not less than –/60/60 and is *non-combustible*; or

(ii) from an *external wall* of another *open spectator stand* if it is *non-combustible*.

3.9 Carparks

(a) Notwithstanding Clause 3.1, a *carpark* may comply with Table 3.9 if it is an *open-deck carpark* or is protected with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification E1.5 and is—

(i) a separate building; or

(ii) a part of a building—

(A) which only occupies part of a *storey*, and is separated from the remaining part by a *fire wall*; or

(B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or

(C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a *carpark*; or

(D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.

(b) For the purposes of this Clause, a *carpark*—

(i) includes—

(A) an administration area associated with the functioning of the *carpark*; and

(B) where the *carpark* is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate *sole-occupancy units*, each carparking area with an area not greater than 10% of its *floor area* for purposes ancillary to the *sole-occupancy units*; but

(ii) excludes—

(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and

(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 3.9 REQUIREMENTS FOR CARPARKS — continued

Building element		**FRL (not less than)** ***Structural adequacy/Integrity/Insulation*** **ESA/M (not greater than)**
(b)	steel column, other than one covered by (a) and one that does not support a part of a building that is not used as a *carpark*	60/–/– or 26 m^2/tonne
(c)	any other column not covered by (a) or (b)	60/–/–
Beam		
(a)	steel floor beam in continuous contact with a concrete floor slab	60/–/– or 30 m^2/tonne
(b)	any other beam	60/–/–
Fire-resisting lift and stair shaft (within the *carpark* only)		60/60/60
Floor slab and vehicle ramp		60/60/60
Roof (not used for carparking)		–/–/–
Notes:		
1.	ESA/M means the ratio of exposed surface area to mass per unit length.	
2.	Refer to **Specification E1.5** for special requirements for a sprinkler system in a *carpark* complying with Table 3.9 and located within a multi-classified building.	

3.10 Class 2 and 3 buildings: Concession

(a) A Class 2 or 3 building having a *rise in storeys* of not more than 3 need not comply with **Clause 3.1(d)** of **Specification C1.1** and the requirements of **C1.9(a)**, **(b)** and **C2.6** for *non-combustible* material, if it is constructed using—

(i) timber framing throughout; or

(ii) *non-combustible* material throughout; or

(iii) a combination of **(i)** and **(ii)**,

provided—

(iv) * * * * *

(v) any insulation installed in the cavity of a wall *required* to have an FRL is *non-combustible*; and

(vi) the building is fitted with an *automatic* smoke alarm system complying with **Specification E2.2a**.

(b) A Class 2 or 3 building having a *rise in storeys* of not more than 4 may have the top three *storeys* constructed in accordance with **(a)** provided—

(i) the lowest *storey* is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and

(ii) the lowest *storey* is constructed of concrete or masonry including the floor between it and the Class 2 or 3 part of the building above; and

(iii) the lowest *storey* and the *storey* above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the *fire-resisting* performance of that construction except that a doorway in that construction may be protected by a –/60/30 *self-closing* fire door.

(c) In a Class 2 or 3 building complying with **(a)** or **(b)** and fitted with a sprinkler system complying with **Specification E1.5**, any FRL criterion prescribed in **Table 3**—

(i) for any floor and any *loadbearing* wall, may be reduced to 60, except any FRL criterion of 90 for an *external wall* must be maintained when tested from the outside; and

(ii) for any non-*loadbearing internal wall*, need not apply if—

(A) it is lined on each side with 13 mm standard grade plasterboard or similar *non-combustible* material; and

(B) it extends—

(aa) to the underside of the floor next above; or

(bb) to the underside of a ceiling with a *resistance to the incipient spread of fire* of 60 minutes; or

(cc) to the underside of a *non-combustible* roof covering; and

(C) any insulation installed in the cavity of the wall is *non-combustible*; and

(D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and

(E) any doorway in the wall is protected by a *self-closing*, tight fitting, solid core door not less than 35 mm thick.

APPENDIAX B - REFERENCED DOCUMENTATION

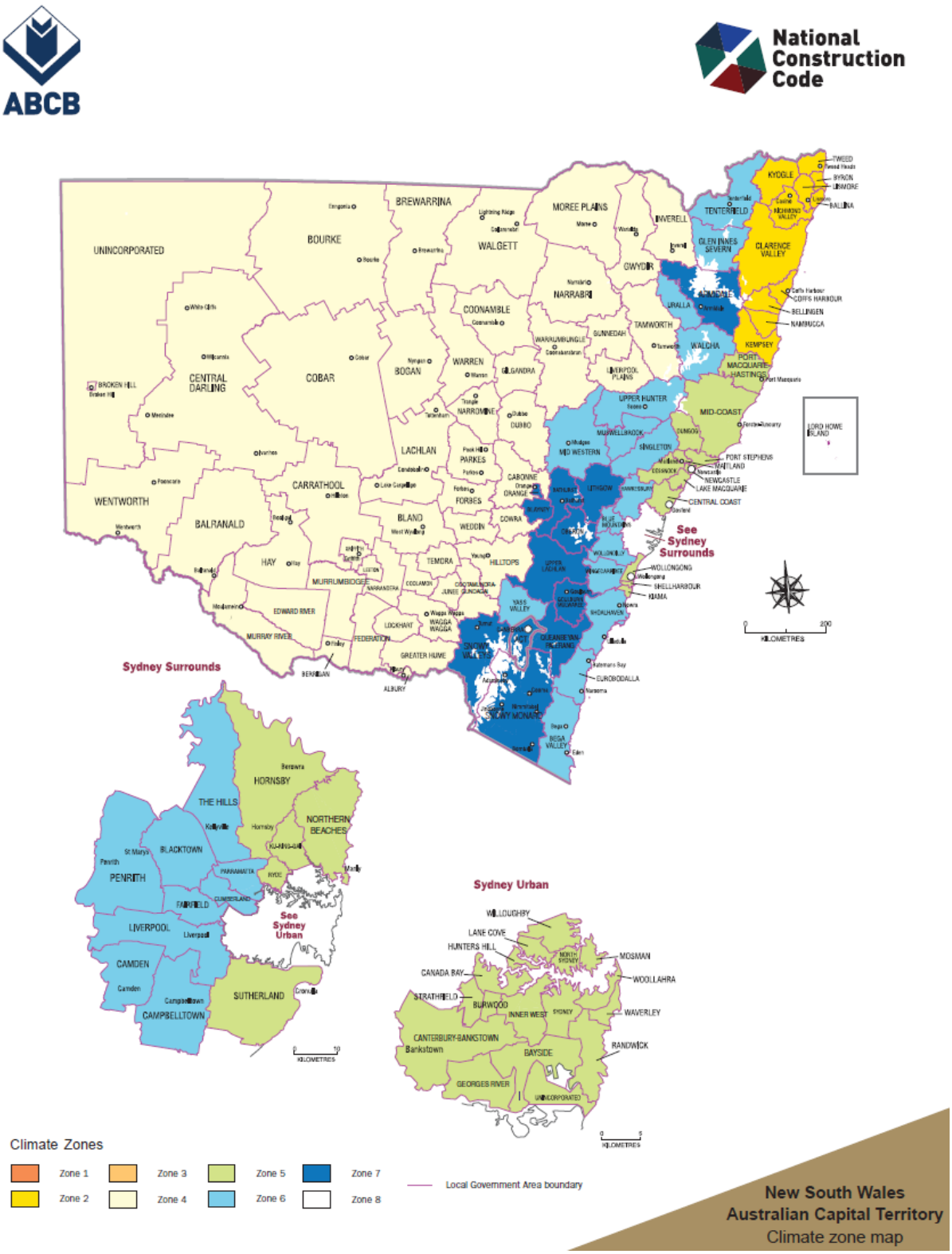
The following documentation was used in the preparation of this report: (As attached)

10-11 Railway Street, Werrington, NSW 2747

Drawing List

DA000	COVER PAGE	06/10/20	DA302	SECTION B-B	03/03/21
DA001	BASIX	06/10/20	DA303	SECTION C-C	03/03/21
DA002	PLANNING REQUIREMENTS	06/10/20	DA401	EXTERIOR FINISHES SCHEDULE	06/10/20
DA003	SITE ANALYSIS	06/10/20	DA501	SHADOW DIAGRAM 21 JUNE 9am	03/05/21
DA100	SITE PLAN	06/10/20	DA502	SHADOW DIAGRAM 21 JUNE 12pm	06/10/20
DA101	BASEMENT LEVEL 2	01/19/21	DA503	SHADOW DIAGRAM 21 JUNE 3pm	03/05/21
DA102	BASEMENT LEVEL 1	02/10/21	DA504	SHADOW DIAGRAM 21 DECEMBER 9am	09/17/21
DA103	GROUND FLOOR PLAN	06/10/20	DA505	SHADOW DIAGRAM 21 DECEMBER 12pm	09/17/21
DA104	FIRST FLOOR PLAN	10/20/20	DA506	SHADOW DIAGRAM 21 DECEMBER 3pm	09/17/21
DA105	SECOND FLOOR PLAN	01/20/21	DA601	3D PERSPECTIVE	06/10/20
DA106	THIRD FLOOR PLAN	02/10/21			
DA107	ROOF PLAN	03/03/21			
DA201	ELEVATIONS	06/10/20			
DA202	ELEVATIONS	02/02/21			
DA301	SECTION A-A	06/10/20			

APPENDIAX C - CLIMATE ZONE MAP



APPENDIAX D - RECOMMENDED DESIGN CERTIFICATIONS.

The National Construction Code, **BCA 2019.1 Volume 1 (BCA), in Part A2.2**, establishes the evidence certifying authorities need to support that the use of a material, design or form of service/component installation meets a National Construction Code (NCC) performance requirement or a deemed-to-satisfy provision. Supporting consultants letter act as Certification to provide such evidence.

Relevant Discipline	Compliance Requirements
Project Architect	▪ Access points to fire rated riser shafts will be protected with fire rated access panels achieving a minimum FRL of -/60/30. ▪ External walls are all to incorporate Spandrel Fire Separation between storeys achieving at least and FRL of 60/60/60. Clause C2.6 of the BCA. ▪ All service penetrations through fire rated elements will be protected with fire seals tested to achieve the required FRL in accordance with AS4072.1 and AS1530.4-2015 in accordance with BCA Spec C3.15. ▪ The finished surface materials to stairs, ramps and landings will achieve a slip resistance classification that accords with Tables D2.14 when tested to AS4586-2013. ▪ Balustrades will be provided to all elevated balconies, landings, stairs and ramps in accordance with Clause D2.16 of BCA. ▪ Handrails will be provided to all stairs and ramps in accordance with Clause D2.17 of BCA. ▪ The door latching mechanisms to the proposed required exit doors and doors within the path of travel to an exit will be in accordance with Clause D2.21 of BCA. ▪ Fire door signage will be provided to all doors entering/ exiting the fire isolated exits in the building to comply with Clause D2.23 of BCA. ▪ Water proofing membranes for external above ground use will comply with AS4654 Parts 1 and 2. ▪ Glazed assemblies to comply with AS2047 and AS1288. ▪ Bathrooms and/ or laundries will be provided with floor wastes per Clause F1.11 of BCA. ▪ Stairways will be constructed of the materials specified within BCA Clause D2.3 *If Concessions are chosen under Spec E1.5a details would need to be disclosed to the certifier at the CC Stage.*
Structural Engineer	▪ The building has been designed to resist all necessary actions and imposed loads determined in accordance with BCA Part B and the relevant Structural Australian Standards as they relate to the relevant materials and forms of construction. ▪ The FRL's of the structural elements for the proposed works have been designed in accordance with Table 3 for a building of Type A Construction of Specification C1.1 of BCA. ▪ The basement roof slab has been designed to achieve an FRL not less than 120/120/120 where parts act as 'Open Space' ▪ Joints in fire rated external walls are to have the required FRL with respect to integrity and insulation relative to the building element they are joining. ▪ BCA Part B – Structural Provisions ▪ BCA Part C1.11 and Spec C1.11 – Performance of External Walls in Fire (pre-Cast Concrete/Tilt up) ▪ BCA Clause D2.2 – Fire Isolated Stairways and Ramps ▪ FRL's as applicable under BCA Spec C1.1 o **Part 3 and Table 3 'Type A'** o ~~Part 4 and Table 4 'Type B'~~ o ~~Part 5 and Table 5 'Type C'~~

Relevant Discipline	Compliance Requirements
	▪ AS1170.0:2002 – General Principles ▪ AS1170.1:2002 – Permanent, Imposed, and other Actions ▪ AS1170.2:2011 – Wind Actions ▪ AS1170.3:2003 – Snow and Ice Actions ▪ AS1170.4:2007 – Earthquake actions ▪ AS2159:2009 – Piling – Design and Installation ▪ AS2870:2011 – Residential Slabs and Footings ▪ AS3600:2018 – Concrete Structures Code ▪ AS4100:1998 – Steel Structures Codes ▪ AS 4600 – 2005, Cold formed steel ▪ AS3700:2018 – Masonry ▪ AS1720.1:2010 –Timber Structures – Design Methods ▪ AS1720.4:2006 – Fire Resistance for structural adequacy of timber members ▪ AS1720.5:201 – Nailplated timber roof trusses ▪ AS3660.1:2014 – Termite Risk Management - New building work ▪ AS 2047 – 2014, Windows in buildings. ▪ AS 1288 – 2006, Glass in buildings (Note if Glass is acting as a balustrade include AS1170) **Damp-proofing** ▪ BCA clause F1.9 and AS/NZS 2904 and /or a Impervious sheet material in accordance with AS3660.1 ▪ BCA Clause F1.10 Damp-proofing of floors on the ground to AS2870 (Vapour Barrier) ▪ All sarking to AS/NZ4200.1 and AS4200.2 **Note**: Sarking is to be non-combustible in accordance with C1.9 where exempted, (1mm in thickness and Flammability Index not greater than 5) and Spec C1.10 ▪ AS/NZS 4200:2017 – Pliable Building Membranes and Underlays and AS4200:2007.1 Insulation (recommended – BCA 2019.1)
Hydraulic Consultant	▪ Fire hydrants will be installed in accordance with Clause E1.3 of BCA and AS2419.1-2005 and any requirements of the Fire Engineered Performance Solution as required. ▪ External wall-wetting drencher systems protecting openings in the external facade to be installed in accordance with BCA C3.4 and AS2118.2-2010. ▪ Fire hose reels will be installed in the basement car park in accordance with Clause E1.4 of BCA 2016.1 Amendment 1 and AS2441-2005 as required. ▪ Storm water drainage will be provided in accordance with and AS3500.3 and AS3500.5 (as appropriate) ▪ Portable Fire Extinguishers will be provided to protect the main switch board and the kitchen to comply with AS2444-2001 and Clause E1.6 of BCA.
Electrical Consultant	▪ A smoke detection and alarm system will be installed throughout the building in accordance with Table E2.2a, and Specification E2.2a of BCA 2019.1, Amendment 1 and AS1670.1-2018. ▪ Emergency lighting will be installed throughout the development in accordance with Clause E4.2, E4.4 of BCA and AS2293.1 – 2018 ▪ Exit signage will be installed in accordance with Clause E4.5, E4.7, and E4.8 of BCA and AS2293.1 – 2018.

Relevant Discipline	Compliance Requirements
Mechanical Consultant	▪ Enclosed areas of the building will be provided with compliant mechanical ventilation systems that accord with AS1668.2-2012 per Clause F4.5 of BCA.
Lift Consultant	▪ Lift installations will comply with Spec E3.1 & Table E3.6a and b of BCA. ▪ Lift landing doorways will be protected by a –/60/– FRL fire doors that comply with AS1735.11. ▪ Lift indicator panels in the wall of the fire isolated shaft will be backed by construction having an FRL of not less than –/60/60 if it exceeds 35,000mm2 in area. ▪ Warning sign for Passenger lifts under Figure E3.3 are to be installed ▪ Details of E3.7 Fire Service Controls are to be referenced. ▪ Details of E3.9 Fire Service recall control switch are to be referenced. ▪ Details of E3.10 Lift car fire service drive control switch are to be referenced.

APPENDIAX E - BCA REQUIREMENTS

Noting that the level of documentation at this stage is for a Construction Certificate assessment purposes, an indicative compliance assessment of the referenced documents identified in Appendix B of this report has been undertaken against the Deemed-to-Satisfy Provisions of the Building Code of Australia (BCA).

Outlined below is a summary of the Deemed-to-Satisfy Provisions of the BCA. All Deemed-to-Satisfy clauses that are applicable to the subject building have been referred to below, including a comment adjacent to each clause of the proposal's ability to satisfy each respective clause.

The abbreviations outlined below have been used in the following tables:

N/A	The Deemed-to-Satisfy clause does not apply to the subject building.
Complies	The relevant provisions of the Deemed-to-Satisfy clause have been demonstrated by the proposed design and existing building features, notwithstanding it is at DA documentation stage.
CRA	'Compliance Readily Achievable'. It is considered that the level of detail included in the documentation will not determine strict compliance with the individual BCA clause requirements. However, subject to noting the requirements of each clause, it is considered BCA compliance can be readily demonstrated without significant implication to the approved design. This will occur through progression of documentation to the Construction Certificate stage of the development.
FI	Further information is necessary to determine the compliance potential of the building design.
PS	Performance Solution to be proposed.
FSU	Fire Safety Upgrade.
DNC	Does Not Comply.
DTS	Deemed-To-Satisfy provisions as defined by the Building Code of Australia.

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
SECTION B – STRUCTURE						
Part B1 – Structural Provisions						
1.	**B1.1 –** Resistance to actions	The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions, where the most critical action has been determined in accordance with this Part – Structural Engineer to certify at CC stage.	**CRA**	**A design practitioner—structural engineering** The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions. Structural details and a design certificate will be obtained from a qualified structural engineer prior to the issue of a CC.		
2.	**B1.2 -** Determination of individual actions	The magnitude of actions must be determined in accordance with this Clause – Structural Engineer to certify at CC stage.	**CRA**	**A design practitioner—structural engineering** The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA. Structural details and a design certificate will be obtained from a qualified structural engineer prior to the issue of a Construction Certificate.		
3.	**B1.4 –** Determination of structural resistance of materials and forms of construction	The structural resistance of materials and forms of construction must be determined in accordance with this Clause – Structural Engineer, Architect and Manufacturers to certify at CC stage. i.e.: □ AS 1170.0 – 2002 General Principles □ AS 1170.1 – 2002, including certification for balustrading (dead and live loads) □ AS 1170.2 – 2002, Wind loads □ AS 1170.4 – 2007, Earthquake loads □ AS 3700 – 2011, Masonry code □ AS 3600 – 2009, Concrete code □ AS 4100 – 1998, Steel Structures and/or □ AS 4600 – 2005, Cold formed steel. □ AS 2047 – 2014, Windows in buildings. □ AS 1288 – 2006, Glass in buildings	**CRA**	**A design practitioner—structural engineering** The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1.4 of the BCA. Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate. ***See Appendix D***		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
4.	**B1.5 –** Structural software	Structural software used in computer aided design of a building or structure within the geometrical limits of (b) of this Clause must comply with the ABCB Protocol for Structural Software. Structural Engineer to certify.	**CRA**	**A design practitioner—structural engineering** Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate.		
5.	**B1.6 –** Construction of buildings in flood hazard areas	A Class 2 or 3 building, Class 9a health care building, Class 9c aged-care building or Class 4 part of a building, in a flood hazard area (refer to Council maps) must comply the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	**CRA**	**A design practitioner—structural engineering** **Confirm the area is not Flood Affected** Structural details and a design certificate will be required by a qualified structural engineer prior to the issue of a Construction Certificate.		
SECTION C – FIRE RESISTANCE **Part C1 – Fire Resistance and Stability**						
6.	**C1.1 / Spec 1.1 –** *Type of construction required* *Note Also* ***C1.9***	All building elements to achieve the fire resistance levels of Type A Construction as outlined in Specification C1.1 (Refer Appendix A).	**CRA**	**A design practitioner—architectural** The building is to be erected as **Type 'A'** fire resisting construction in accordance with Specification C1.1 of the BCA. Refer to **Appendix A** for the relevant fire resisting requirements. Plans to reflect required FRL's prior to the issue of a Construction Certificate.		
Table C1.1 Type of construction required Rise in storeys / Class of building 2, 3, 9 / Class of building 5, 6, 7, 8 4 or more: A / A 3: A / B 2: B / C 1: C / C				FRLs are to be listed on the CC plans and the Products and Test Sheets for the proposed materials. FRL's presented appear consistent with **Table 3 of Spec C1.1** **Note: Spec Sheets for wall systems as per tested system is still to be provided.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S

Table 3 Type A construction: FRL of building elements

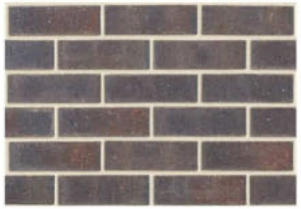
Building element	Class of building — FRL: (in minutes) *Structural adequacy/Integrity/Insulation*			
	2, 3 or 4 part	5, 7a or 9	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any *fire-source feature* to which it is exposed is—				
For *loadbearing* parts—				
less than 1.5 m	90/ 90/ 90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/ 60/ 60	120/ 90/ 90	180/180/120	240/240/180
3 m or more	90/ 60/ 30	120/ 60/ 30	180/120/ 90	240/180/ 90
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/ 60	–/ 90/ 90	–/180/120	–/240/180
3 m or more	–/–/–	–/–/–	–/–/–	–/–/–
EXTERNAL COLUMN not incorporated in an *external wall*—				
For *loadbearing* columns—	90/–/–	120/–/–	180/–/–	240/–/–
For non-*loadbearing* columns—	–/–/–	–/–/–	–/–/–	–/–/–
COMMON WALLS and FIRE WALLS—	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	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Between or bounding *sole-occupancy units*—				
Loadbearing	90/ 90/ 90	120/–/–	180/–/–	240/–/–
Non-*loadbearing*	–/ 60/ 60	–/–/–	–/–/–	–/–/–
Ventilating, pipe, garbage, and like *shafts* not used for the discharge of hot products of combustion—				
Loadbearing	90/ 90/ 90	120/ 90/ 90	180/120/120	240/120/120
Non-*loadbearing*	–/ 90/ 90	–/ 90/ 90	–/120/120	–/120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES and COLUMNS—	90/–/–	120/–/–	180/–/–	240/–/–
FLOORS	90/ 90/ 90	120/120/120	180/180/180	240/240/240
	2, 3 or 4 part	**5, 7a or 9**	**6**	**7b or 8**
ROOFS	90/ 60/ 30	120/ 60/ 30	180/ 60/ 30	240/ 90/ 60

Note also Spandural detail under need to be confirmed to achieve and FRL of 60/60/60 also if a AS2118.1 is not slected udner Spec E1.5a

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		3.1 Fire-resistance of building elements In a building *required* to be of Type A construction— (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and (b) * * * * * (c) 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; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering 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) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and				
7.	**C1.2 –** Calculation of rise in storeys	The rise in storeys of a building is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space calculated in accordance with the requirements set out in this clause	**Note**	The building has an overall rise in storeys: **RIS = FOUR (4)** The building contains **SIX (6)** storeys.		
8.	**C1.3 –** Buildings of multiple classification	In a building of multiple classifications, the type of construction required for the building is the most fire-resisting type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.	**CRA**	As the building appears to inherit the Higher FRL across the Storey. This application does not alter the building that would affect this clause. Additional FRL's are required to confirm that the Class 7b storage areas are Fire Separated from the remainder of the storey with the lower ground floor of building C and D, or the higher FRL is to apply to the whole storey.		
9.	**C1.4 –** Mixed types of Construction	A building may be of mixed types of construction where it is separated in accordance with C2.7 and the type of construction is determined in accordance with C1.1 or C1.3.	**N / A**	The building Appears to be all one type of Construction, there is no separation by required fire walls. All parts of the building are required to be of **Type A** construction.		
10.	**C1.5 –** Two storey Class 2, 3 or 9c buildings	A building having a rise in storeys of 2 may be of Type C construction provided that it complies with the requirements set out in this clause.	**N / A**			
11.	**C1.6 –** Class 4 parts of buildings	For the type of construction required by C1.3, a Class 4 part of a building requires the same FRL for building elements and the same construction separating the Class 4 part from the remainder of the building as a Class 2 part in the same type of construction.	**N / A**			
12.	**C1.7 –** Open spectator	An open spectator stand or indoor sports stadium may be of Type C construction subject to the provisions set out in sub-clauses (a) & (b)	**N / A**			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	stands and indoor sports stadiums					
13.	**C1.8 –** Lightweight construction	Lightweight construction must comply with Specification C1.8 if used in a wall system in accordance with sub-clauses (a) & (b).	**CRA**	**A design practitioner—architectural** Lightweight construction used in a wall system must comply with Specification C1.8. Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height of not less than 1.2m above the floor and where the column is liable to be damaged must be protected by steel or other suitable material. If lightweight construction is used in the proposed development, then details demonstrating required FRL and compliance with this clause must be provided prior to the issue of a Construction Certificate.		
14.	**C1.9 –** Non-combustible building elements	(a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: (i) External walls and common 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 where they are required to be fire-resisting. (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 in— (i) a building required to be of Type A construction; and (ii) a building required to be of Type B construction, subject to C2.10, in— (A) a Class 2, 3 or 9 building; and	**CRA**	**A design practitioner—architectural** In this regard, we note that further details are required having regard to the proposed external façade materials which must be of non-combustible construction. Where the design team proposes to use any combustible cladding (such as aluminium composite panels or the like), then it will be necessary to provide details along with a CodeMark Certificate of the proposed product, which indicates that the product has been tested against **AS1530.1** for combustibility. It is also noted that this clause also prohibits the use of in situ formwork containing combustible elements including PVC lined formwork products where the PVC lining remains in place for the life of the building were proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-loadbearing internal walls required to be fire resisting.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. (c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. (d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants, termite management systems, Glass including laminated glass, thermal breaks associated with glazing systems and damp-proof courses. (e) The following materials, may be used wherever 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) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (vi) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (vii) Bonded laminated materials where— (A) each lamina, including any core, is non-combustible; and (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; 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 respectively.		**The design architect is also to specifically confirm.** 1. All Internal wall components *are non-compostable*, or parts *are combustible*. 2. Selected Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. 3. Selected Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. 4. The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC; a. a current CodeMark certificate, b. a current certificate of Accreditation, c. a report issued by an Accredited Testing Laboratory, or d. a certificate or report from a professional engineer for each non-combustible building element.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
 1. PGH BRICK MYSTIQUE		 2. BLACK ALUMINUM SHROUD OR SIMILAR	 3. ROOF TILES MONIER HORIZON CARAWAY	 4. FC SHEET JAMES HARDIE STRIA - RENDERED DULUX MOROCCAN DUSK	 5. CEMBRIT FACADE PANEL COLOR RANGE SELECTION	
15.	**C1.10 –** Fire hazard properties	The fire hazard properties of all floor materials, floor coverings, wall and ceiling lining materials must comply with Specification C1.10. The fire hazard properties of all other materials must comply with Specification C1.10. Existing carpet to the 'Office Part' of the tenancy does have carpet, it is recommended to be replaced is its original installation certificate complying with Spec C1.10.	**CRA**	**A design practitioner—architectural** Design certification will be required verifying compliance prior to the issue of a Construction Certificate. **The design architect is also to specifically confirm.** *1.* All Internal wall components *are non-compostable,* or parts *are combustible.* 2. The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC of all intended wall, ceiling, and floor linings. a. a current CodeMark certificate, b. a current certificate of Accreditation, c. a report issued by an Accredited Testing Laboratory, or a certificate or report from a professional engineer for each non-combustible building element.		
16.	**C1.11 –** Performance of external walls in fire	Concrete external walls that could collapse as complete panels (E.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification C1.11.	**N / A**	**A design practitioner—architectural** **A design practitioner—structural engineering**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
17.	**C1.12 –**	Clause now deleted, and relocated to C1.9.	**N / A**			
18.	**C1.13 –** Fire-protected timber: Concession	This clause specifies that fire protected timber in a Class 2, 3 or 5 building may be used providing it meets particular criteria and is provided with fire services set out under this clause. *Fire-protected timber* in all building classifications may be used wherever an element is required to be non-combustible, provided— (a) the building is— (i) a separate building; or (ii) a part of a building— (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or (B) which is located above or below a part not containing fire-protected timber and the floor between the adjoining parts is provided with an FRL not less than that prescribed for a fire wall for the lower storey; and (b) the building has an effective height of not more than 25 m; and (c) the building has a sprinkler system throughout complying with Specification E1.5; and (d) any insulation installed in the cavity of the timber building element required to have an FRL is non-combustible; and (e) cavity barriers are provided in accordance with Specification C1.13.	**N / A**	**A design practitioner—architectural** **A design practitioner—structural engineering** It is noted that *fire protected timber* is not proposed to be applied to this building.		
19.	**C1.14 –** Ancillary elements	An ancillary element must not be fixed, installed or attached to the 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 2 m2 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; and (ii) does not extend beyond one storey; and (iii) does not extend beyond one fire compartment; and	**CRA**	**A design practitioner—architectural** **A design practitioner—facade** All Pergolas, awnings and other attachment to the external are included in this clause. **Comment**: The architect is to provide evidence of suitability under BCA A5.2 via the following with the application for CC; a) a current CodeMark certificate, b) a current certificate of Accreditation, c) a report issued by an Accredited Testing Laboratory, or		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(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 (a) that— (i) meets the relevant requirements of Table 4 of Specification C1.10 as for an internal element; and (ii) serves a storey— (A) at ground level; or (B) immediately above a storey at ground level; and (iii) does not serve an exit, where it would render the exits unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) A paint, lacquer or a similar finish. (m) A gasket, caulking, sealant or adhesive directly associated with (a) to (k).		d) a certificate or report from a professional engineer for each non-combustible building element.		
	Part C2 – Compartmentation and Separation					
20.	**C2.1 –** Application of Part		**Note**			
21.	**C2.2 –** General floor area limitations	Informational - C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5, an open-deck carpark or an open spectator stand. *However*, floor area and volume limitations do not apply to a carpark provided with a sprinkler system (other than a FPAA101D orFPAA101H system) complying with Specification E1.5.	**Note**	This clause sets out the parameters for the area and volume of Class 5, 6, 7, 8 & 9 buildings as required by sub-clauses (a), (b) & (c). All parts of the building comply and are within compartment limitations. This application does not alter the building that would affect this clause. As the building is existing, compliance with compartment limitations is assumed.		
		Table C2.2 Maximum size of fire compartments or atria Classification / Type A construction / Type B construction / Type C construction 5, 9b or 9c: Max *floor area*—8000 m² / Max volume—48000 m³ ; Max *floor area*—5500 m² / Max volume—33000 m³ ; Max *floor area*—3000 m² / max volume—18000 m³ 6, 7, 8 or 9a (except for *patient care areas*): Max *floor area*—5000 m² / Max volume—30000 m³ ; Max *floor area*—3500 m² / Max volume—21000 m³ ; Max *floor area*—2000 m² / Max volume—12000 m³ Note to Table C2.2: See C2.5 for maximum size of compartments in *patient care areas* in Class 9a *health-care buildings*.				
22.	**C2.3 –** Large Isolated buildings	The size of a fire compartment in a building may exceed that specified in Table C2.2 where the provisions of sub-clauses (a), (b) & (c) of this Part apply.	**N / A**			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
23.	**C2.4 –** Requirements for open spaces and vehicular access	An open space and vehicular access required by C2.3 must comply with the requirements of sub-clauses (a) & (b) of this Part, i.e. generally an unobstructed path of 6m in width is to be provided around all buildings. Differences apply whether the building is provided with a sprinkler system.	**N / A**			
24.	**C2.5 –** Class 9a and 9c buildings	Class 9a and Class 9c buildings must comply with the provisions of sub-clauses (a) & (b) of this Part and the NSW Provisions of the Code.	**N / A**			
25.	**C2.6 –** Vertical separation of Openings in external walls	If in a building of **Type A construction**, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by and horizontal or vertical spandrel with an FRL of 60/60/60, and for the purposes of C2.6, window or other opening means that part of the external wall of a building that does not have an FRL of 60/60/60 or greater.	**CRA**	**A design practitioner—architectural** As the building is to be Sprinkler Protected, if a AS2118.1 system is chosen this clause would comply. If a AS2118.1 or a FPA system is selected, further spandrel details are to be provided to the Certifier.		
26.	**C2.7 –** Separation by fire walls	**Construction** — A fire wall must be constructed in accordance with the following: (i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL, except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side. (ii) Any openings in a fire wall must not reduce the FRL required by Specification C1.1 for the fire wall, except where permitted by the Deemed-to-Satisfy Provisions of Part C3. (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.	**CRA**	**A design practitioner—architectural**		
27.	**C2.8 –** Separation of classifications in the same storey	• Each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or • The parts must be separated in that storey by a fire wall having – • The higher FRL prescribed in **Table 3**, 4 or 5 of Specification C1.1 as applicable for that element for the Type of construction and the classifications concerned. • Where one part is a car park complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate Table.	**CRA**	**A design practitioner—architectural** **Comments**: The higher of the following FRL's are to be provided to walls separating classifications in the same storey: • Class 3 = FRL 90/90/90 • Class 7a = FRL 120/120/120		

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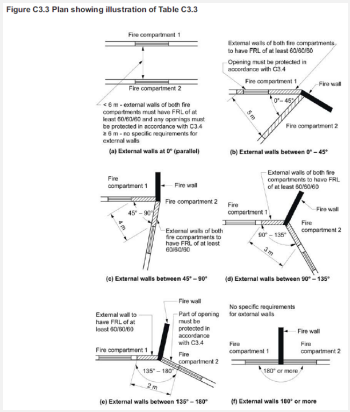
				Note: Fire doors are to be provided in separating walls that have the same integrity of the FRL with a concession for the insulation which can be reduced to 30min. A floor plan identifying the required FRL and door schedule is to be provided with the structural details to confirm FRL compliance.		
28.	**C2.9 –** Separation of classifications in different storeys **Note:** *C3.11,* *Spec C1.1 for Type C Construction*	**Type A** Floors separating storeys of different classifications must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. Type B or C The floor separating the Class 2, 3 or 4 part from the storey below must: (i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or (ii) have an FRL of at least 30/30/30; or (iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal. Note: Determination of Floor FRL's must also consider compliance with C2.7 whereby the floor must have the same FRL as the fire wall of the fire compartment below and D2.12 whereby roof as open space must have an FRL not less than 120/120/120.	**CRA**	**A design practitioner—architectural** If parts of different classification are situated one above the other in adjoining *storeys* they must be separated as follows; (a) Type A construction — The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey. **Comments**: The following FRL's are to be provided to floors separating classifications in different storeys. • **Class 3** = FRL 90/90/90 • **Class 7a** = FRL 120/120/120 A floor plan identifying the required FRL is to be provided with the structural details to confirm compliance. **Note: If options for Spec C1.1 Table C3.9, is this is to be applied, specific details are to be disclosed to the Certifier.**		
29.	**C2.10 –** Separation of lift shafts	(a) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which— (i) in a building required to be of Type A construction—the walls have the relevant FRL prescribed by Specification C1.1; and (ii) in a building required to be of Type B construction — the walls— (A) if loadbearing, have the relevant FRL prescribed by Table 4 of Specification C1.1; or (B) if non-loadbearing, be of non-combustible construction.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** Passenger lifts must be separated from the remainder of the building by enclosure in a fire rated shaft achieving an FRL prescribed by **Table 3 of Specification C1.1.** Please also note the lid of the shaft is also to be fire rated.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) Any lift in a patient care area in a Class 9a health-care building or a resident use area in Class 9c aged care building must be separated from the remainder of the building by a shaft having an FRL of not less than— (i) in a building of Type A or B construction — 120/120/120; or (ii) in a building of Type C construction — 60/60/60. (c) An emergency lift must be contained within a fire-resisting shaft having an FRL of not less than 120/120/120. (d) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.		**Comments:** The lifts are enclosed in their own shaft and require an FRL of not less than the following with lift openings to be protected. • Class 2 = FRL 90/90/90 • Class 7a = FRL 120/120/120 Structural details are required to confirm FRL compliance. Details to be provided with the application for CC.		
30.	**C2.11 –** Stairways and lifts in one shaft	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.	**CRA**	**A design practitioner—structural engineering** The architectural documentation indicates that the lifts will be provided within separate shafts. The Lift and the Stair Shaft are adjoining yet separated.		
31.	**C2.12 –** Separation of equipment	(a) Equipment other than that described in (b) and (c) 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; or (ii) emergency generators used to sustain emergency equipment operating in the emergency mode; or (iii) central smoke control plant; or (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 200 kWh or more. (b) Equipment need not be separated in accordance with (a) 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 E2.2b; or (ii) stair pressurising equipment installed in compliance with the relevant provisions of AS/NZS 1668.1; or (iii) a lift installation without a machine-room; or (iv) equipment otherwise adequately separated from the remainder of the building. (c) Separation of on-site fire pumps must comply with the requirements of AS 2419.1. (d) Separating construction must have— (i) except as provided by (ii)— (A) an FRL as required by Specification C1.1, but not less than 120/120/120; and	**Need Design Detail**	**A design practitioner—architectural** **A design practitioner—fire systems (fire hydrant and fire hose reel)** **A design practitioner—fire systems (fire sprinkler)** Separation must be by construction having an FRL as required by Specification C1.1, but not less than FRL 120/120/120 with openings protected by self-closing fire doors having an FRL of not less than –/120/30. Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2005. **Note: Location of Pump room under E1.5** **Note: Ventilation requirements** **The plans do not show or indicate a room allocated for a Pump room if required in the future for Fire Hydrant and Sprinkler systems**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) any doorway protected with a self-closing fire door having an FRL of not less than –/120/30; or (ii) when separating a lift shaft and lift motor room, an FRL not less than 120/–/–.				
Note: Clause 6.4.2 of AS 2419.1-2005 requires that an internal pumproom located within the building shall have the following: **A door opening to a road or open space, or a door opening to fire-isolated passage or stair which leads to a road or open space; and** **Except where the building is sprinkler protected in accordance with AS 2118.1, enclosing walls with an FRL notless than that prescribed by the BCA for a firewall for the particular building classifications served by the fire hydrant system.** **6.4.2 Internal pumprooms** Pumprooms located within a building shall have— (a) a door opening to a road or open space, or a door opening to fire-isolated passage or stair which leads to a road or open space; and (b) except where the building is sprinklered in accordance with AS 2118.1, enclosing walls with an FRL not less than that prescribed by the BCA for a firewall for the particular building classification served by the fire hydrant system. **6.4.3 External Pumprooms** Pumprooms and enclosures, located external to and within 6 m of any building they are protecting, shall have enclosing walls with an FRL not less than that prescribed by the BCA for a firewall for the particular building classification served by the fire hydrant system. Hardstand shall be provided within 20 m of the access door to the pumproom.					
32.	**C2.13 –** Electricity supply system	(a) An **electricity substation** located within a building must— (i) be separated from any other part of the building by 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) A **main switchboard** located within the building which sustains emergency equipment operating in the emergency mode must— (i) be separated from any other part of the building by 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. (c) **Electrical conductors** located within a building that supply— (i) a substation located within the building which supplies a main switchboard covered by (b); or	**CRA**	**A design practitioner—electrical engineering** **A design practitioner—architectural** No substation indicated; this building also does not have a main switchboard which sustains emergency equipment operating in emergency mode It is not envisaged that requirements for the altered building will vary from existing, however if this is the case then details verifying compliance can be provided on plans prior to the issue of a Construction Certificate.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) a main switchboard covered by (b), Must- (iii) have a classification in accordance with AS/NXS 3013 of not less than - (A) If located in a position that could be subject to damage by motor vehicles – WS53W; or (B) Otherwise – WS52W; or (C) be enclosed or otherwise protected by construction having an FRL of 120;120/120 For the purpose of (d), **emergency equipment includes** but not limited to: 0 Fire hydrant booster pumps 0 Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like. 0 Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building. 0 Air handing systems designed to exhaust and control the spread of fire and smoke 0 Emergency lifts 0 Control and indication equipment 0 Emergency Warning and intercom systems **Note**: Separation must be by construction having an FRL as required by Specification C1.1, but not less than FRL 120/120/120 with openings protected by self-closing fire doors having an FRL of not less than –/120/30. ***See***: Separation of on-site fire pumps must comply with the requirements of AS 2419.1-2005.				
33.	**C2.14 –** Public corridors in Class 2 and 3 buildings	Public corridors in Class 2 parts that exceed 40 m in length must be divided at intervals of not more than 40m with smoke-proof walls complying with Clause 2 of Specification C2.5.	**CRA**	Only one (1) residential corridor exceed 40m In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5. **Smoke doors are proposed to be installed in each storey separating corridors to intervals <40m**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Part C3 – Protection of Openings					
34.	**C3.1 –** Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to– a) 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; and b) Non-combustible ventilators for subfloor or cavity ventilation, if each does not exceed 45 000 mm2 in face area and is spaced not less than 2 m from any other ventilator in the same wall; and c) Openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or veranda, colonnade, terrace, or the like; and In a carpark– a) Service penetrations through; and b) Openings formed by a vehicle ramp in, a. A floor other than a floor that separates a part not used as a carpark, providing the connected floors comply as a single fire compartment for the purposes of all other requirements of the Deemed-to-Satisfy Provisions of Sections C, D and E. b. For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL. For the purposes of the Deemed-to-Satisfy Provisions of this Part, openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.	**Note**	Concessions and definition of certain openings.		
35.	**C3.2 –** Protection of openings in external walls	Openings in an external wall that is required to have an FRL must – (a) If the distance between the opening and the fire-source feature to which it is exposed is less than – (i) 3 m from a side or rear boundary of the allotment; or (ii) 6 m from the far boundary of a road, river, lake or the like adjoining the allotment, if not located in a storey at or near ground level; or	**N / A**	**A design practitioner—architectural** The building **does not** incorporate windows within 3m of the boundary which under current codes, protection is required.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(iii) 6 m from another building on the allotment that is not a Class 10, be protected in accordance with C3.4 and if wall-wetting sprinklers are used, they are located externally; and (b) If the required to be protected under (a), not occupy more than 1/3 of the area of the external wall of the storey in which it is located unless they are in a Class 9b building used as an open spectator stand.				
36.	**C3.3 –** Separation of external walls and associated openings in different fire compartments	The distance between parts of external walls and any openings within them in different fire compartments separated by a fire wall must be not less than that set out in Table C3.3 unless- (a) Those parts of each wall have an FRL not less than 60/60/60; and (b) Any openings protected in accordance with C3.4. **Angle between walls / Min. Distance** 0° (walls opposite) — 6 m more than 0° to 45° — 5 m more than 45° to 90° — 4 m more than 90° to 135° — 3 m more than 135° to less than 180° — 2 m 180° or more — Nil	**N / A**	No windows or opeings are located within an exposure distance under Table C3.3. Figure C3.3 Plan showing illustration of Table C3.3 		
37.	**C3.4 –** Acceptable method of protection	Where protection is required, openings must be protected as follows: Doorways: (i) Internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing; or (ii) –/60/30 fire doors that are self-closing. Windows: (i) Internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (ii) –60/– fire windows that are automatically closing or permanently fixed in the closed position; or	**N / A**	**A design practitioner—architectural** Fire doors, fire windows and fire shutters must comply with BCA Specification C3.4. If required, Details as to your chosen options must be disclosed as to reflect on the Final Fire Safety Schedule.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(iii) –/60/– automatic closing fire shutters. <u>Other openings:</u> (i) Excluding voids – internal or external wall-wetting sprinklers; or (ii) Construction having an FRL not less than –/60/–				
38.	**C3.5 –** Doorways in fire walls	Doorways in fire walls, that are not part of a horizontal exit, must be protected by a fire door or fire shutter that has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.	**N / A**	**A design practitioner—architectural** There are no Fire Walls are within this part of the building.		
39.	**C3.6 –** Sliding fire doors	If a doorway in a fire wall is fitted with a sliding fire door which is open when the building is in use it must be activated in accordance with the requirements of this clause and warning signs must be installed on either side of the doorway. **If proposed, sliding Fire Door, Fire Services drawings need to indicate local smoke detectors within 1.5m of the sliding Fire Doors.** **Signage is also required:** **'WARNING – SLIDING FIRE DOOR'** In capital letters not less than 50mm in height.	**N / A**	**A design practitioner—architectural**		
40.	**C3.7 –** Protection of doorways in horizontal exits	(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 C1.1 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 ½that *required* by Specification C1.1 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 AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		located on each side of the *fire wall* not more than1.5 m horizontal distance from the opening. (ii) Where any other *required* suitable fire alarm system, including a sprinkler system (other than a FPAA101Dsystem) complying with Specification E1.5, 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.				
41.	**C3.8 –** Openings in fire isolated exits	(a) Doorways that open to *fire-isolated stairways*, *fire-isolated passageways* or *fire-isolated ramps*, 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 AS 1670.1 if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m 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 E1.5, is installed in the building, activation of the system must also initiate the *automatic*-closing operation. (d) A *window* in an *external wall* of a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp* must be protected in accordance with C3.4 if it is within 6 m of, and exposed to, a *window* or other opening in a wall of the same building, other than in the same fire-isolated enclosure.	**CRA**	**A design practitioner—architectural** A door schedule is to be provided to confirm compliance. Details to be provided with the application for CC. ***See*** *Fire Safety Schedule*		
42.	**C3.9 –** Service penetrations in fire isolated exits	The fire isolated exits are not to be penetrated by any services **other** than: • electrical wiring associated with: – a lighting, detection, or pressurization system serving the exit; or – a security, surveillance or management system serving the exit; or – an intercommunication system or an audible or visual alarm system in accordance with D2.22; or – the monitoring of hydrant or sprinkler isolating valves. • ducting associated with a pressurisation system if it; (i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and (ii) does not open into any other part of the building; or	**CRA**	**A design practitioner—architectural** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		water supply pipes for fire services.				
43.	**C3.10 –** Openings in fire isolated lift shafts	Lift landing doors are required to be fire doors with an FRL of -/60/- that comply with AS 1735.11-1986, and be set to remain closed except when discharging or receiving, passengers, goods or vehicles. Panels in the wall of the lift shaft must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm2 in area.	**CRA**	**design practitioner—vertical transportation** **A design practitioner—architectural** Lift contractor will need to certify compliance with the design requirements.		
44.	**C3.11 –** Bounding construction: Class 2, 3, 4 and 9 Buildings	A doorways between sole occupancy units and the public lobbies and any common / service rooms and the public lobbies (class 2/3 parts) must be protected by self–closing -/60/30 fire doors. In a Class 2/3 building where a path of travel to an exit does not provide a person seeking egress with a choice of travel in different directions to alternative exits and is along an open balcony, landing or the like and passes an external wall of– (i) another sole-occupancy unit; or (ii) a room not within a sole-occupancy unit, then that external wall must– (i) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and (ii) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and (iii) have any windows or other openings– A. protected internally in accordance with C3.4; or B. located at least 1.5 m above the floor of the balcony, landing or the like.	**PS**	**A design practitioner—architectural** The Design Architect is to Provide a Full Schedule of all intended location of Fire Rated Walls. The Design Architect is to Provide a Full Schedule of all intended location of Fire Doors in a Fire Rated Elements. **It was advised that the upper storey bounding walls to SOU's are to extend to the roof Lining as per 3.1 c iii. (Underside of the roof Lining)** **Provided Spec Sheet as to selected wall system and how that system terminates at the roof line.** **Please Note,** Spec E1.5a introduces additional concessions if you so choose. Details are to be confirmed with your Certifier. **Note**: The choice of **FPA101H** Systems does not offer any concessions for Fire Doors. **Performance Solution** Required – 3 SOU's open onto the foyer part of the building which contain a *Pubic Corridor*, this part of a residential *Pubic Corridor* is also connected to the 'common room' which is not separated from the residential *Pubic Corridor.*		
	Resistance to the incipient spread of fire, in relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space.					

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Fire-protective covering means— (a) 13 mm fire-protective grade plasterboard; or (b) 12 mm cellulose cement flat sheeting complying with AS/NZS 2908.2 or ISO 8336; or (c) 12 mm fibrous plaster reinforced with 13 mm x 13 mm x 0.7 mm galvanised steel wire mesh located not more than 6 mm from the exposed face; or (d) other material not less fire-protective than 13 mm fire-protective grade plasterboard, fixed in accordance with the normal trade practice for a *fire-protective covering*. **Public corridor** means an enclosed corridor, hallway or the like which— (a) serves as a means of egress from 2 or more *sole-occupancy units* to a *required exit* from the *storey* concerned; or (b) is *required* to be provided as a means of egress from any part of a *storey* to a *required exit*. **Note: Spec C1.1, 5.1 (e) Fire Resistance of Building Elements** (e) in a Class 2 or 3 building, except where within the one *sole-occupancy unit*, or a Class 9a *health-care building*, or a Class 9b building, a floor separating *storeys*, or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must— (i) have an FRL of at least 30/30/30; or (ii) have a *fire-protective covering* on the underside of the floor including beams incorporated in it and around the column, if the floor or column is *combustible* or of metal; and			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		3. Type A Fire-Resisting Construction **3.1 Fire-resistance of building elements** In a building *required* to be of Type A construction— (a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and (b) * * * * * (c) 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; or (ii) the underside of a roof complying with Table 3; or (iii) if under Clause 3.5 the roof is not *required* to comply with Table 3, the underside of the *non-combustible* roof covering 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) a ceiling that is immediately below the roof and has a *resistance to the incipient spread of fire* to the roof space between the ceiling and the roof of not less than 60 minutes; and				
45.	**C3.12 –** Openings in floors for services	(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) in a building of Type A construction, by a *shaft* complying with Specification C1.1; or (ii) in a building of Type B or C construction, by a *shaft* that will not reduce the fire performance of the building elements it penetrates; or (iii) in accordance with C3.15. (c) Where a service passes through a floor which is *required* to be protected by a *fire-protective covering*, the penetration must not reduce the fire performance of the covering.	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element. Where services pass through a floor which is required to achieve an FRL or a ceiling required to have a resistance to the incipient spread of fire, the service must be enclosed within a fire resisting shaft or fire protected in accordance with Clause C3.15.		
46.	**C3.13 –** Openings in shafts	Openings in shafts must be protected by: a) if it is in a sanitary compartment – a door or panel which together with its frame, is non-combustible or has an FRL of not less than –/30/30; or b) a self-closing –/60/30 fire door or hopper; or	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		c) an access panel having an FRL of not less than –/60/30; or d) if the shaft is a garbage shaft – a door or hopper of non-combustible construction.		This clause specifies that in buildings of Type A Construction, openings in shafts must be protected (generally with 1 hour fire rated shafts and doors).		
47.	**C3.14 –**	-	**Note**	No provisions		
48.	**C3.15 –** Openings for service installation	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 with respect to integrity or insulation or a resistance to the incipient spread of fire, that installation must comply with any one of the following: (a) Tested systems (i) The service, building element and any protection method at the penetration are identical with a prototype assembly of the service, building element and protection method which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire. (ii) It complies with (i) except for the insulation criteria relating to the service if— (A) the service is a pipe system comprised entirely of metal (excluding pipe seals or the like); and (B) any combustible building element is not located within 100 mm of the service for a distance of 2 m from the penetration; and (C) combustible material is not able to be located within 100 mm of the service for a distance of 2 m from the penetration; and (D) it is not located in a required exit. (b) Ventilation and air-conditioning — In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1. (c) Compliance with Specification C3.15 (i) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and (C) does not contain a flammable or combustible liquid or gas.	**CRA**	***A design practitioner—architectural*** The Design Architect is to Provide a Full Schedule of all intended Fire Services located passing through a fire rated element. Where services (e.g. hydraulic, mechanical, plumbing, electrical) penetrate a building element that is required to achieve an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire then that installation must be protected / sealed (e.g. fire collars, fire dampers etc) by material that is identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and having achieved the required FRL or resistance to the incipient spread of fire or other specified method. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate. Based on the Fire Safety Strategy, current fire stopping requirements would still apply to the bounding ceilings and walls as appropriate regardless to slow fire spread. **Note**: Contractors should check with PC to confirm compliance with their proposed fire stopping method prior to the required mandatory inspection.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) The service is sanitary plumbing installed in accordance with Specification C3.15 and it— (A) is of metal or UPVC pipe; and (B) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and (C) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification C1.1 for a stair shaft in the building and a self-closing –/60/30 fire door. (iii) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it— (A) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and (B) connects not more than 2 fire compartments in addition to any fire-resisting service shafts. (iv) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.				
49.	**C3.16 –** Construction Joints	Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.	**CRA**	***A design practitioner—structural engineering*** Construction joints are to be installed in accordance with a tested prototype in accordance with AS1530.4. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate.		
50.	**C3.17 –** Columns protected with lightweight construction	A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a 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.	**CRA**	***A design practitioner—structural engineering*** Columns must be protected in accordance with the identical tested prototype. Details verifying compliance must be provided on plans prior to the issue of a Construction Certificate.		
	SPECIFICATION C.1.1 – FIRE-RESISTING CONSTRUCTION					
51.	**2.1 –** Exposure to fire-source features	A building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that– (i) has an FRL of not less than 30/–/–; and (ii) is neither transparent nor translucent.	**Note**	***Noted***		
52.	**2.2 –**	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 have an FRL not less than that	**Note**	***A design practitioner—structural engineering***		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Fire protection for a support of another part	required by other provisions of this Specification; and if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required for the supporting part itself and for the part it supports.				
53.	**2.3 –** Lintels	A lintel must have the FRL required for the 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 meets the requirements of Spec C1.1 clause 2.3 (a) & (b).	**Note**	***A design practitioner—structural engineering***		
54.	**2.4 –** Attachments not to impair fire-resistance	The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.	**Note**	***A design practitioner—architectural***		
55.	**2.5 –** General concessions	Detail any concessions that apply: • Steel columns (1 or 2 storey buildings) • Timber columns (1 storey buildings) • Structures on roofs • Curtain walls and panel walls • Balconies and verandas' Structures on roofs — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains— (i) lift motor equipment; or (ii) one or more of the following: (A) Hot water or other water tanks. (B) Ventilating ductwork, ventilating fans and their motors. (C) Air-conditioning chillers. (D) Window cleaning equipment. (E) Other service units that are non-combustible and do not contain flammable or combustible liquids or gases.	**Note**	***A design practitioner—architectural***		
56.	**2.6 –** Mezzanine floors: Concession		**Note**	***A design practitioner—architectural***		
57.	**2.7 –** Enclosure of shafts	Fire-isolated shafts are required to be enclosed at the top and bottom of the shaft with fire rated construction having an FRL required for the walls of a non-load-bearing shaft in the same building, as per specification C1.1. This fire rating is required in two directions.	**Note**	***A design practitioner—architectural***		

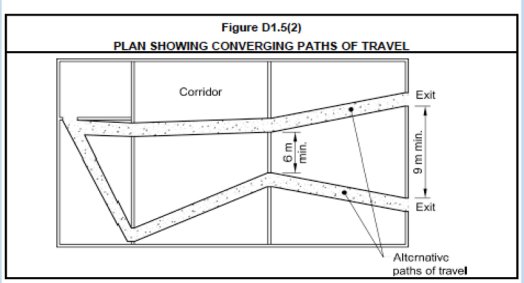
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		The above does not apply to shafts extending beyond the roof covering, other than fire isolated stair and lift shafts and the bottom of non-combustible shafts laid directly on the ground.				
58.	**2.8 –** Carparks in Class 2 and 3 Buildings	Class 2 buildings not more than 4 storeys Class 3 building not more than 3 storeys	**Note**			
59.	**2.9 –** Residential Aged Care building: Concession	Noted	**Note**			
60.	**3.0 –** Type A fire-resisting construction	Noted	**Note**			
61.	**3.1 –** Fire-resistance of building elements	The FRL's of all elements are to be in accordance with the FRL's as per Table 3. **(see Appendix A)** • An external wall that is required to have an FRL tested from both directions to satisfy the FRL requirement. • Internal walls in a Class 2 building required to be fire rated must extend to– **(i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or** **(ii) the underside of a ceiling having a resistance to the incipient spread of fire to the roof 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; and** • In a Class 2 or 3 building, except where within the one sole-occupancy unit, or a Class 9a health-care building, or a Class 9b building, a floor separating storey, or above a space for the accommodation of motor vehicles or used for	**CRA**	***A design practitioner—architectural*** ***A design practitioner—structural engineering*** As the building is required to comply with that of Type A Construction, the relevant FRL's must be achieved in both directions (i.e. internal and external) and be of non-combustible construction. Typically, the building will need to comply with the following: o External walls, common walls, flooring and the like must be of non-combustible construction (i.e. no timber framing) o Insulation & sarking provided within the external walls must be of non-combustible materials. o Non-combustible fire stopping will be required at the cavity edges (both vertically and horizontally). o An internal separating wall required to have an FRL must not be penetrated by any building element other than roof battens of dimensions not greater than 50mm x 75mm. o A loadbearing internal wall must be of concrete or masonry construction.		

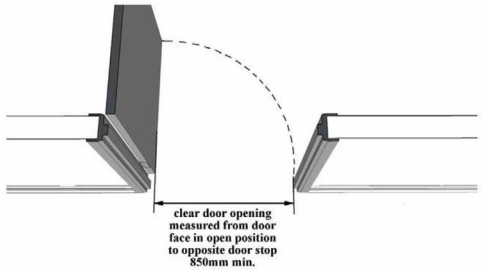
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		storage or any other ancillary purpose, and any column supporting the floor, must— (i) have an FRL of at least 30/30/30; or (ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal. **Note:** This includes non-combustible insulation. When an insulation material is not certified as non-combustible, this material will need to be the subject of a Fire Engineering, this needs to be disclosed. The FRL's specified in **Table 3** for an external column apply also to those parts of an internal column that face and are within 1.5m of a window and are exposed through that window to a fire-source feature. **I.e.:** It should also be noted that if Dincel material is to be used as an element where the BCA requires such element to be non-combustible, this material will need to be the subject of a Fire Engineering Assessment at the CC stage		0 External walls must achieve an FRL in accordance with table 3 depending on the setback from the boundaries. 0 Any loadbearing external columns (not in the external wall) will need to achieve an FRL. 0 The roof need not achieve an FRL. 0 Internal loadbearing columns in the topmost storeys may be reduced to achieve an FRL of not less than 60/60/60. With regard to the garbage chute located within the basement level, please note that the fire rating of the metal ducting is to be continued from the soffit of the room, down to the self-closing fire rated hopper.		
62.	**3.2 –** Concessions for floors	A floor need not comply with Table 3 if— (a) it is laid directly on the ground; or (b) in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or (c) it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or (d) it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; or (e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.	**Note**	***Noted***		
63.	**3.3 –** Floor Loading of Class 5 and 9b buildings: Concession	If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa— (a) the floor next above (including floor beams) may have an FRL of 90/90/90; or (b) the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.	**Note**	***N / A***		
64.	**3.4 –** Roof superimposed	A Roof located over a concrete slab fire rated as per Table 23, need not have an FER also.	**Note**	***Noted***		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	on concrete slab: Concession					
65.	**3.5 –** Roof: Concession	A roof need not comply with Table 3 if its covering is non-combustible and the building— a) has a sprinkler system complying with Specification E1.5 installed throughout; or b) has a rise in storeys of 3 or less; or c) is of Class 2 or 3; or d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.	**Note**	***Noted***		
66.	**3.6 –** Roof lights	If a roof is *required* to have an FRL or its covering is *required* to be *non-combustible*, roof lights or the like installed in that roof must— a) have an aggregate area of not more than 20% of the roof surface; and b) be not less than 3 m from— (i) any boundary of the allotment other than the boundary with a road or public place; and (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the rooflight or the like are protected in accordance with C3.4; and (iii) any rooflight or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and (iv) any rooflight or the like in an adjoining fire-separated section of the building; and c) if a ceiling with a *resistance to the incipient spread of fire* is *required*, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.	**Note**	***Noted***		
67.	**3.7 –** Internal columns and walls: Concession	For a building with an *effective height* of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the *storey* immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and *internal walls* other than *fire walls* and *shaft* walls may have— (a) in a Class 2 or 3 building: FRL 60/60/60; or (b) in a Class 5, 6, 7, 8 or 9 building— (i) with *rise in storeys* exceeding 3: FRL 60/60/60 (ii) with rise *in storeys* not exceeding 3: no FRL.	**CRA**	***A design practitioner—structural engineering*** ***A design practitioner—architectural*** *FRL's are to be shown on CC Plans.*		
	SECTION D – ACCESS AND EGRESS					

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Part D1 – Provision for Escape					
	Clause	Description	**Status**	Comments		
68.	**D1.1 –** Application of Part	The Deemed-to-Satisfy provisions of this Part do not apply to the internal parts of a sole-occupancy unit of a Class 2 or 3 building or a Class 4 part of a building.	**Note**	***Noted***		
69.	**D1.2 –** Number of exits required	(a) **All buildings** — Every building must have at least one exit from each storey. (b) **Class 2 to 8 buildings** — In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has an effective height of more than 25m. (ii) A Class 2 or 3 building subject to C1.5. (d) **Class 9 buildings** — In addition to any horizontal exit, not less than 2 exits must be provided from the following: (i) Each storey if the building has a rise in storeys of more than 6 or an effective height of more than 25 m. (ii) Any storey which includes a patient care area in a Class 9a health-care building. (iii) Any storey that contains sleeping areas in a Class 9c building. (iv) Each storey in a Class 9b building used as an early childhood centre. (v) Each storey in a primary or secondary school with a rise in storeys of 2 or more. (vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D1.13.	**Complies**	Building has effective height less than 25m. Each storey is to have at least one (1) exit. The lower ground storey is to have two (2) exits as the rise to an exit is more than 1.5m. Currently **each storey** is provided with **two (2) exits**.		
70.	**D1.3 –** When fire isolated exits are required	**Class 2 and 3 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless it connects, passes through or passes by not more than— (i) 3 consecutive storeys in a Class 2 building; or (ii) 2 consecutive storeys in a Class 3 building, and one extra storey of any classification may be included if— (iii) it is only for the accommodation of motor vehicles or for other ancillary purposes; or (iv) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (v) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (A) an FRL of –/60/60, if non-loadbearing; and (B) an FRL of 90/90/90, if loadbearing; and	**Complies**	**The building is afforded with several exits, only two (2) exits are required to be isolated being the main internal exits serving all levels of the building.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(C) no opening that could permit the passage of fire or smoke. **Class 5, 6, 7, 8 or 9 buildings** — Every stairway or ramp serving as a required exit must be fire-isolated unless— (i) in a Class 9a health-care building — it connects, or passes through or passes by not more than 2 consecutive storeys in areas other than patient care areas; or (ii) it is part of an open spectator stand; or (iii) in any other case except in a Class 9c building, it connects, passes through or passes by not more than 2consecutive storeys and one extra storey of any classification may be included if— (A) the building has a sprinkler system (other than a FPAA101D system) complying with Specification E1.5 installed throughout; or (B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having— (aa) an FRL of –/60/60, if non-loadbearing; and (bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B or C construction, if loadbearing; and (cc) no opening that could permit the passage of fire or smoke.				
71.	**D1.4 –** Exit travel distances	a) **Class 2 and 3 buildings**— (i) The entrance doorway of any *sole-occupancy unit* must be not more than— (A) 6 m from an *exit* or from a point from which travel in different directions to 2 *exits* is available; or (B) 20 m from a single *exit* serving the *storey* at the level of egress to a road or *open space*; and (ii) no point on the floor of a room which is not in a *sole-occupancy unit* must be more than 20 m from an *exit* or from a point at which travel in different directions to 2 *exits* is available. **Class 5, 6, 7, 8 or 9 buildings** — Subject to (d), (e) and (f)— (i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and (ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.	**CRA**	**As the building is required to be sprinkler protected, the selection of a AS2118.1 system will allow up to 12m in leu of 6m.** 		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Note Concessions under **Specification E1.5a** for compliance				
72.	**D1.5 –** Distances between alternative exits	Exits that are required as alternative means of egress must be— (a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and (b) not less than 9 m apart; and (c) not more than— (i) in a Class 2 or 3 building — 45 m apart; or (ii) in a Class 9a health-care building, if such required exit serves a patient care area — 45 m apart; or (iii) in all other cases — 60 m apart; and (d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.	**Complies**	**Travel distances comply**  D1.6 Dimensions of exits and paths of travel to exits		
73.	**D1.6 –** Dimensions of exits	In a required exit or path of travel to an exit— (a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and (b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than— (i) 1 m; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area (iii) in a public corridor in a Class 9c aged care building, notwithstanding (c) and (d)— (A) 1.5 m; and (B) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom; and (c) if the storey, mezzanine or open spectator stand accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than— (i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or (ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and (d) if the storey, mezzanine or open spectator stand accommodates more than 200 persons, the aggregate	**CRA**	**A design practitioner—architectural** In a required exit or path of travel, the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway must be reduced to not less than 1980mm. The unobstructed width of each exit or path of travel to an exit except a doorway must not be less than 1m. The unobstructed width must be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like. Further details are to be provided in the form of a door schedule which indicates that the unobstructed widths of the proposed doorways are not less than 750mm for isolated exits, all other doors where on an accessible storey, should be consistent with AS1428.1:2009 I.e., Minimum of 850mm. **Dimension of appear Exits Comply**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		unobstructed width, except for doorways, must be increased to— (i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or (ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and (e) in an open spectator stand which accommodates more than 2000 persons, the aggregate unobstructed width, except for doorways, must be increased to 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600.				
74.	**D1.7 –** Travel via fire-isolated exits	(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from— (i) a public corridor, public lobby or the like; or (ii) a sole-occupancy unit occupying all of a storey; or (iii) a sanitary compartment, airlock or the like. (b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway— (i) to a road or open space; or **(ii) to a point—** **(A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and** **(B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or** (iii) into a covered area that— (A) adjoins a road or open space; and (B) is open for at least 1/3 of its perimeter; and (C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m. (c) 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, that part of the wall must have— (i) an FRL of not less than 60/60/60; and	**PS**	**A design practitioner—architectural** Protection of foyer doors and glazing is required to the discharge doors next to in accordance with C3.4 as the stair is with <3m above the discharge point and <6m. **(b)(ii)(A) A Fire Engineer if to confirm that the under-croft area meets 2/3 open design requirements.**		

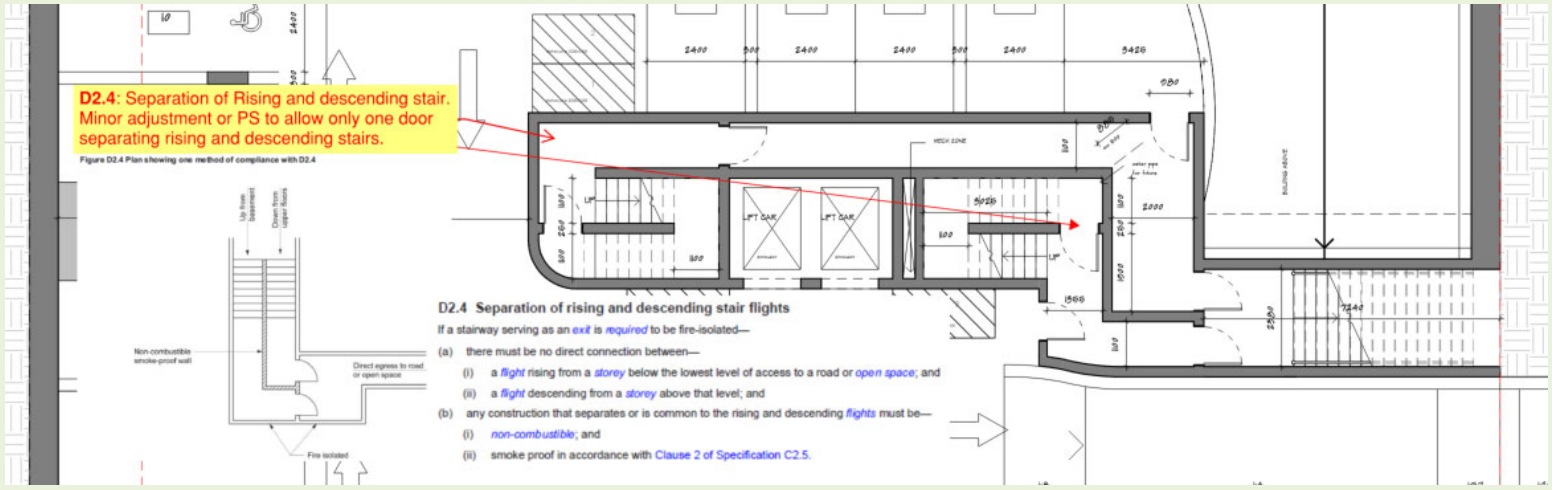
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) any openings protected internally in accordance with C3.4, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser. (d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey— (i) a smoke lobby in accordance with D2.6 must be provided; or (ii) the exit must be pressurised in accordance with AS/NZS 1668.1. (e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.				
75.	**D1.8 –** External stairways in lieu of fire-isolated exits	An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25m provided that it is constructed in accordance with the requirements of sub-clauses (a) to (d). The provisions also set out the requirements of protection for external required exits.	**Note**			
76.	**D1.9 –** Travel by Non-fire-isolated Stairways or ramps	**(a) A non-*fire-isolated stairway* or non-*fire-isolated ramp* serving as a *required exit* must provide a continuous means of travel by its own *flights* and landings from every *storey* served to the level at which egress to a road or *open space* is provided.** (b) In a **Class** 2, **3** or 4 building, the distance between the doorway of a room or *sole-occupancy unit* and the point of egress to a road or *open space* by way of a stairway or ramp that is not fire-isolated and is *required* to serve that room or *sole-occupancy unit* must not exceed— (i) 30 m in a building of Type C construction; or (ii) 60 m in all other cases. (c) In a **Class** 5, 6**, 7**, 8 or 9 building, the distance from any point on a floor to a point of egress to a road or *open space* by way of a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must not exceed 80 m. (d) In a **Class** 2, **3** or 9a building, a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must discharge at a point not more than— (i) 15 m from a doorway providing egress to a road or *open space* or from a *fire-isolated passageway* leading toa road or *open space*; or (ii) 30 m from one of 2 such doorways or passageways if travel to each of them from the non-*fire-isolated stairway* or non-*fire-isolated ramp* is in opposite or approximately opposite directions.	**CRA**	**Travel distances to open space comply via non-fire isolated exits.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(e) In a Class 5 to 8 or 9b building, a *required* non-*fire-isolated stairway* or non-*fire-isolated ramp* must discharge at a point not more than— (i) 20 m from a doorway providing egress to a road or *open space* or from a *fire-isolated passageway* leading toa road or *open space*; or (ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-*fire-isolated stairway* or non-*fire-isolated ramp* is in opposite or approximately opposite directions.				
77.	**D1.10 –** Discharge from exits	(a) 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. (b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than— (i) the minimum width of the required exit; or (ii) 1 m, whichever is the greater. (c) 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 the Deemed-to-Satisfy Provisions of Part D3; or (ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA. (d) The discharge point of alternative exits must be located as far apart as practical. (e) In a Class 9b building which is an open spectator stand that accommodates more than 500 persons, a required stairway or required ramp must not discharge to the ground in front of the stand. (f) In a Class 9b building used as an entertainment venue, at least half of the required number of exits from each storey or mezzanine, and at least half of the aggregate width of such exits must discharge otherwise than through the main entrance, or the area immediately adjacent to the main entrance of the building. (g) The number of persons accommodated must be calculated according to D1.13.	**CRA**	**A design practitioner—architectural** Suitable barriers such as bollards are to be provided to prevent the blockage of exits by vehicles, etc. All external ramps that are used as a path from an exit to a road must have a gradient not steeper than 1:8 at any part.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
78.	**D1.11 –** Horizontal exits	Horizontal exits must not be counted as required exits between sole-occupancy units or in an early childhood centre, primary or secondary school. Horizontal exits may be counted as required exits in Class 9a-health care building or a Class 9c aged care building if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartment which has at least one required exit which is not a horizontal exit. In addition, horizontal exits must have a clear area on the side of the fire wall to which occupants are evacuating, to accommodate the total number of persons serviced by the horizontal exit of not less than 2.5m2 per patient.	**N / A**			
79.	**D1.12 –** Non-required stairs, ramps or escalators	This clause sets out the requirements for the application of non-required exits and the circumstances under which they may be utilised. Clause D1.12 only applies to escalators, moving walkways and travelators, non-required non-fire-isolated stairways and non-required non-fire-isolated ramps. A non-required stairway cannot be used to connect patient care areas in a class 9a building or resident use areas in a class 9c building.	**N / A**			
80.	**D1.13 –** Number of persons accommodated	**Informational–** The number of persons accommodated in a storey, room or mezzanine must be determined within consideration to the purpose for which it is used and the layout of the floor area by– (a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in BCA Table D1.13 according to the use of that part, excluding spaces set aside for— (i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and (ii) service ducts and the like, sanitary compartments or other ancillary uses; or (b) reference to the seating capacity in an assembly building or room; or (c) any other suitable means of assessing its capacity. Based on floor area and Table D1.13, the population numbers are as follows:	**Note**			
81.	**D1.14 –** Measurement of distance	**Informational –** The nearest part of an exit means in the case of— (a) a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp, the nearest part of the doorway providing access to them; and (b) a non-fire-isolated stairway, the nearest part of the nearest riser; and	**Noted**			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(c) a non-fire-isolated ramp, the nearest part of the junction of the floor of the ramp and the floor of the storey; and (d) a doorway opening to a road or open space, the nearest part of the doorway; and (e) a horizontal exit, the nearest part of the doorway.				
82.	**D1.15 –** Method of measurement	**Informational –** This clause sets out the method of measuring travel distance to an exit in various circumstances by determining the path that a person would walk.	**Note**			
83.	**D1.16 –** Plant rooms and lift machine rooms: Concession	(a) A ladder may be used in lieu of a stairway to provide egress from— (i) a plant room with a *floor area* of not more than 100 m2; or (ii) all but one point of egress from a plant room, a lift machine room or a Class 8 *electricity network substation* with a *floor area* of not more than 200 m2. (b) A ladder permitted under (a)— (i) may form part of an *exit* provided that in the case of a *fire-isolated stairway* it is contained within the *shaft*; or (ii) may discharge within a *storey* in which case it must be considered as forming part of the path of travel; and (iii) for a plant room or a Class 8 *electricity network substation*, must comply with AS 1657; and (iv) for a lift machine room, where access is provided from within a machine room to a secondary floor, a fixed rung type ladder complying with AS 1657 may be used, provided that— (A) the height between the floors is not more than 2800 mm; and (B) the ladder is inclined at an angle to the horizontal not less than 65 degrees nor more than 75 degrees; and (C) the distance between the front face of the ladder and any adjacent obstruction is not less than— (aa)960 mm, where the ladder is inclined 65 degrees to the horizontal; or (bb)760 mm, where the ladder is inclined 75 degrees to the horizontal; or (cc)a distance that is determined by interpolating the values in (aa) and (bb), where the ladder is inclined at any angle between 65 degrees and 75 degrees to the horizontal; and (D) a clear space not less than 600 mm exists between the foot of the ladder and any equipment.	**Note**	**A design practitioner—architectural** **A design practitioner—structural engineering**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
84.	**D1.17 –** Access to lift pits	Access to lift pits must— (a) where the pit depth is not more than 3 m, be through the lowest landing doors; or (b) where the pit depth is more than 3 m, be provided through an access doorway complying with the following: (i) In lieu of D1.6, 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. (iv) In lieu of D2.21, 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: (D) "DANGER LIFT WELL – ENTRY OF UNAUTHORIZED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES"	**Note**			
	Part D2 – Construction of Exits					
85.	**D2.1 –** Application of Part	**Informational–** Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17(e), D2.21 and D2.24, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 3 building. Except for D2.13, D2.14(a), D2.16, D2.17(d), D2.17 (e), D2.18 & D2.24, the deemed-to-satisfy Provisions of this Part do not apply to internal parts of the Class 2 sole-occupancy units.	**Note**			
86.	**D2.2 –** Fire isolated stairs or ramps	A stairway or ramp, including landings that are required to be within a fire-resisting shaft must be constructed of non-combustible materials to protect the structural integrity of the shaft.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering**		
87.	**D2.3 –** Non-fire-isolated stairways and ramps	Buildings more than 2 storeys Required stairs and ramps (including landings and any supporting building elements) must be constructed according to D2.2, or only of- (a) reinforced or prestressed concrete; or (b) steel in no part less than 6 mm thick; or (c) timber that— (i) has a finished thickness of not less than 44 mm; and	**Complies**	**A design practitioner—architectural** Required stairs that are not required to be within a fire-resting shaft are to be constructed of concrete, steel, or timber of specified minimum dimensions.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) has an average density of not less than 800 kg/m3 at a moisture content of 12%; and (iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue".				
88.	**D2.4 –** Separation of rising and descending stair flights	If a stairway serving as an exit is required to be fire-isolated— (a) there must be no direct connection between— (i) a flight rising from a storey below the lowest level of access to a road or open space; and (ii) a flight descending from a storey above that level; and (b) any construction that separates or is common to the rising and descending flights must be (i) non-combustible; and (ii) smoke proof in accordance with Clause 2 of Specification C2.5. Or; Complies – there is no direct connection between the stairs rising from the basement levels and the stairs from the residential levels.	**Need Design Detail**	**A design practitioner—architectural** A Smoke Door is required to separate Rising and Descending Stairs. This includes smoke separation within the stair itself between the two (2) separate flights.		
						
89.	**D2.5 –** Open access ramps and balconies	Where an open access ramp or balcony is provided to meet the smoke hazard management requirements of Table E2.2a, it must— (a) have ventilation openings to the outside air which— (i) have a total unobstructed area not less than the *floor area* of the ramp or balcony; and (ii) are evenly distributed along the open sides of the ramp or balcony; and	**N / A**	**A design practitioner—architectural**		

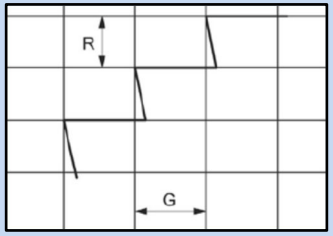
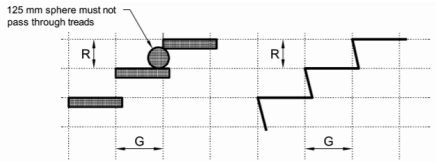
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) not be enclosed on its open sides above a height of 1 m except by an open grille or the like having a free air space of not less than 75% of its area.				
90.	**D2.6 –** Smoke lobbies	A smoke lobby *required* by D1.7 must— (a) have a *floor area* not less than 6 m2; and (b) be separated from the occupied areas in the *storey* by walls which are impervious to smoke, and— (i) have an FRL of not less than 60/60/– (which may be fire-protective grade plasterboard, gypsum block with set plaster, face brickwork, glass blocks or glazing); and (ii) extend from slab to slab, or to the underside of a ceiling with a *resistance to the incipient spread of fire* of 60minutes which covers the lobby; and (iii) any construction joints between the top of the walls and the floor slab, roof or ceiling must be smoke sealed with intumescent putty or other suitable material; and (c) at any opening from the occupied areas, have smoke doors complying with Clause 3 of Specification C3.4 except that the smoke sensing device need only be located on the approach side of the opening; and (d) be pressurised as part of the *exit* if the *exit* is *required* to be pressurised under E2.2.	**N / A**	**A design practitioner—architectural**		
91.	**D2.7 –** Installations in exits and paths of travel	(a) Access to service shafts and services other than to fire-fighting or detection equipment as permitted in the Deemed-to-Satisfy Provisions of Section E, must not be provided from a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp. (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 a required exit. (c) Gas or other fuel services must not be installed in a required exit. (d) Services or equipment comprising— (i) electricity meters, distribution boards or ducts; or (ii) central telecommunications distribution boards or equipment; or (iii) electrical motors or other motors serving equipment in the building, may be installed in— (i) a required exit, except for fire-isolated exits specified in (a); or	**CRA**	**A design practitioner—architectural** EDB cupboards or the like which are located within the path of travel must be enclosed in non-combustible construction and be suitably smoke sealed to prevent smoke spreading from the enclosure. In this regard, the doors must be lined on the inside of the door with sheet metal or similar and smoke seals provided around the perimeter of the door. The ceiling within the cupboard shall also be smoke sealed to prevent smoke leaking into the corridor ceiling space.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) in any corridor, hallway, lobby or the like leading to a required exit, if the services or equipment are enclosed by non-combustible construction or a fire-protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure. (e) 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; or (ii) a security, surveillance or management system serving the exit; or (iii) an intercommunication system or an audible or visual alarm system in accordance with D2.22; or (iv) the monitoring of hydrant or sprinkler isolating valves.				
92.	**D2.8 –** Enclosure of space under stairs and ramps	The space below non-fire-isolated stairs must not be enclosed to form a cupboard or similar enclosed space unless the enclosing walls have an FRL of not less than 60/60/60 and any doorway to the enclosed space is fitted with a self-closing --/60/30 fire door. There is to be no form of cupboard or similar enclosed space proposed within any of the stairways. The existing stair appears not to have an accessible cupboard.	**Note**	**A design practitioner—architectural**		
93.	**D2.9 –** Width of stairways	**Informational –** A required stairway or ramp that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2 m.	**N / A**	**A design practitioner—architectural**		
94.	**D2.10 –** Pedestrian ramps	(a) A fire-isolated ramp may be substituted for a fire-isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire-isolated stairway. (b) A ramp serving as a required exit must— (i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or (ii) in any other case, have a gradient not steeper than 1:8. (c) The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586. **Table 2 – Slip resistance Classification** **Application** / **Surface Conditions** (Dry / Wet)	**CRA**	**A design practitioner—architectural** Ramps serving as a required exit must not have a gradient steeper than 1:8. If the ramp is required for disabled access under Part D3 it must comply with AS1428.1. The surface of the ramp must have a non-slip finish. The entry is not to be classified as a Pedestrian ramp for the purpose of an Exit. However, see D3 of this report for further comments.		

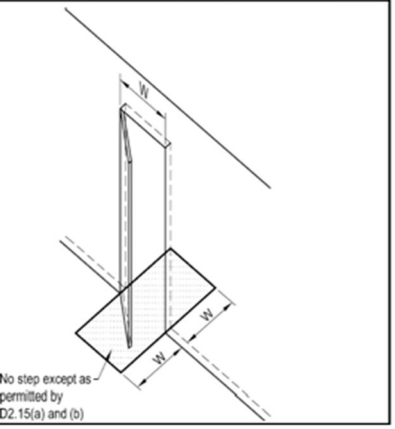
ITEM	Clause	Reference			Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Ramp steeper than 1:14	P4 or R11	P5 or R12				
		Ramp steeper than 1:20 but not steeper than 1:14	P3 or R10	P4 or R11				
		Tread or landing surface	P3 or R10	P4 or R11				
		Nosing or landing edge strip	P3	P4				
95.	**D2.11 –** Fire-isolated passageways	(a) The enclosing construction of a fire-isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of— (i) if the passageway discharges from a fire-isolated stairway or ramp — not less than that required for the stairway or ramp shaft; or (ii) in any other case — not less than 60/60/60. (b) Notwithstanding (a)(ii), the top construction of a fire-isolated passageway need not have an FRL if the walls of the fire-isolated passageway extend to the underside of— (i) a non-combustible roof covering; or (ii) a ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment. **Note**: E2.2a Fire Isolated Passages >60m are required to be pressurised as per or open access ramps or balconies.			**N / A**	**A design practitioner—architectural**		
96.	**D2.12 –** Roof as open space	If an *exit* discharges to a roof of a building, the roof must— (a) have an FRL of not less than 120/120/120; and (b) not have any roof lights or other openings within 3 m of the path of travel of persons using the *exit* to reach a road or *open space*.			**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** **Comment:** The basement roof slab must achieve a minimum FRL for 120/120/120.		
97.	**D2.13 –** Goings and risers	(a) A stairway must have— (i) not more than 18 and not less than 2 risers in each *flight*; and (ii) going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13, except as permitted by (b) and (c);and (iii) constant goings and risers throughout each *flight*, except as permitted by (b) and (c), and the dimensions of goings (G) and risers (R) in accordance with (a)(ii) are considered constant if the variation between— (A) adjacent risers, or between adjacent goings, is no greater than 5 mm; and			**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** Stairs are to have risers measuring between 115-190mm and goings between 250-355. Goings and Risers are to satisfy the equation of		

<table>
<tr><th>ITEM</th><th>Clause</th><th>Reference</th><th>Status</th><th>Comments</th><th>DETAIL SHOWN ON CC PLANS OR SPECIFICATION</th><th>RFI'S</th></tr>
<tr><td></td><td></td><td>(B) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and
(iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
(v) treads which have—
(A) a surface with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; or
(B) a nosing strip with a slip-resistance classification not less than that listed in Table D2.14 when tested in accordance with AS 4586; and
(vi) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and
(vii) in a Class 9b building, not more than 36 risers in consecutive flights without a change in direction of at least30°; and
(viii) in the case of a required stairway, no winders in lieu of a landing.</td><td></td><td>2R+G=700(max) and 550(min).

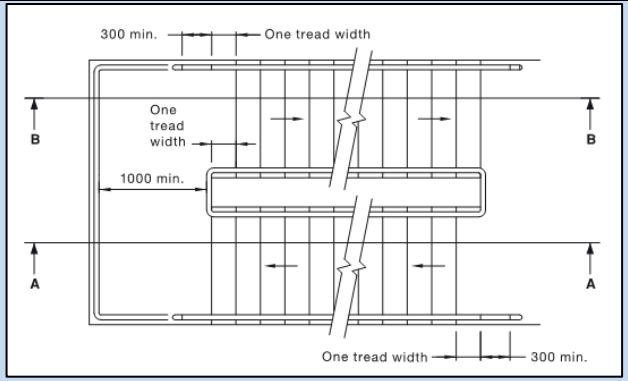
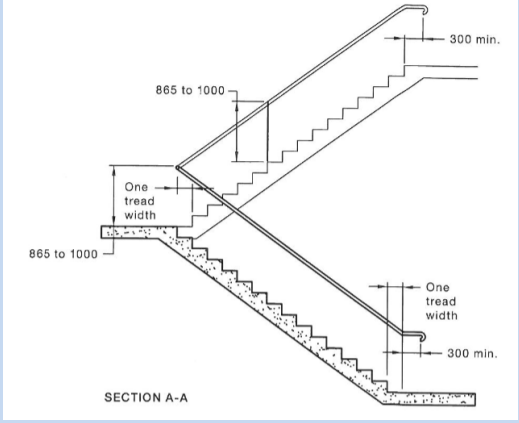
Any gap between risers must not permit a 125mm sphere to pass through it, these are to be adjusted to ensure compliance is achieved.

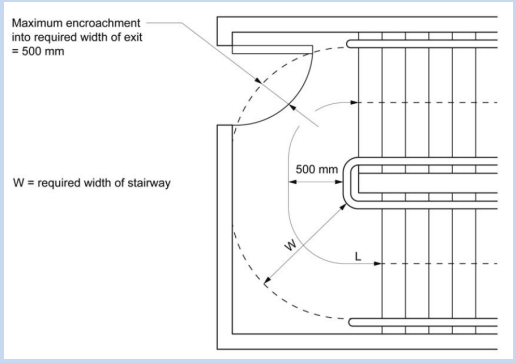
 
</td><td></td><td></td></tr>
<tr><td></td><td></td><td>Table D2.14 Slip-resistance classification
<table><tr><th>Application</th><th>Dry surface conditions</th><th>Wet surface conditions</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table></td><td></td><td><table><tr><th></th><th colspan="2">Riser (R)</th><th colspan="2">Going (G) (2)</th><th colspan="2">Quantity (2R+G)</th></tr><tr><th></th><th>Max</th><th>Min</th><th>Max</th><th>Min</th><th>Max</th><th>Min</th></tr><tr><td>Public stairways</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private stairways(1)</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table> 
</td><td></td><td></td></tr>
<tr><td>98.</td><td>D2.14 –
Landings</td><td>Landings to have either a surface with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586 or a strip at the edge of the landing with a slip-resistance classification complying with Table D2.14 when tested in accordance with AS 4586.
<table><tr><th rowspan="2">Application</th><th colspan="2">Surface conditions</th></tr><tr><th>Dry</th><th>Wet</th></tr><tr><td>Ramp steeper than 1:14</td><td>P4 or R11</td><td>P5 or R12</td></tr><tr><td>Ramp steeper than 1:20 but not steeper than 1:14</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Tread or landing surface</td><td>P3 or R10</td><td>P4 or R11</td></tr><tr><td>Nosing or landing edge strip</td><td>P3</td><td>P4</td></tr></table></td><td>CRA</td><td>A design practitioner—architectural

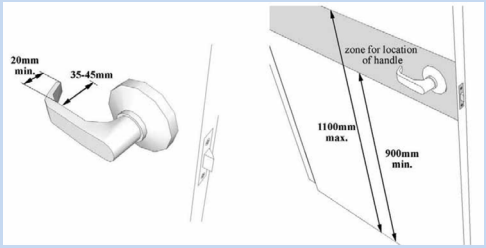
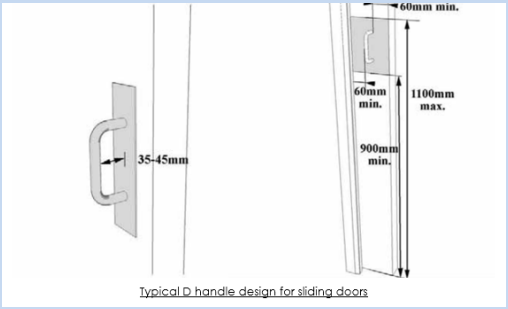
Landings must comply with the requirements of Clause D2.14 of the BCA. Landings must be not less than 750mm long and have a non-slip finish throughout or an adequate non-skid strip near the edge of the landing where it leads to a flight below and 30% colour contrasting nosings and slip resistant as per table D2.14.</td><td></td><td></td></tr>
</table>

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
99.	**D2.15 –** Thresholds	The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorways that the width of the door leaf unless– (a) in patient care areas in a Class 9a health-care building, the door sill is not more than 25mm above the finished floor level to which the doorway opens; or (b) in a Class 9c building, a ramp is provided with a maximum gradient of 1:8 for a maximum height of 25mm over the threshold; or (c) in a building required to be accessible by Part D3, the doorway— (i) opens to a road or open space; and (ii) is provided with a threshold ramp or step ramp in accordance with AS 1428.1; or (d) in a Class 9b building used as an entertainment venue, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50mm above the finished floor level to which the doorway opens; or (e) in other cases – (i) the doorway opens to a road or open space, internal stair landing or external balcony; and (ii) the door sill is not more than 190mm above the finished surface of the ground, balcony, or the like, to which to doorway opens.	**CRA**	**A design practitioner—architectural** A threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless the door opens to a road or open space, external stair landing or external balcony and the doorsill is not more than 190mm above the finished surface of the ground balcony or the like to which the door opens. Figure D2.15(1) ILLUSTRATION OF WHERE A STEP IS NOT ALLOWED IN A DOORWAY  **Concessions**—D2.15(a), (b) and (c) Concessions are granted in specified circumstances. These include: • D2.15(a)—in the patient care areas of a hospital; and • D2.15(b)—in Class 9c buildings; and • D2.15(c)—in a building required to be accessible by Part D3. • D2.15(d)—in other buildings, to allow for weatherproofing under an external door.		
100.	**D2.16 –** Balustrades	This clause details where balustrades are required to be provided and sets out in specific detail the construction requirements. Typically, the following will apply to a Class 2 building: 0 Balustrades are required where the fall to the level below is more than 1m in height. The minimum height of a balustrade is 1m above the floor of the landing, walkway or the like; and 865mm above the floor of a stairway or a ramp.	**CRA**	**A design practitioner—architectural** **A design practitioner—structural engineering** The plans indicate that in some cases that glass balustrades are provided, which will need to be provided with a continuous handrail or top rail and fixed into the internal wall or column construction.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		◦ For a fall of more than 4m to the surface level below, a window sill must be a minimum of 865mm in height above the height of the floor surface. ◦ Where the floor is more than 4m above the surface beneath the balustrade any horizontal or near horizontal members between 150mm and 760mm above the floor must not could facilitate climbing. Balustrades must be constructed so as to not permit a sphere of 125mm diameter to pass through. The exception to this is within fire isolated exits within the building, where the rails can be positioned a maximum of 460mm apart, so long as a bottom rail is located so a sphere of 150mm cannot pass through the opening between the nosing of the stair treads and the rail or between the floor of the landing, balcony or the like.		Notwithstanding, consideration shall also be given to the below: ◦ Any planter boxes located on the podium should be designed to achieve a 1m height to prevent a further 1m high balustrade being provided at the edge of the building. ◦ Where air conditioning units are provided to balconies, it will be necessary for a vertical type of barrier to prevent this unit being used as a foothold. Any electrical GPO's, gas outlets or the like which may be used as a foothold shall be located above 760mm from FFL. Final details are to be provided prior to the issue of a Construction Certificate.		
101.	**D2.17 –** Handrails *(See also D3.5)*	(a) Except for handrails referred to in D2.18, handrails must be— (i) located along at least one side of the ramp or *flight*; and (ii) located along each side if the total width of the stairway or ramp is 2 m or more; and (iii) in a Class 9b building used as a primary *school*— (A) have one handrail fixed at a height of not less than 865 mm; and (B) have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and (iv) in any other case, fixed at a height of not less than 865 mm measured above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and (v) continuous between stair *flight* landings and have no obstruction on or above them that will tend to break a hand-hold; and (vi) in a *required exit* serving an area *required* to be *accessible*, designed and constructed to comply with clause 12 of AS 1428.1, except that clause 12(d) does not apply to a handrail *required* by (a)(iii)(B).	**CRA**	**A design practitioner—architectural** Handrails are to be provided to at least one side of stair flights within fire isolated stairs and both side in any other case (See D3) and located not less than 865mm above the nosings of stair treads and the floor surfaces of landings. Isolated stairs are Compliant. All non-isolated Stairs are not compliant. An additional handrail is required to each stair as per AS1428.1 making the stair <1m clear as required. Details demonstrating compliance with this clause must be incorporated into the architectural drawings prior to the issue of a Construction Certificate.		

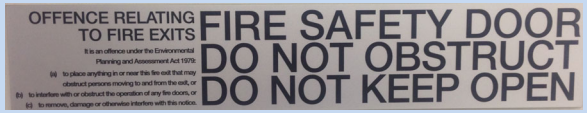
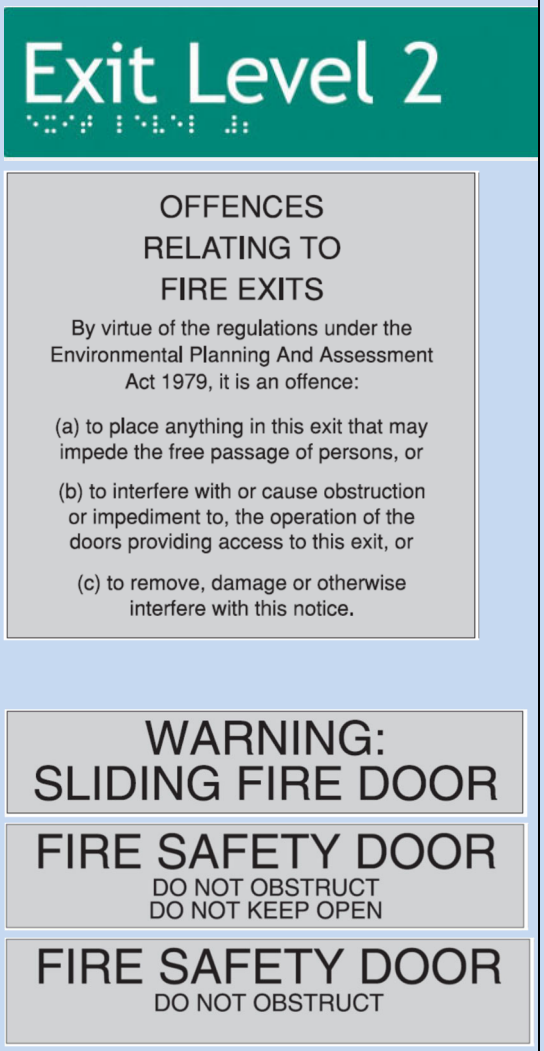
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
						
102.	**D2.18 –** Fixed platforms walkways, stairways and ladders	A fixed platform, walkway, stairway, ladder, any going and riser, any balustrade or other barrier attached thereto may comply with AS1657 if it only serves a machinery or plant room or non-habitable part of a sole-occupancy unit in a Class 2 building or Class 4 part	**Note**	Noted		
103.	**D2.19 –** Doorways and doors	A doorway serving as a *required exit* or forming part of a *required exit*, or a doorway in a *patient care area* of a Class 9a *health-care building*— (i) must not be fitted with a revolving door; and (ii) must not be fitted with a roller shutter or tilt-up door unless— (A) it serves a Class 6, 7 or 8 building or part with a *floor area* not more than 200 m2; and (B) the doorway is the only *required exit* from the building or part; and (C) it is held in the open position while the building or part is lawfully occupied; and (iii) 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 110 N; and (iv) 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	**Note**	**A design practitioner—architectural** Swinging doors are proposed throughout the building. **Note:** Power-operated sliding doors 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 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.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		the activation of a fire or smoke alarm anywhere in the *fire compartment* served by the door.				
104.	**D2.20 –** Swinging doors	A swinging door in a required exit or forming part of a required exit— (a) must not encroach— (i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required— (A) stairway; or (B) ramp; or (C) passageway, if it is likely to impede the path of travel of the people already using the exit; and (ii) when fully open, by more than 100 mm on the required width of the required exit, and the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and (b) must swing in the direction of egress unless— (i) it serves a building or part with a floor area not more than 200 m^2, it is the only required exit from the building or part and it is fitted with a device for holding it in the open position; or (ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction); and (d) must not otherwise impede the path or direction of egress.  	**Need Design Detail**	**A design practitioner—architectural** **Performance Solution Proposed for Buildings Smoke Doors if they are orientated against door swing direction.**		
105.	**D2.21 –** Operation of latch	(a)A door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* must be readily openable without a key from the side that faces a person seeking egress, by—	**CRA**	**A design practitioner—architectural** The door which serve as the exits for the building must be readily openable without a key from the side that faces a person seeking egress, by a single hand		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(i) a single hand downward action on a single device which is located between 900 mm and 1.1 m from the floor and if serving an area *required* to be *accessible* by Part D3— (A) be such that the hand of a person who cannot grip will not slip from the handle during the operation of the latch; and (B) 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 35 mm and not more than 45 mm; or (ii) a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor; and (iii) where the latch operation device referred to in (ii) is not located on the door leaf itself— (A) manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— (aa)not less than 500 mm from an internal corner; and (bb)for a hinged door, between 1 m and 2 m from the door leaf in any position; and (cc)for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. (B) braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. (b) The requirements of (a) do not apply to a door that— (i) serves a vault, strong-room, *sanitary compartment*, or the like; or (ii) serves only, or is within— (A) a *sole-occupancy unit* in a Class 2 building or a Class 4 part of a building; or (B) a *sole-occupancy unit* in a Class 3 building (other than an entry door to a *sole-occupancy unit* of a boarding house, guest house, hostel, lodging house or backpacker accommodation); or (C) a *sole-occupancy unit* with a *floor area* not more than 200 m2 in a Class 5, 6, 7 or 8 building; or (D) a space which is otherwise inaccessible to persons at all times when the door is locked; or (iii)serves— (A) Australian Government Security Zones 4 or 5; or (B) the secure parts of a bank, *detention centre*, mental health facility, *early childhood centre* or the like; and it can be immediately unlocked—		downward action on a single device which is located between 900 mm and 1.1 m from the floor or a single hand pushing action on a single device which is located between 900 mm and 1.2 m from the floor. Manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located— not less than 500 mm from an internal corner; and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position.  Typical lever handle design  Typical D handle design for sliding doors		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(C) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or (D) 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; or (iv) 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 E1.5 or smoke, or any other detector system deemed suitable in accordance with AS 1670.1 installed throughout the building, and is readily openable when unlocked; (c) The requirements of (a) do not apply in a Class 9b building (other than a *school*, an *early childhood centre* or a building used for religious purposes) to a door in a *required exit*, forming part of a *required exit* or in the path of travel to a *required exit* serving a *storey* or room accommodating more than 100 persons, determined in accordance with D1.13, in which case it must be readily openable— (i) without a key from the side that faces a person seeking egress; and (ii) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and (iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; and (iv) where the door is a door in a path of travel providing re-entry to the building from a balcony, terrace or the like, it may be fitted with key-operated fastenings only, the tongues of which must be locked in the retracted position whenever the building is occupied by the public, so the door can yield to pressure. (d) The requirements of (a) and (c) do not apply to a door serving a Class 9b building used as an *entertainment venue* where the following provisions apply to a door or gate used by the public— (i) on a door, the single device operating the latch or bolts must be a panic bar if those doors are to be secured; or (ii) an *exit* door or gate used by the public as the main entrance may be fitted with key-operated fastenings only,				

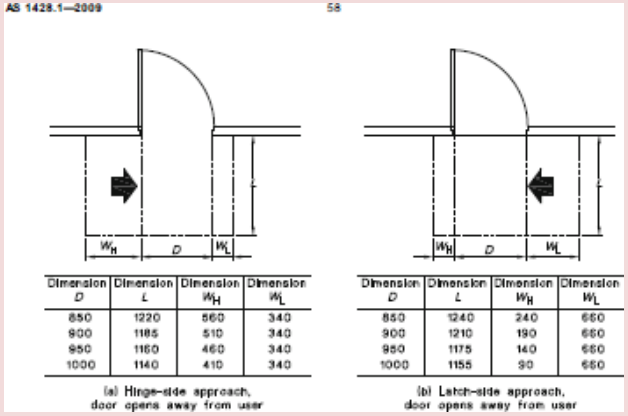
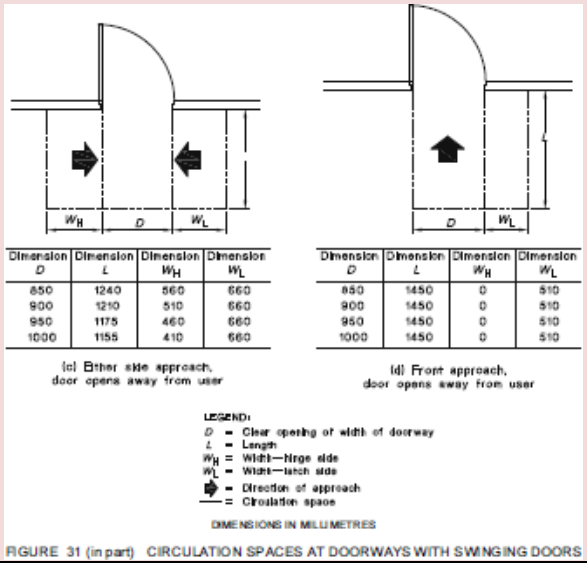
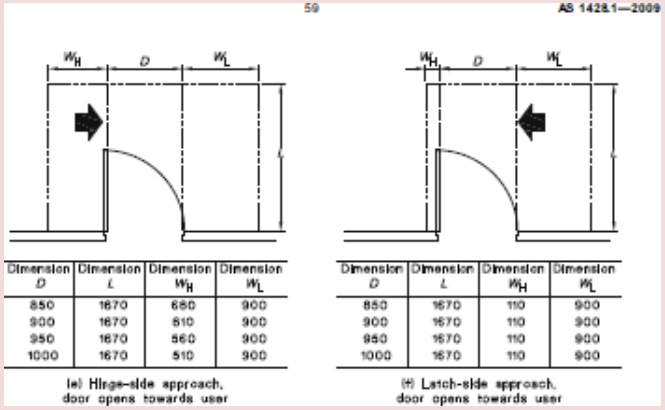
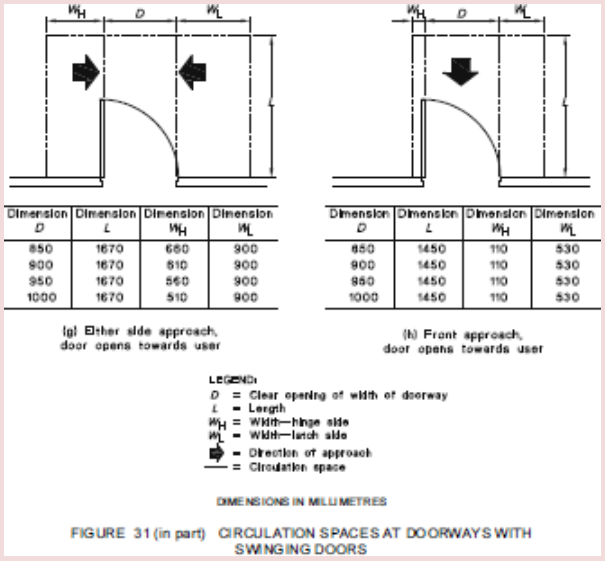
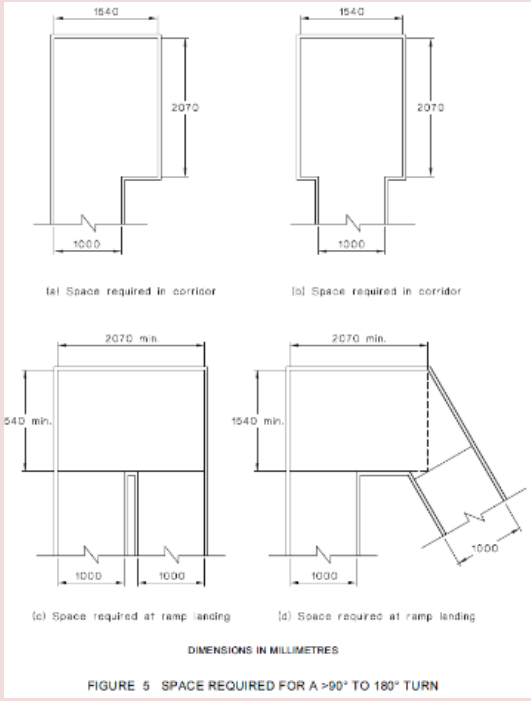
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		the tongues of which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within; or (iii) a door from a balcony, terrace or the like, being a door in a path of travel providing re-entry to the building, may comply with the locking provision of (ii) above.				
106.	**D2.22 –** Re-entry fire-isolated exits	(a) Doors of a fire-isolated *exit* must not be locked from the inside as follows: (i) In a Class 9a *health-care building*. (ii) In a Class 9c building. (iii) In a fire-isolated *exit* serving any storey above an *effective height* of 25 m, throughout the *exit*. (b) The requirements of (a) do not apply to a door fitted with a fail-safe device that *automatically* unlocks the door upon the activation of a fire alarm and— (i) on at least every fourth *storey*, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or (ii) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
107.	**D2.23 –** Signs on doors *Note also Brail Sign requirements under D3.6*	(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, a— (i) (A) required fire door providing direct access to a fire-isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building; and (B) required smoke door, 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, on either the wall adjacent to the doorway or both sides of the door; and (ii) (A) Fire door forming part of a horizontal exit; and (B) Smoke door that swings in both directions; and (C) Door leading from a fire isolated exit to a road or open space, on each side of the door. (b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state— (i) for an automatic door held open by an automatic hold-open device— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**" or (ii) for a self-closing door— "**FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN**"; or (iii) for a door discharging **from** a fire-isolated exit— "**FIRE SAFETY DOOR—DO NOT OBSTRUCT**." **See example below;** **Note**: In accordance with Clause 183 of the EP&A Reg 2000 a fire safety notice be displayed in the following areas of the building; A fire safety notice is to display **the following words**; 	**CRA**			

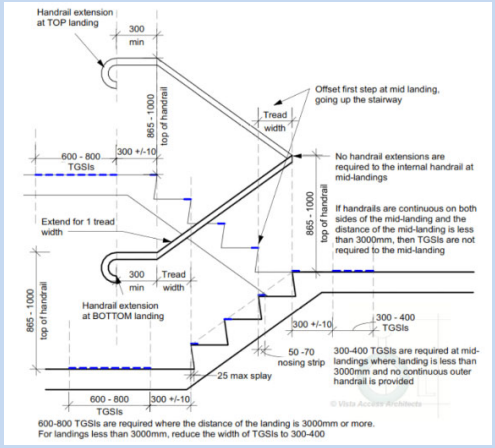
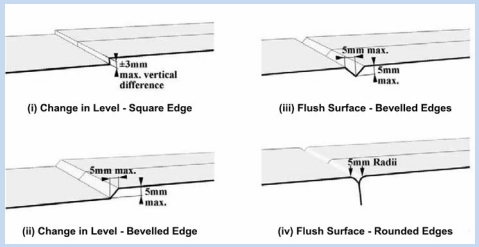
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Note: The above requirements also include the need to have **Braille** exit signage on the doors which states "exit" & indicate the level that the person seeking egress is on (i.e. "level").				
108.	**D2.24 –** Protection of openable windows	(a) A window opening must be provided with protection, if the floor below the window is 2m or more above the surface beneath in – (i) a bedroom in a Class 2 or 3 building or Class 4 part of a building; or (ii) a Class 9b early childhood centre. (b) Where the lowest level of the window opening is less than 1.7m above the floor, a window opening covered by (a) must comply with the following: (i) The openable portion of the window must be protected with – (A) a device capable of restricting the window opening; or (B) a screen with secure fittings. (ii) A device or screen required by (i) must – (A) not permit a 125mm sphere to pass through the window opening or screen; and (B) resist an outward horizontal action of 250N against the – (aa) window restrained by a device; or (bb) screen protecting the opening; and (C) have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. (c) A barrier with a height not less than 865mm above the floor is require to an openable window – (i) in addition to window protection, when a child resistant release mechanism is required by (b)(ii)(C); and (ii) where the floor below the window is a 4m or more above the surface beneath if the window is not covered by (a). (d) A barrier covered by (c) except for (e) must not – (i) permit a 125mm sphere to pass through it; and (ii) have any horizontal or near horizontal elements between 150mm and 760mm above the floor that facilitate climbing. (e) A barrier required by (c) to an openable window in – (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and (ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings containing those classes; (iii) must not permit a 300mm sphere to pass through it.	**CRA**	**A design practitioner—architectural** Details indicating compliance will need to be shown on the Construction Certificate Plans. Details are to be provided which indicates that a child resistant release mechanism, device or similar is provided to the window openings of the Class 2 parts.	a)	b)

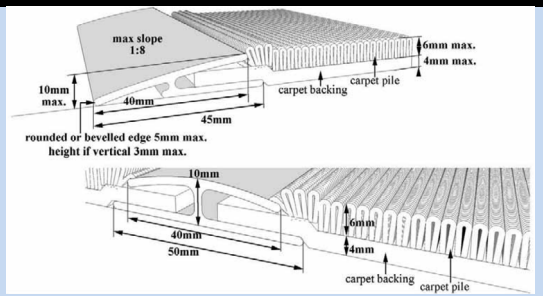
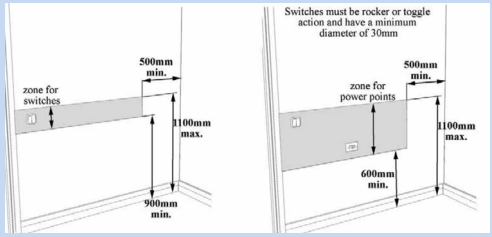
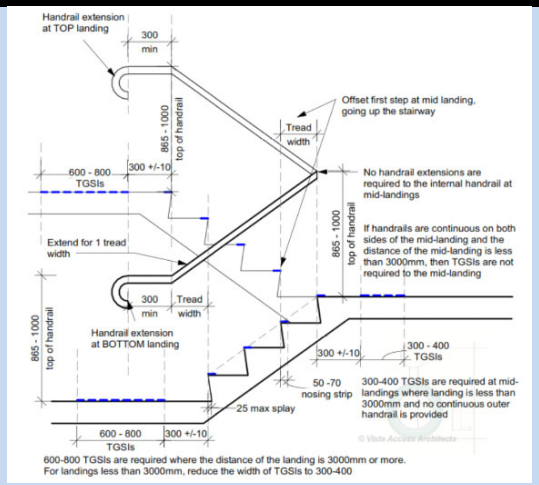
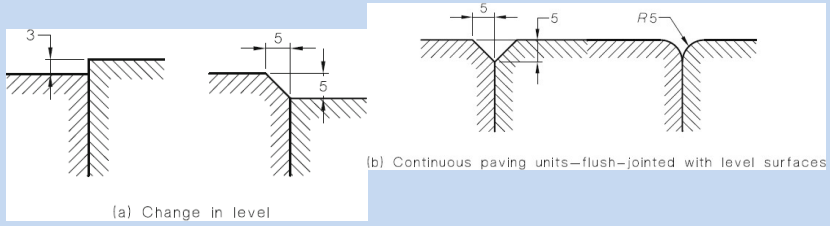
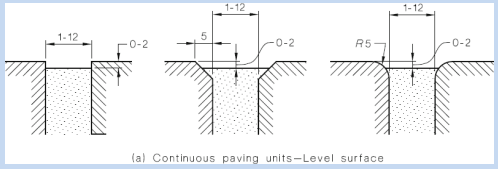
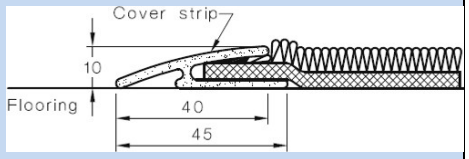
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Comment: Windows openings in bedrooms are to provided with protection. Details are to be provided with the application for CC.				
109.	**D2.25 –** Timber stairways: concession	Noted	**Note**			
	Part D3 – Access for People with Disabilities					
	Clause	Description	**Status**	Comments		
110.	**D3.0 –** Deemed-to-Satisfy Provisions	Informational –	**Note**	Disability (Access to Premises — Buildings) Standards 2010 is to be read in conjunction with the BCA. Compliance with the Access Codes appears to be achieved.		
111.	**D3.1 –** General Building Access Requirements	Buildings and parts of buildings must be accessible as required by Table D3.1, unless exempted by D3.4. **Table D3.1:** **Class 3** Common areas From a pedestrian entrance *required* to be *accessible* to at least 1 floor containing *sole-occupancy units* and to the entrance doorway of each *sole-occupancy unit* located on that level. To and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, *swimming pool*, common laundry, games room, TV room, individual shop, dining room, public viewing area, ticket purchasing service, lunch room, lounge room, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— (a) to the entrance doorway of each *sole-occupancy unit*; and (b) to and within rooms or spaces for use in common by the residents, located on the levels served by the lift or ramp. *Sole-occupancy units* If the building or group of buildings contain— / To and within— 1 to 10 *sole-occupancy units* / 1 *accessible sole-occupancy unit*. 11 to 40 *sole-occupancy units* / 2 *accessible sole-occupancy units*. 41 to 60 *sole-occupancy units* / 3 *accessible sole-occupancy units*. 61 to 80 *sole-occupancy units* / 4 *accessible sole-occupancy units*. 81 to 100 *sole-occupancy units* / 5 *accessible sole-occupancy units*. 101 to 200 *sole-occupancy units* / 5 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 25 units or part thereof in excess of 100. 201 to 500 *sole-occupancy units* / 9 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 30 units or part thereof in excess of 200. more than 500 *sole-occupancy units* / 19 *accessible sole-occupancy units* plus 1 additional *accessible sole-occupancy unit* for every 50 units or part thereof in excess of 500. Not more than 2 *required accessible sole-occupancy units* may be located adjacent to each other. Where more than 2 *accessible sole-occupancy units* are *required*, they must be representative of the range of rooms available.	**Need Design Detail**	**A design practitioner—architectural** Final design details of wheelchair access to this part are to beprovided at the final Construction Certificate stage. **A performance solution** is required if corridors are not adjusted to allow access to each SOU doorway, and corridors with dead ends, are to be adjusted. A Performance Solution can be presented to he certifier to assess at the CC stage. The building is accommodating 69 Class 3 SOU rooms, Table D3.1 require a minimum of four (4) accessible rooms. Complies. It is noted that Councils DCP may required additional assessable rooms as 8 are proposed. It is noted that each allocated accessible room should also have a dedicated car space. Only 4 accessible car spaces are allocated, yet		
	Architects/Designers Note: AS1428.1 is very detailed, please ensure that your design has been checked and recheckedas to full compliance. .I.e.:					

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	- *All doors are to be a minimum of a clear opening width of not less than 850 mm and the required circulation spacesaround doors to be accessible in accordance with AS 1428.1* - *Door hardware is to a 'D' grasping style, 20N force to open and close all doors.* - *Walkways, corridors also must be compliant for dead areas, wheelchair passing and splayed corners.* - *Doors and doorways need to have 30% luminance contrasting to distinguish door locations,* - *All Glazing other than windows needs 30% luminance contrasting, The contrasting line shall be not less than 75 mm wide and shall extend across the full width of the glazing panel. The lower edge of the contrasting line shall be located between 900 mm and 1000 mm above the plane of the finished floor level. Any contrasting line on theglazing shall provide a minimum of 30% luminance contrast when viewed against the floor surface or surfaces within 2 m of the glazing on the opposite side.* - *All stairs excluding the fire isolated stair are to incorporate the required double handrail, downturns, solid treads, colour contrast nosing strips and TGSI's.* *Floor surfaces and junction points are all smooth and comply with slip resistant levels.*				
	Door Circulation Spaces **All circulation spaces to SOU doors and doorways through commercial and common areas are to be confirmed for compliance with AS1428.1-2009.** **Numerous doorways to common facilities throughout the basement and residential floor levels and the doorways to thecommercial loading dock and sanitary facilities on the ground floor level appear not to meet the set dimensions under AS 1428.1 and/or are provided with less than 850mm clearance through the active door leaf.** **Please note: D3 requires access just to the SOU door, not within the unit unless the unit is Adaptable.** **Compliance can be achieved by slight redesign or alternatively in some cases via an access performance solution conducted prior to issue of the Construction Certificate.**					

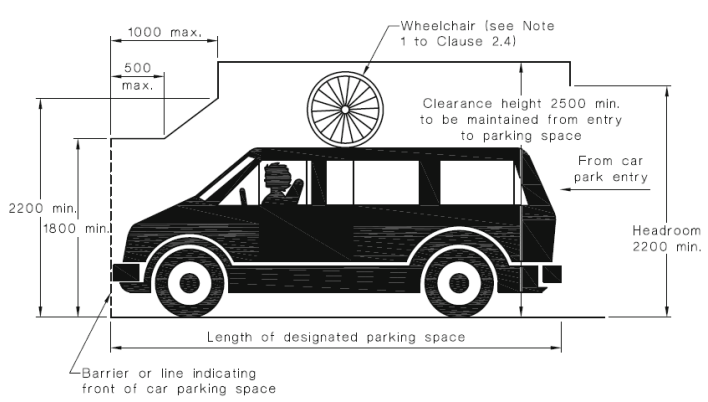
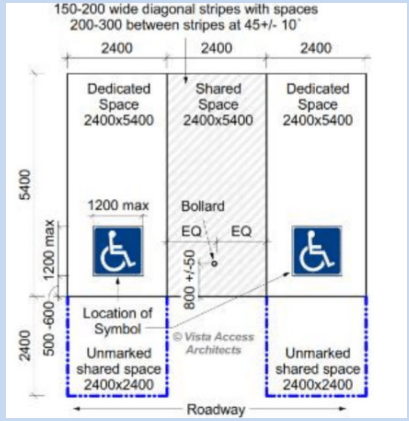
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		AS 1428.1—2009 58  (a) Hinge-side approach, door opens away from user (b) Latch-side approach, door opens away from user  (c) Either side approach, door opens away from user (d) Front approach, door opens away from user LEGEND: D = Clear opening of width of doorway L = Length W_H = Width—hinge side W_L = Width—latch side = Direction of approach = Circulation space DIMENSIONS IN MILLIMETRES FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS	59 AS 1428.1—2009  (e) Hinge-side approach, door opens towards user (f) Latch-side approach, door opens towards user  (g) Either side approach, door opens towards user (h) Front approach, door opens towards user LEGEND: D = Clear opening of width of doorway L = Length W_H = Width—hinge side W_L = Width—latch side = Direction of approach = Circulation space DIMENSIONS IN MILLIMETRES FIGURE 31 (in part) CIRCULATION SPACES AT DOORWAYS WITH SWINGING DOORS	 (a) Space required in corridor (b) Space required in corridor (c) Space required at ramp landing (d) Space required at ramp landing DIMENSIONS IN MILLIMETRES FIGURE 5 SPACE REQUIRED FOR A >90° TO 180° TURN		
112.	**D3.2 –** Access to Buildings	Compliance with Part D3 of the BCA is applicable to this building. All common areas are also to facilitate access in accordance with AS1428.1. From a pedestrian entrance required to be accessible to at least 1 floor containing sole-occupancy units and to the entrance	**Need Design Detail**	**A design practitioner—architectural** An accessway/s has been provided from Principal Pedestrian Entry (PPE) areas.		

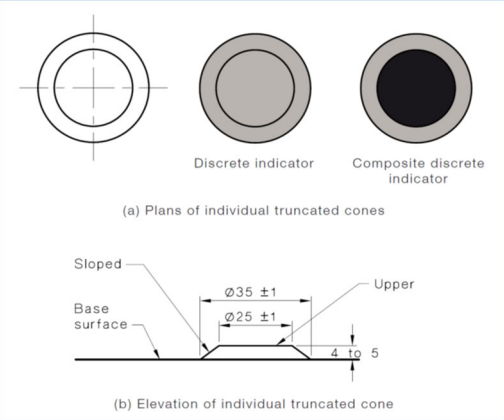
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		doorway ofeach sole-occupancy unit located on that level and to and within not less than 1 of each type of room or space for use in common by the residents, including a cooking facility, sauna, gymnasium, swimming pool, common laundry, games room, individual shop, eating area, or the like. Where a ramp complying with AS 1428.1 or a passenger lift is installed— **(a) to the entrance doorway of each sole-occupancy unit; and** **(b) to and within rooms or spaces for use in common by the residents,located on the levels served by the lift or ramp.** **Areas Required to be Accessible** Access to the commercial and residential garbage rooms on the ground and basement floor levels is required to be accessible and appear to require review. 0 Access to storage cages for adaptable units on the basement floor level is required and appears to require review. 0 Access to the residential bike storage areas on the basement floor level is required and appears to require review. 0 Access to the commercial loading dock on the ground floor level is required and appears to require review. 0 Access to the sanitary facilities and parent's room on the ground floor level is required and appears to require review.		The residential parts of the building are deemed to have only one entry, the fire isolated exits are for egress purposes only. All doors are to be a minimum of a clear opening width of not less than 850 mm and the required circulation spaces around doors to be accessible in accordance with AS 1428.1 including SOU doors to storey serviced via a lift. All stairs excluding fire isolated stair are to incorporate the required double handrail, downturns, colour contrast nosing strips and TGSI's. Nosing to stairs within the fire isolated passage are to have a colour contrasting strip. Final design details of wheelchair access to this part are to be provided at the final Construction Certificate stage.		

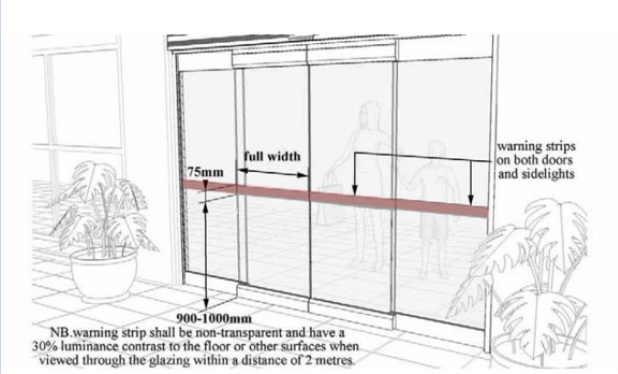
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
113.	**D3.3 –** Parts of Buildings to be accessible	 0 All accessways must have suitable turning / passing spaces. 0 Internal surfaces are to comply with Section 7 of AS1428.1-2009.  0 Internal tiles or internal vinyls are to comply with AS 4586. 0 All finished floor surfaces are to be trip free, the following details demonstrate the tolerance level for floor finishes: 0 Any proposed carpets within the building are to have a pile height or pile thickness not exceeding 11mm and the carpet backing thickness shall not exceed 4mm (total thickness shall not exceed 15mm).	**CRA**	**A design practitioner—architectural** Walkways and ramps must comply with clause 10 of AS 1428.1-2009. Non-fire-isolated stairways must comply with Clause 11 of AS 1428.1-2009. Fire-isolated stairways must comply with clause 11 (f) & (g) of AS 1428.1-2009. Accessways must have passing spaces (1800 mm x 2000 mm) complying with AS 1428.1-2009 at maximum 20 m intervals on those parts of an accessway where a direct line of sight is not available. Accessways must have turning spaces (1540 mm x 2070 mm) within 2m of the end of the accessway and at maximum 20 m intervals along the accessway. **Note**: Turning spaces must be provided clear of fixtures and fittings such as skirtings, general purpose outlets (GPOs), fire extinguishers etc. An intersection of accessways satisfies the spatial requirements for a passing and turning space. **Note**: The Access to Premises Standards to not provide the concessions provided in sub-cluses (g) and (h) in this clause, hence compliance with the Access to Premises Standards will require the floor covering in the accessible areas to strictly comply with Clause 7.4.1(a) of AS1428.1-2009. **Please advise as to which apartments are to be adaptable. Plans Not provided.** Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		

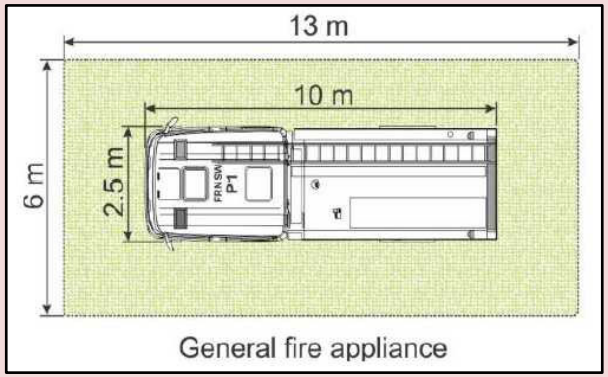
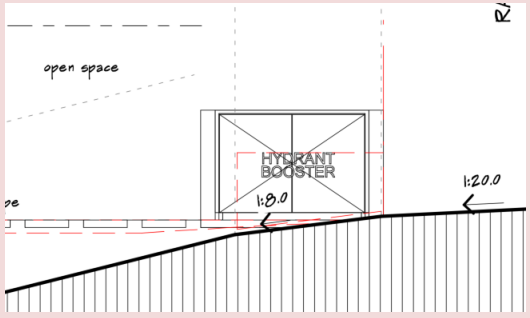
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 0 Circulation space at main entry doorways must comply with clause 13 of AS1428.1-2009. 0 All door handles and related hardware to common area doorways required to be accessible shall be of a type that allows the door to be unlocked and opened with one hand in accordance with AS1428.1-2009 0 All switches and controls, other than general purpose outlets, shall be located not less than 900 mm nor more than 1,100 mm above the FFL and not less than 500 mm from internal corners except where on the architrave on the latch side. 				
						

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Note: BCA Clause D3.3 changes the above to 11mm, 4mm and 15mm respectively					
114.	**D3.4 –** Exemptions	This part provides exemptions to the Deemed-to-Satisfy provisions for access by people with a disability. This part provides details on buildings or parts of buildings not required to be accessible under the BCA where providing access would be inappropriate because of the nature of the area or the tasks undertaken **Note:** Clause 13.5.3 of AS1428.1-2009 excludes early childhood centres from the standard location of opening and locking controls as regulated by the relevant statutory authority. The Children (Education and Care Services) Supplementary Provisions Regulation 2012 (NSW) restricts unsupervised access to kitchens, nappy changing facilities, entry & exit points, and all equipment (such as light and heating) that may be hazardous to children must be guarded to prevent access by children.	**Note**	The following areas are not required to be accessible: - An area where access would be inappropriate because ofthe particular purpose for which the area is used; - An area that would pose a health or safety risk for people witha disability; and - Any path of travel providing access only to an areaexempted by the above.		
115.	**D3.5 –** Accessible Carparking	Car-parking spaces have been provided to the building which are ancillary to the use. Adaptable Units require a Parking Space as per AS4299-1995, typically design dimensions and requirements of the current AS2890.6:2009 is applied. ***Note**: Accessible sign posting, and Bollards are not mandatory to Adaptable Units, as they are one's personal unit entitlements, also, where visitor Parking and its associated Accessible Space requirements do required sign posting if more than 5 public spaces are afforded.*	**CRA**	**A design practitioner—architectural** Designer to verify compliance prior to the issue of the Construction Certificate. Please note all services need to be documented as to not encroach of the required head heights.		

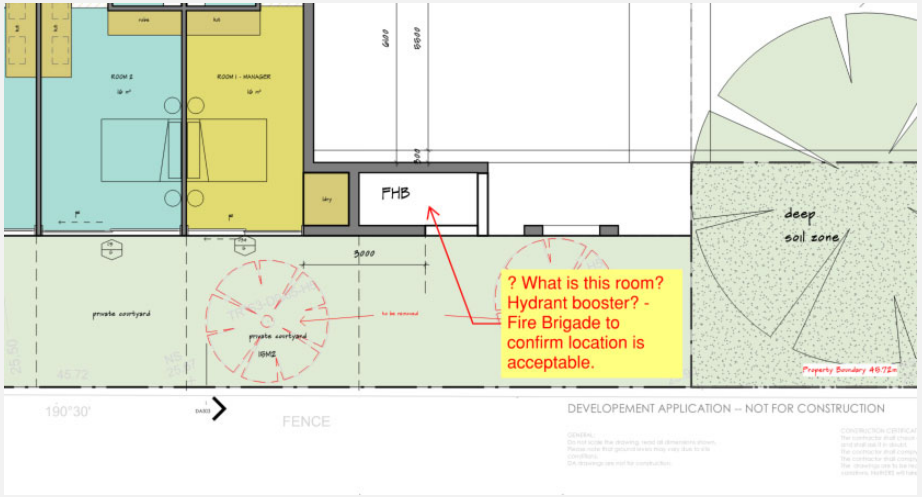
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		**3.7 CAR PARKING** **3.7.1 General** Private car parking spaces shall be large enough to enable a person with a wheelchair to get in and out of both the car and the parking space. A car parking space width of 3.8 m minimum is necessary to enable a driver to alight, open the passenger side door, and assist a person with a disability into a wheelchair, or for a side-loading ramp. A 3.8 m, minimum width is also required for a driver with a disability to unload a wheelchair and to alight. A roof to the car parking space is desirable. NOTE: If it is required to unload the wheelchair within the garage, an internal vertical clearance of 2.5 m is necessary to operate a car roof wheelchair unit.			
116.	**D3.6 –** 'Exits' must have Braille to identify occupant's location within a building.	In a building required to be accessible – Braille and tactile signage complying with Specification D3.6 andincorporating the international symbol of access or deadness, as appropriate, in accordance with AS1428.1 must identify each – – Sanitary facility, – Ambulant toilet facility, – Any required accessible carparking space, – Where needed, directional signage to any Carparking space orsanitary facility. – At Each '**Exit'** and which '**Level'** an occupant is at also needs tobe in Braille. Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage incorporating the international symbol of access in accordance with AS 1428.1 must beplaced at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.	**CRA**	**A design practitioner—architectural**  Example of Braille egress sign from ground floor exits		
117.	**D3.7 –** Hearing Augmentation	This part provides requirements for provision of hearing augmentation in accessible buildings, i.e. to be provided where an in-built amplification system (other than one used for emergencies), is installed: – In a room in a class 9b building; or – In an auditorium, conference room, meeting room, or room for judiciary purposes. or – At any ticket office, teller's booth, reception area or the like where the public is screened from the service provider.	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
118.	**D3.8 –** Tactile Indicators	For a building required to be accessible, tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment in accordance with this clause. I.e.: – A stairway, other than a fire-isolated stairway, – An escalator, – A passenger conveyor of moving walk, – A ramp other than a fire-isolated ramp, step ramp, kerb ramp orswimming pool ramp, – In the absence of a suitable barrier an overhead obstruction lessthan 2m above floor level, other than a doorway. Tactile ground surface indicators required by (a) must comply with sections 1 and 2 of AS/NZS 1428.4.1	**CRA**	**A design practitioner—architectural** Detail are to be shown on the final CC Plans. 		
119.	**D3.9 –** Wheelchair Seating Spaces in Class 9b Assembly Buildings	This part provides requirements for the provision of wheelchair seating spaces in Class 9b Assembly buildings and includes the number of spaces to be provided in theatres, cinemas and the like.	**N / A**	**A design practitioner—architectural**		
120.	**D3.10 –** Swimming Pools	This part provides the requirements for making swimming pools accessible to people with disabilities required by Table D3.1 to be accessible and must be constructed in accordance with Specification D3.10 Not less than 1 means of accessible water entry/exit in accordance with Specification D3.10 must be provided for each swimming pool required by Table D3.1 to be accessible. An accessible entry/exit must be by means of— 0 a fixed or movable ramp and an aquatic wheelchair; or 0 a zero-depth entry at a maximum gradient of 1:14 and an aquatic wheelchair; or 0 a platform swimming pool lift and an aquatic wheelchair; or 0 a sling-style swimming pool lift.	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Where a swimming pool has a perimeter of more than 70 m in length,at least one accessible water entry/exit must be provided by a meansother than a sling-style swimming pool lift. Latching devices on gates and doors forming part of a swimming poolsafety barrier need not comply with AS 1428.1.				
121.	**D3.11 –** Ramps	Ramps may be used as part of an accessway where there is a change of level and must comply with the requirements set out in AS1428.1	**Note**	**A design practitioner—architectural**		
122.	**D3.12 –** Glazing on an Accessway	On an accessway, where there is no chair rail, handrail or transom, allframeless or fully glazed doors, sidelights, and any glazing capable ofbeing mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.  *Decals / motifs to identify glazed doors and walls where no mullions*	**CRA**	**A design practitioner—architectural** All frameless glass panels or fully glazed doors on an accessway are to be clearly marking in accordance with AS 1428.1. In this instance, all frameless glass panel or fully glazed doors, including glazing capable of being mistaken for a doorway or opening, shall be marked with a full width solid non transparent contrast line not less than 75mm wide is required to be located between 900mm and 1000mm above floor level. Decals are required to warn people with vision impairment that they are approaching any new glazed panels with the decals to be provided as per AS 1428.1 – 2009, clause 6.6. This requires a solid-non-transparent line 75mm in width, located between 900mm and 1100mm above the floor and 30% contrasting when viewed against the floor surface/s within 2m of the glazing on the opposite side of the glass.		
	SECTION E – SERVICES AND EQUIPMENT **Part E1 – Fire Fighting Equipment**					
	Clause	Description	**Status**	Comments		
	E1.1 –	-	**-**	No Provisions		
	E1.2 –	-	**-**	No Provisions		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
123.	**E1.3 –** Fire Hydrants	A fire hydrant system must be provided to serve a building having a total floor area greater than 500m² and where a fire brigade is available to attend a building fire, installed in accordance with the provisions of AS2419.1-2005 **E1.3 Fire hydrants** (a) A fire hydrant system must be provided to serve a building— (i) having a total *floor area* greater than 500 m²; and (ii) where a *fire brigade station* is— (A) no more than 50 km from the building as measured along roads; and (B) equipped with equipment capable of utilising a fire hydrant. (b) The fire hydrant system— (i) must be installed in accordance with AS 2419.1, except— (A) a Class 8 *electricity network substation* need not comply with clause 4.2 of AS 2419.1 if— (aa) it cannot be connected to a town main supply; and (bb) one hour water storage is provided for fire-fighting; and (B) where a sprinkler system is installed throughout a building in accordance with AS 2118.1, AS 2118.4, AS 2118.6, FPAA101H or FPAA101D the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply; and (C) a fire hydrant booster assembly may be located between 3.5 m and 10 m of the building, and need not comply with clause 7.3(d)(iii) of AS 2419.1 where the assembly is protected by an adjacent fire-rated freestanding wall that— (aa) achieves an FRL of not less than 90/90/90; and (bb) extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and  	**Need Design Detail**	**A design practitioner—fire systems (fire hydrant and fire hose reel)** **A design practitioner—architectural** The building is >500m2 thus hydrant coverage is required. Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans. **The designer needs to confirm** if the Hydrant and Sprinkler system require a pump room and water pressures serving the system. Additional space should be reserved in the building for a pump room with direct assess to the fire isolated exits serving the building. The grade adjacent to the Hydrant Booster needs to be confirmed via your hydraulic fire services consultant.  		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



Note Only:

The following is noted about booster assemblies as from cl. 7.3 of AS2118.1-2005:

Fire brigade booster assemblies shall be located so that they meet the following requirements:

(a) They are readily accessible to firefighters.

(b) They are operable by fire brigade pumping appliances located within 8 m.

(c) If within, or affixed to, the external wall of the building, the booster shall be—

- **(i) within sight of the main entrance to the building; and**
- **(ii) separated from the building by a construction with a fire resistance rating of not less than FRL 90/90/90 for a distance of not less than 2 m each side of and 3 m above the upper hose connections in the booster assembly.**

(d) If remote from the building, the booster shall be—

- **(i) at the boundary of the site or within sight of the main entrance of the building;**
- **(ii) adjacent to the principal vehicular access to the site; and**
- **(iii) located not less than 10 m from the external wall of any building served**

(e) The booster enclosure shall only contain firefighting pipework and equipment.

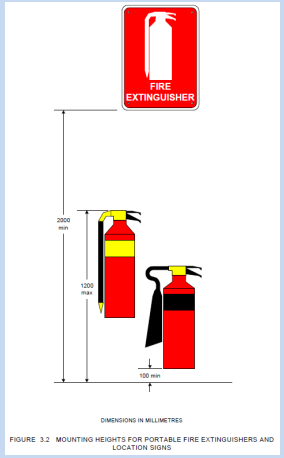
(f) In a position not less than 10 m from any high voltage main electrical distribution equipment such as transformers and distribution boards, and from liquefied petroleum gas and other combustible storage.

(g) In a position so that the booster assembly is not obstructed or obscured by obstacles, stored goods, vehicles, vegetation, etc.

Comments: The booster assembly has the following non-compliances:

- **The handstand location is not identified within 8m. Reference should be made to the Fire Safety Guideline, Access for Fire Brigade Vehicles and Firefighters, published by Fire and Rescue NSW, reference No. FRN14/3255, document ID D15/6224, Version 5, dated 4 October 2019 for details, diagram attached below for reference of size and orientation of a hardstand.**

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	(https://www.fire.nsw.gov.au/ gallery/files/pdf/guidelines/ vehicle_access.pdf) **The following is noted about hardstand areas:** ○ **To be a flat, level all weather surface, clear of obstructions.** ○ **To provide easy manoeuvring space for the fire appliance.** ○ **Any section of carriageway can be designated only when the passing traffic flow will no be blocked by the fire positioned appliance.**					
124.	**E1.4 –** Hose Reels	Fire hose reels are to be provided to serve a fire compartment greater than 500m2 and to serve the building where internal fire hydrants are to be provided. Should the building be provided with internal fire hydrants each storey is to be served via hose reel system with *exception to the Class 2 parts of the building.* E1.4 does not apply to a Class 2, 3 or 5 building or Class 4 part of a building. A fire hose reel system complying with BCA clause E1.4 and AS 2441-2005 must be provided to the building (excluding Classes 2 parts). All points on a floor shall be within reach of a 4 m hose stream issuing from a nozzle at the end of the hose laid on floor. The hose length shall not exceed 36 m. Fire hose reels must be located so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except— (i) doorways in walls referred to in C2.5(a)(v) in a Class 9a building and C2.5(b)(iv) in a Class 9c building, separating ancillary use areas of high potential fire hazard; and (ii) doorways in walls referred to in C2.12 or C2.13 separating equipment or electrical supply systems; and (iii) doorway openings to shafts referred to in C3.13.	**CRA**	**A design practitioner—architectural** **A design practitioner—fire systems (fire hydrant and fire hose reel)** **Fire Hose Reels are not identified on the plans, final CC plans are to reflect locations.** **Hose reels are to be located in the Car Park**		
125.	**E1.5 –** Sprinklers	The building must be provided with a sprinkler system complying with Table E1.5 and Specification E1.5 installed throughout. The sprinkler valve room location should be indicated on the plans. The room must have direct egress to road or open space.	**CRA**	**A design practitioner—architectural** **A design practitioner—hydraulic**		

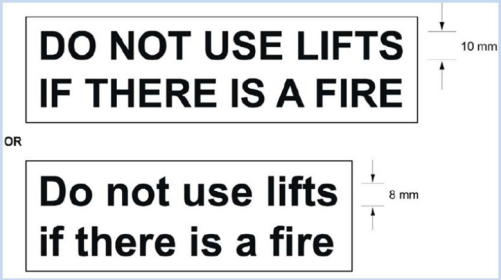
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				The building is to be afforded with a Sprinkler System. There are 4 choices, your hydraulic consultant would advise the ones suitable for your specific design as some have limited applications. • **AS2118.1; or (Recommended)** • AS2118.4, as applicable; or • FPAA101D, as or • FPAA101H.		
126.	**E1.6 –** Portable fire extinguishers	Portable fire extinguishers must be provided as listed in Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444	**CRA**	**A design practitioner—architectural** Portable fire extinguishers are required to be provided in accordance with Table E1.6 of the BCA and AS 2444. Along with areas advised by a Fire Safety Contractor, in the Class 2 part, install an ABE type fire extinguisher and a minimum size of 2.5 kg and or either.; a) 10m of the SOU entry in a common area; or, b) Within each unit in an accessible location for the occupants.		
		 FIGURE 3.2 MOUNTING HEIGHTS FOR PORTABLE FIRE EXTINGUISHERS AND LOCATION SIGNS		**3.6 CABINET OR ENCLOSURE** Where a cabinet or enclosure is used, the open door shall not encroach on the required width of path of travel to an exit or doorway. In addition to the location sign referred to in Clause 3.3, the cabinet or enclosure shall be marked with the words 'FIRE EXTINGUISHER' in letters at least 32 mm high in a colour contrasting with the background unless the door has not less than 50% of its surface area fabricated from transparent material that permits visual identification of the cabinet's contents. Where extinguishers are likely to incur unauthorized interference, the cabinet may be locked. Locked cabinets shall be provided with a frangible panel to provide access to the latching device or extinguisher. The panel shall be not less than 150 × 150 mm, and the panel material shall comply with the requirements for frangibility set out in AS 1603.5.		
127.	**E1.7 –**	-	**-**	No Provisions		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
128.	**E1.8 –** Fire control centres	A fire control centre facility in accordance with Specification E1.8 must be provided for— (a)a building with an *effective height* of more than 25 m; and (b)a Class 6, 7, 8 or 9 building with a total *floor area* of more than 18 000 m2.	**N / A**	**A design practitioner—architectural**		
129.	**Spec E1.8 –** Fire control centres	**A fire control centre must—** (a) provide an area from which fire-fighting operations or other emergency procedures can be directed or controlled; and (b) contain controls, panels, telephones, furniture, equipment and the like associated with the *required* fire services in the building; and (c) not be used for any purpose other than the control of— (i) fire-fighting activities; and (ii) other measures concerning the occupant safety or security. **3. Location of fire control centre** A fire control centre must be so located in a building that egress from any part of its floor, to a road or *open space*, does not involve changes in level which in aggregate exceed 300 mm. **4. Equipment not permitted within a fire control centre** An internal combustion engine, pumps, sprinkler control valves, pipes and pipe fittings must not be located in a fire control centre, but may be located in rooms accessed through the fire control centre. **5. Ambient sound level for a fire control centre** (a) The ambient sound level within the fire control centre measured when all fire safety equipment is operating in the manner in which it operates in an emergency must not exceed 65 dB(A). (b) The measurement must be taken for a sufficient time to characterize the effects of all sound sources. Where there is not a great variation in noise level, a measurement time of 60 seconds may be used. **6. Construction of a fire control room** A fire control centre in a building more than 50 m in *effective height* must be in a separate room where— (a) the enclosing construction is of concrete, masonry or the like, sufficiently impact resistant to withstand the impact of any likely falling debris, and with an FRL of not less than 120/120/120; and (b) any material used as a finish, surface, lining or the like within the room complies with the requirements of Specification C1.10; and (c) services, pipes, ducts and the like that are not directly *required* for the proper functioning of the fire control room do not pass through it; and (d) openings in the walls, floors or ceiling which separate the room from the interior of the building are confined to door ways, ventilation and other openings for services necessary for the proper functioning of the facility. **7. Protection of openings in a fire control room** Openings permitted by Clause 6 must be protected as follows: (a) Openings for *windows*, doorways, ventilation, service pipes, conduits and the like, in an *external wall* of the building that faces a road or *open space*, must be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3. (b) Openings in the floors, ceilings and *internal walls* enclosing a fire control room must, except for doorways, be protected in accordance with the *Deemed-to-Satisfy Provisions* of Part C3. (c) A door opening in the *internal walls* enclosing a fire-control room, must be fitted with a *self-closing* –/120/30smoke sealed fire door. (d) Openings associated with natural or mechanical ventilation must— (i) not be made in any ceiling or floor immediately above or below the fire control room; and (ii) be protected by a –/120/– fire damper if the opening is for a duct through a wall *required* to have an FRL, other than an *external wall*. **8. Doors to a fire control room** (a) *Required* doors to a fire control room must open into the room, be lockable and located so that persons using escape routes from the building will not obstruct or hinder access to the room. (b) The fire control room must be accessible via two paths of travel—			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(i) one from the front entrance of the building; and (ii) one direct from a public place or *fire-isolated passageway* which leads to a public place and has a door with an FRL of not less than –/120/30. **9. Size and contents of a fire control room** (a) A fire control room must contain— (i) a Fire Indicator Panel and necessary control switches and visual status indication for all *required* fire pumps, smoke control fans and other *required* fire safety equipment installed in the building; and (ii) a telephone directly connected to an external telephone exchange; and (iii) a blackboard or whiteboard not less than 1200 mm wide x 1000 mm high; and (iv) a pin-up board not less than 1200 mm wide x 1000 mm high; and (v) a raked plan layout table of a size suitable for laying out the plans provided under (vi); and (vi) colour-coded, durable, tactical fire plans. (b) In addition, a fire control room may contain— (i) master emergency control panels, lift annunciator panels, remote switching controls for gas or electrical supplies and emergency generator backup; and (ii) building security, surveillance and management systems if they are completely segregated from all other systems. (c) A fire control room must— (i) have a *floor area* of not less than 10 m2 and the length of any internal side must be not less than 2.5 m; and (ii) if only the minimum prescribed equipment is installed — have a net *floor area* of not less than 8 m2 with a clear space of not less than 1.5 m2 in front of the Fire Indicator Panel; and (iii) if additional equipment is installed — have an additional area of not less than 2 m2 net *floor area* for each additional facility and a clear space of not less than 1.5 m2 in front of each additional control or indicator panel, and the area *required* for any path of travel through the room to other areas must be provided in addition to the requirements (ii) and (iii). **10. Ventilation and power supply for a fire control room** A fire control room must be ventilated by— (a) natural ventilation from a *window* or doorway in an *external wall* of the building which opens directly into the fire control room from a road or *open space*; or (b) a pressurisation system that only serves the fire control room, and— (i) is installed in accordance with AS 1668.1 as though the room is a *fire-isolated stairway*; and (ii) is activated *automatically* by operation of the fire alarm, or sprinkler system complying with SpecificationE1.5, installed in the building and manually by an over-riding control in the room; and (iii) provides a flow of fresh air through the room of not less than 30 air changes per hour when the system is operating and any door to the room is open; and (iv) has fans, motors and ductwork that form part of the system but not contained within the fire control room protected by enclosing construction with an FRL of not less than 120/120/120; and (v) has any electrical supply to the fire control room or equipment necessary for its operation connected to the supply side of the main disconnection switch for the building, and no openable devices other than necessary doorways, pressure controlled relief louvres and *windows* that are openable by a key, must be constructed in the fire control room. **11. Sign for a fire control room** The external face of the door to the fire control room must have a sign with the words— FIRE CONTROL ROOM in letters of not less than 50 mm high and of a colour which contrasts with that of the background. **12. Lighting for a fire control room**			

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		Emergency lighting in accordance with the *Deemed-to-Satisfy Provisions* of Part E4 must be provided in a fire control room, except that an illumination level of not less than 400 lux must be maintained at the surface of the plan table.				
130.	**E1.9 –** Fire precautions during construction	In buildings under construction at least one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to a required exit and if the building has reached an effective height of 12m the required hydrant and hose reel systems must be installed, as set out in (b)(ii) and be operational and any required booster connections must be installed	**CRA**	**A design practitioner—architectural** During construction, not less than one fire extinguisher to suit Class A, B and C fires is required for each storey, and is required to be located adjacent to each exit.		
131.	**E1.10 –** Provisions for special hazards	Suitable provision must be made if special problems of firefighting could arise because of. (a) The nature or quantity of materials stored, displayed or used in a building on the allotment; or (b) The location of the building in relation to a water supply for fire fighting purposed.	**Note**	**A design practitioner—architectural**		
	Part E2 – Smoke Hazard Management					
132.	**E2.1 –** Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to any open deck carpark or open spectator stand. The smoke exhaust and smoke-and-heat vent provisions of this part do not apply to any area not used by occupants for an extended period of time such as a storeroom with a floor area of less than 30m², sanitary compartment, plant room or the like.	**Note**	Part is not applicable to • open deck car parks • open spectator stands		
133.	**E2.2 –** General requirements	**Automatic air pressurisation system** The fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving is required to be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS 1668.1 as the fire-isolated stairway serve storeys above an effective height of 25 m; **Note:** An automatic air pressurisation system for fire-isolated exits applies to the entire exit. The discharge into the lobby for two of the egress stairs does not satisfy this requirement. **Smoke Detection** The building is required to be provided with an automatic smoke detection and alarm system complying with BCA Spec E2.2a and AS1670.1-2015. **Building Occupant Warning System** A building occupant warning system provided as part of a smoke hazard management system must comply with clause 3.22 of AS 1670.1 to sound through all occupied areas. **System Monitoring**	**CRA**	**A design practitioner—architectural** **A design practitioner—fire systems (detection and alarm systems)** **Note**: Common areas utilise a concession where a AS2118.1 Sprinkler System is installed throughout the building connected to the buildings BOWs, smoke detection is not needed. **See Draft Fire Safety Schedule under Part 2 of this report.** **The following smoke hazard management services are required for the subject development:**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		A fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3 is required.		o An Automatic Smoke detection and alarm system complying with Clause 4 (AS1670.1-2018) for the common areas of the Class 2, and o Clause 3 (AS3786-2014) within the residential SOU's Note: Where multiple detectors are provided within an SOU, those detectors must be interconnected. o The carpark shall be provided with a sprinkler system in accordance with AS2118.1-2017. o Building Occupant Warning System (BOWS) throughout, Automatic Shutdown / Manual Over-ride mechanical exhaust system in basement carpark. The location of all Smoke Alarms are to be indicated on the CC Plans. Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		
134.	**E2.3 –** Provisions for special hazards	Additional smoke hazard management measures may be necessary due to the nature of a building's special characteristic, its use, the nature of materials being stored in them and special mix of classifications.	**Note**			
	Part E3 – Lift Installations					
135.	**E3.1 –**	**7 Regulated designs relating to integration of vertical transportation products in buildings** (1) For the purposes of section 5(2) of the Act, a regulated design for building work relating to the integration of a vertical transportation product in a building to which the building work relates must include the registration number of the product if the product is used, or is proposed to be used, in a workplace. **Note—**	**Note**	**A design practitioner—vertical transportation.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		The *Work Health and Safety Act 2011*, section 42, provides that the design of a vertical transportation product that is used in a workplace must be authorised in accordance with the *Work Health and Safety Regulation 2017*. (2) In this clause— ***registration number*** means the registration number for the vertical transportation product referred to in the *Work Health and Safety Regulation 2017*, clause 273. ***workplace*** has the same meaning as in the *Work Health and Safety Act 2011*				
136.	**E3.2 –** Stretcher facility in lifts	(a) A stretcher facility in accordance with (b) must be provided— (i) in at least one emergency lift required by E3.4; or (ii) where an emergency lift is not required, if passenger lifts are installed to serve any storey above an effective height of 12 m, in at least one of those lifts to serve each floor served by the lifts. (b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	**CRA**	**A design practitioner—vertical transportation.** A lift consultant will need to ensure compliance in this regard, and that the shaft provided is suitable. All lifts are to be able to accomidate a **stretcher facility** **The building has an effective height of 8m, Stretcher lifts are optional yet recommended.**		
137.	**E3.3 –** Warning against use of lifts in fire	Warning signs required to be provided must be displayed where they can be readily seen and must comply with the details and dimensions of: 	**CRA**	**A design practitioner—vertical transportation.** Warning signage to be provided as follows– "Do not use lifts if there is a fire".		
138.	**E3.4 –** Emergency lifts	(a) At least one emergency lift complying with (d) must be installed in— (i) a building which has an *effective height* of more than 25 m; and (ii) a Class 9a building in which *patient care areas* are located at a level that does not have direct egress to a road or *open space*. (b) An emergency lift may be combined with a passenger lift and must serve those *storeys* served by the passenger lift so that	**N / A**	**A design practitioner—vertical transportation.**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		all *storeys* of the building served by passenger lifts are served by at least one emergency lift. (c) Where two or more passenger lifts are installed and serve the same *storeys*, excluding a lift that is within an *atrium* and not contained wholly within a *shaft*— (i) at least two emergency lifts must be provided to serve those *storeys*; and (ii) if located within different *shafts*, at least one emergency lift must be provided in each *shaft*. (d) An emergency lift must— (i) be contained within a *fire-resisting shaft* in accordance with C2.10; and (ii) in a Class 9a building serving a *patient care area*— (A) have minimum dimensions, measured clear of all obstructions, including handrails, etc complying with Table E3.4; and (B) be connected to a standby power supply system where installed; and (iii) if the building has an *effective height* of more than 75 m, have a rating of at least— (A) 600 kg if not provided with a stretcher facility; or (B) 900 kg if provided with a stretcher facility.				
139.	**E3.5 –** Landings	E3.5(a) The provisions of clause 12.2 – "Access" of AS 1735.2 do not apply. E3.5(b) The provisions of Clause A3.2 – "Access to landings" of Appendix A of AS 1735.1 do not apply. E3.5(c) Access and egress to and from lift well landings must comply with the Deemed-to-Satisfy Provisions of Part D.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing floor services and materials are to be provided at the Construction Certificate stage or noted on the plans.		
140.	**E3.6 –** Facilities for people with disabilities	In an accessible building, every passenger lift must be one of the types identified in Table E3.6a, have accessible features in accordance with Table E3.6b and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing final design items are to be provided at the Construction Certificate stage or noted on the plans.		
141.	**E3.7 –** Fire Services Control	In passenger lifts designed in accordance with AS 1735 Parts 1 and 2, all lift cars serving any storey above an effective height of 12m must be provided with fire service controls. Where lifts serve any storey above an effective height of 12m, the following must be provided: (a) A fire service recall control switch complying with E3.9 for— (i) a group of lifts; or (ii) a single lift not in a group that serves the storey.	**CRA**	**A design practitioner—vertical transportation.** Final details to be provided detailing final design items are to be provided at the Construction Certificate stage or noted on the plans.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(b) A lift car fire service drive control switch complying with E3.10 for every lift.		**The building has an effective height of 8m, Stretcher lifts are optional yet recommended.**		
142.	**E3.8 –** Aged care buildings	Where residents in an aged care building are on levels which do not have direct access to a road or open space a building must be provided with either at least one lift to accommodate a stretcher in accordance with E3.2(b) or a ramp in accordance with AS1428.1 and the ramp must discharge to a level providing direct access to a road or open space	**N / A**	**A design practitioner—vertical transportation.**		
143.	**E3.9 –** Fire Recall Control Switch	This Clause looks at the specific requirements relating to Fire service control switches and the need for operation.	**CRA**	**A design practitioner—vertical transportation.** See E3.7 in the report.		
144.	**E3.10 –** Lift Car Drive Control Switch	This clause identifies the requirements for the position and location of a service drive control switch.	**CRA**	**A design practitioner—vertical transportation.** See E3.7 in the report.		
	Part E4 – Emergency Lighting, Exit Signs and Warning Systems					
145.	**E4.1 –**	-	**-**	No provisions		
146.	**E4.2 –** Emergency lighting requirements	An emergency lighting system must be installed— (a) in every *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*; and (b) in every *storey* of a Class 5, 6, 7, 8 or 9 building where the *storey* has a *floor area* more than 300m^2— (i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an *exit*; and (ii) in any room having a *floor area* more than 100m^2 that does not open to a corridor or space that has emergency lighting or to a road or *open space*; and (iii) in any room having a *floor area* more than 300m^2;	**CRA**	Emergency lighting is to be provided throughout the building in accordance with AS2293.1-2005 Electrical engineers review. Where existing lighting requirements are to be altered, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
147.	**E4.3 –** Measurement of distance	Distance, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.	**Note**			
148.	**E4.4 –** Design and operation of emergency lighting	Every required emergency lighting system must comply with AS2293.1	**CRA**	Emergency lighting shall be provided throughout the building in accordance with the requirements of Clause E4.4 of the BCA and AS 2293.1.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				Details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
149.	**E4.5 –** Exit signs	An exit sign must be clearly visible to persons approaching the exit and must be installed on, above or adjacent to each door providing egress form a building. Sub-clauses (a) to (d) set out the situations where exit signs are required to be installed	**CRA**	Exit signs are to be provided in accordance with Clause E4.5 of the BCA. Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to; 1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit. 2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space. 3. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting. Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
150.	**E4.6 –** Direction signs	If an exit is not readily apparent to persons occupying or visiting the building then exit signs must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.	**CRA**	Where an exit is not readily apparent then exit signs with directional arrows must be installed in appropriate positions in corridors, hallways, lobbies and the like indicating the direction to a required exit in accordance with Clause E4.6 of the BCA. Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate. It is noted that E4.7 can apply, exit signs are optional.		
151.	**E4.7 –** Class 2, 3 and 4 buildings: Exemptions	This clause grants an exemption for Class 2, 3 and Class 4 parts of buildings from the need to comply with E4.5 if the provisions of sub-clauses (a) & (b) are complied with.	**Note**			
152.	**E4.8 –**	Every required exit sign must comply with AS/NZS 2293.1 and be clearly visible at all times when the building is occupied by any person having the legal right of entry into the building.	**CRA**	Exit signs are to operate in accordance with AS 2293.1 and be clearly visible at all times while the building is occupied.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Design and operation of exit signs			Where and if requirements are altered under this proposal, details and a design certificate will be required by a suitably qualified electrical engineer prior to the issue of a Construction Certificate.		
153.	**Spec E4.8 –** Photoluminescent Exit Signs	Every *required exit* sign must comply with— (a) AS/NZS 2293.1; or (b) for a photoluminescent *exit* sign, Specification E4.8; and (c) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.	**N / A**			
154.	**E4.9 –** EWIS systems	This clause sets out the types of buildings requiring the installation of a sound system and intercom system to assist with the emergency evacuation of occupied. This clause specifies that sound and intercom systems must comply with AS 1670.4 An emergency warning and intercom system complying where applicable with AS 1670.4 must be installed in a building with an effective height of more than 25m. ***See*** additional for Class 3 building, Class 9a, Class 9b buildings.	**N / A**	**A design practitioner—fire systems (detection and alarm systems),**		
	SECTION F – HEALTH AND AMENITY **Part F1 – Damp and Weatherproofing**					
	Clause	Description	**Status**	Comments		
155.	**FP1.4 –** Weatherproofing (Performance Requirement)	**F1.0 Deemed-to-Satisfy Provisions** Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls. **FP1.4 Weatherproofing** A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause— (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements. **Limitation:** FP1.4 does not apply to—	**PS**	**A design practitioner—architectural** **A design practitioner— facade** Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or (b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or (c) an open spectator stand or open-deck carpark.				
156.	**F1.1 –** Stormwater drainage	Stormwater drainage design shall be in accordance with AS/NZS 3500.3.	**CRA**	**A design practitioner— drainage** Details and a design certificate will be required by a suitably qualified hydraulic engineer prior to the issue of a Construction Certificate.		
157.	**F1.2 –**	-	**-**	No provisions		
158.	**F1.3 –**	-	**-**	No provisions		
159.	**F1.4 –** External above ground membranes	Waterproofing membranes for external above ground use to comply with AS4654 Parts 1 and 2-2012.	**CRA**	**A design practitioner—architectural** Details and a design certificate will be required by a suitably qualified hydraulic engineer prior to the issue of a Construction Certificate.		

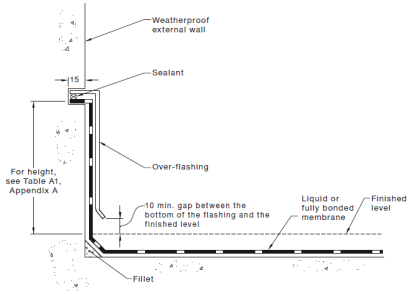


FIGURE 2.2 TYPICAL VERTICAL UPWARD TERMINATION—DETAIL OF OVER-FLASHING FOR LIQUID OR FULLY BONDED SHEET MEMBRANES

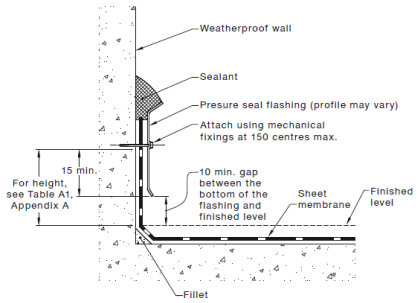
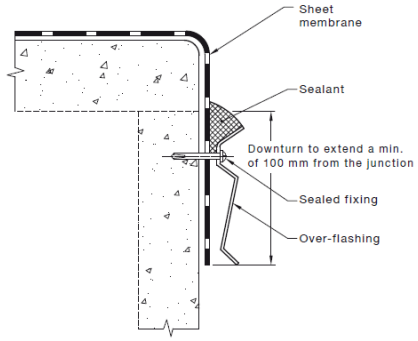
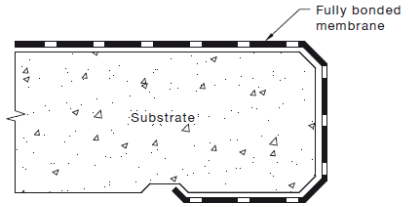


FIGURE 2.3 TYPICAL VERTICAL UPWARD TERMINATION—DETAIL OF PRESSURE SEAL FOR SHEET MEMBRANE



NOTE: Gap between pressure seal flashing and membrane has been exaggerated for clarity.

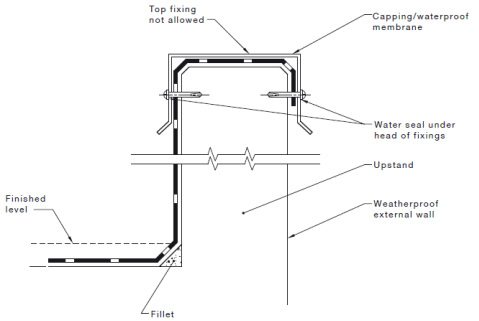
(a) Roof edge detail for a sheet membrane system with pressure seal



(b) Optional balcony edge detail for a fully bonded membrane

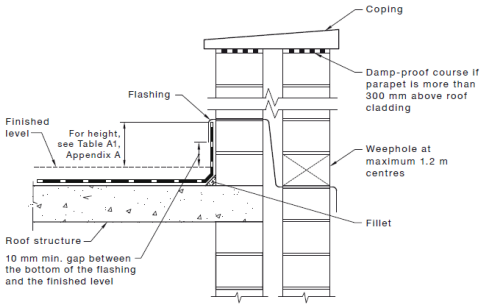
FIGURE 2.4 TYPICAL VERTICAL DOWNWARD TERMINATION

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



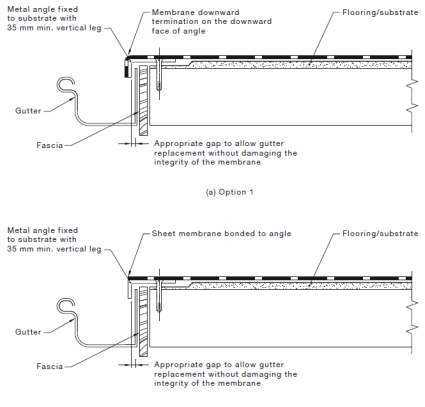
NOTE: For falls, see Clause 2.5.2.

FIGURE 2.5 TYPICAL EDGE PROTECTION OF SHEET MEMBRANE OVER A PARAPET



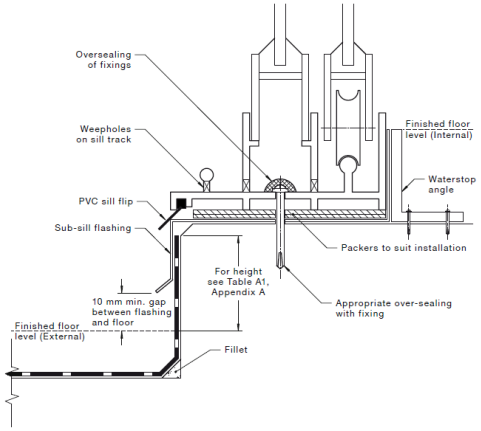
NOTE: For falls, see Clause 2.5.2.

FIGURE 2.6 TYPICAL MEMBRANE TERMINATION AT A CAVITY PARAPET



NOTES:
1 Overflow facilities should divert water away from the building.
2 For falls, see Clause 2.5.2.

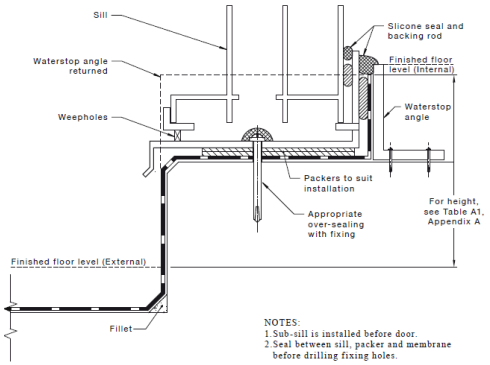
FIGURE 2.7 TYPICAL GUTTER TERMINATIONS—DETAIL



NOTE: For falls, see Clause 2.5.2.

(a) Option 1 Opening higher than sill upward termination

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS

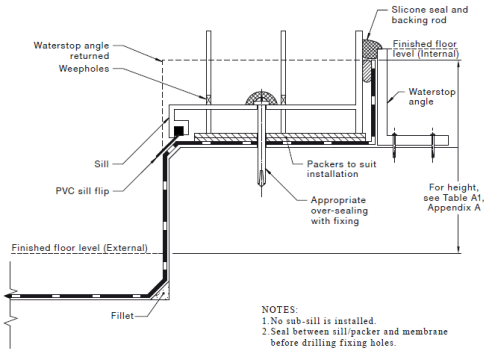


NOTES:
1. Sub-sill is installed before door.
2. Seal between sill, packer and membrane before drilling fixing holes.

NOTE: For falls, see Clause 2.5.2.

(b) Option 2 Sill with sub-sill

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS



NOTES:
1. No sub-sill is installed.
2. Seal between sill/packer and membrane before drilling fixing holes.

NOTE: For falls, see Clause 2.5.2.

(c) Option 3 Sill—No sub-sill

FIGURE 2.8 (in part) TYPICAL DETAILS OF MEMBRANE TERMINATION AT EXTERNAL OPENING DOORS

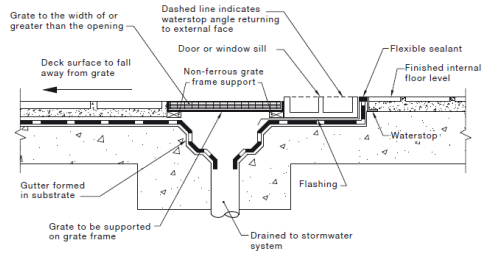
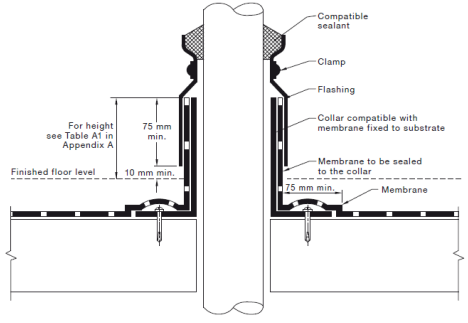


FIGURE 2.9 TYPICAL DETAILS OF MEMBRANE TERMINATION AT WALL OPENINGS WHERE THE INTERNAL AND EXTERNAL FINISHED FLOOR LEVELS DO NOT ALLOW FOR AN UPTURN

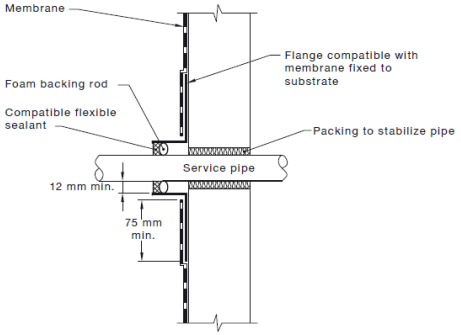


DIMENSIONS IN MILLIMETRES

NOTES:
1 All pipes, ducts and vents should be located within a collar mechanically fixed to the substrate as an extension to the penetration. Alternatively, a collar may be cast into the substrate to form the penetration. A separate collar should be used for each penetration.
2 The membrane should be turned up around the penetration and over-flashed with a minimum overlap of 75 mm.
3 Sufficient clearance between pipe and sleeve/substrate to be provided.

FIGURE 2.10 TYPICAL DETAILS OF VERTICAL PENETRATION USING A COLLAR

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S



NOTE: Prime service pipe to allow for proper adhesion between sealant and pipe interface.

FIGURE 2.11 TYPICAL PENETRATION

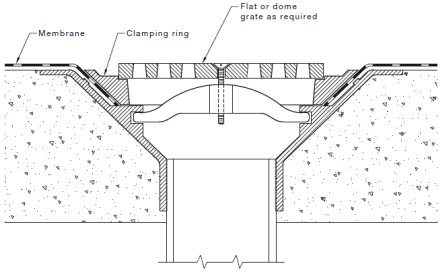
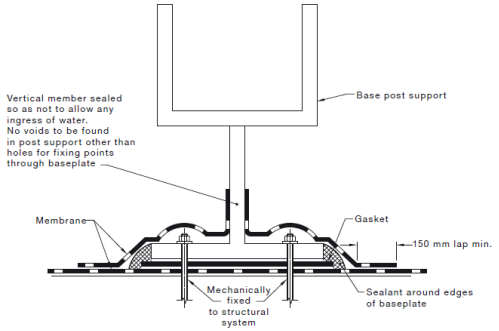


FIGURE 2.15 DRAINAGE DETAIL FOR AN EXPOSED MEMBRANE



(b) Post membrane installation

NOTES:

1 The membrane should be turned up around the post or support prior to membrane installation.

2 All post bases should be placed into position prior to placement of membrane. If posts are placed onto a completed membrane, any damaged membrane should be replaced or repaired to ensure its original integrity.

3 For posts penetrating through the deck, see Clause 2.8.4.

4 All penetrations into concrete should be treated with epoxy. All fixings into concrete should be of a chemically injected type in order to maintain the integrity of the waterproofing and substrate.

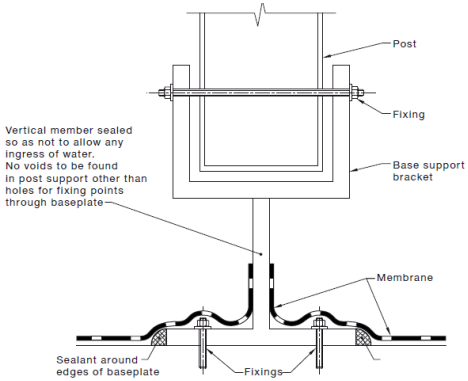
5 Consideration should be given to post designs that are fixed below the level of the deck without penetrating through the surface of the deck.

6 Waterproofing of the system will be compromised by the use of timber or metal posts that are not suitable for external use.

7 For base support to heavy structures or plant, extra consideration should be given to waterproofing and sealants to cater for the vibration movement around the base of the installations, such as—

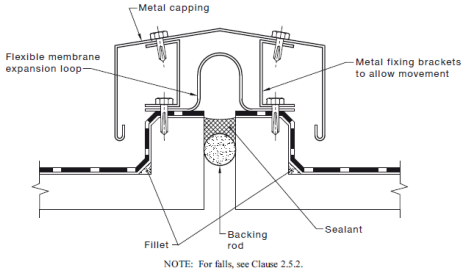
(a) heavy plant and equipment and plinths;
(b) power poles;
(c) flagpoles;
(d) communication towers;
(e) roof access railings; and
(f) building maintenance units.

FIGURE 2.12 (in part) TYPICAL DETAILS OF METAL POST SUPPORT



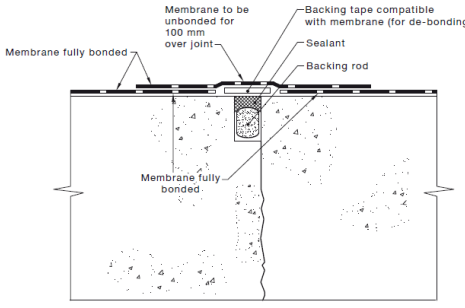
(a) Prior to membrane installation

FIGURE 2.12 (in part) TYPICAL DETAILS OF METAL POST SUPPORT



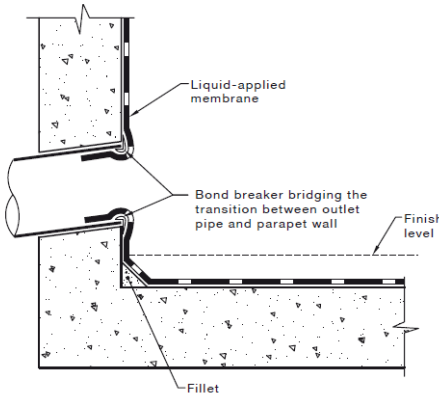
NOTE: For falls, see Clause 2.5.2.

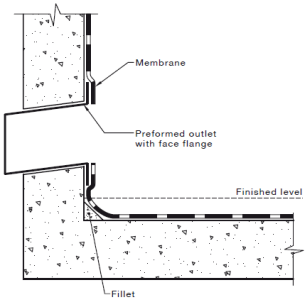
FIGURE 2.13 TYPICAL DISCONTINUOUS ONE-WAY MOVEMENT JOINT



NOTE: For falls, see Clause 2.5.2.

FIGURE 2.14 TYPICAL CONTINUOUS MOVEMENT JOINT

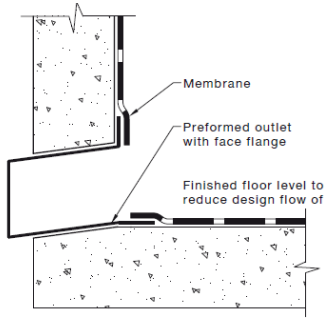
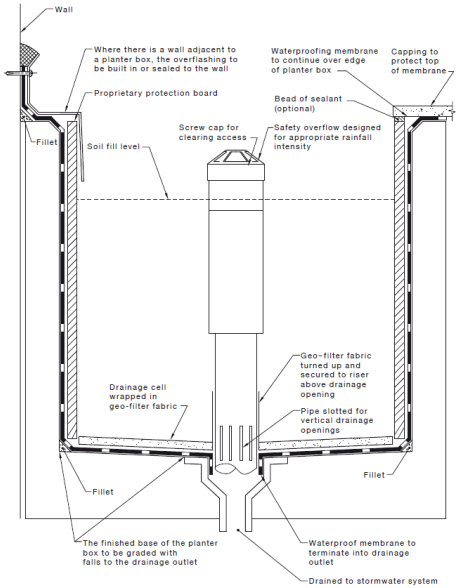




(b) Preformed overflow through parapet

NOTE: The overflow pipe should be located in a readily visible location to alert of a potential blockage.

FIGURE 2.16 (in part) TYPICAL DETAILS OF OVERFLOW

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
 (c) Preformed outlet to parapet overflow FIGURE 2.16 (in part) TYPICAL DETAILS OF OVERFLOW PIPE		 FIGURE 2.17 TYPICAL PLANTER BOX CONSTRUCTION			
160.	**F1.5 –** Roof coverings	Metal roof sheeting is to comply with AS1562.1	**CRA**	**A design practitioner—architectural** Roof coverings are to comply with the relevant Australian Standards as per Clause F1.5. Details and design certification to be provided prior to the issue of a Construction Certificate.		
161.	**F1.6 –** Sarking	Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.	**CRA**	**A design practitioner—architectural** Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2. Details and design certification to be provided prior to the issue of a Construction Certificate.		
162.	**F1.7 –**	Water proofing of wet areas is to comply with AS3740-2010.	**CRA**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Waterproofing of wet areas			Shower enclosure surfaces, floor surfaces in bathrooms, shower rooms, slop hoppers, sink compartments, laundry and sanitary compartments is required to be waterproofed in accordance with AS 3740. Details and design certification to be provided prior to the issue of a Construction Certificate.		
	F1.8 –	-	**-**	No provisions		
163.	**F1.9 –** Damp-proofing	Damp-proof course is to be provided compliant with AS2904.	**CRA**	**A design practitioner—architectural** Damp-proof course is to be provided compliant with AS2904.		
164.	**F1.10 –** Damp-proofing of floors on the ground	Vapour barrier is to be provided in accordance with AS2870.	**CRA**	**A design practitioner—architectural** A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab. Details and design certification to be provided prior to the issue of a Construction Certificate.		
165.	**F1.11 –** Provisions of floor wastes	In a Class 2 or 3 building or Class 4 part of a building, the floor of each bathroom and laundry located above a sole-occupancy unit or public space must be graded to permit drainage to a floor waste.	**CRA**	**A design practitioner—architectural** The floor of each bathroom / laundry is to be graded to permit drainage to a floor waste. The plans forming part of the Construction Certificate Application must detail compliance with the above.		
166.	**F1.12 –** Sub-floor ventilation	The sub-floor space between the suspended floor of a building and the ground must be in accordance with sub-clauses (a) to (g). This clause specifies the minimum sub-floor ventilation openings and the height of sub-floor timbers above the ground level for the three climatic zones set out in Figure F1.12 of the BCA	**CRA**	**A design practitioner—architectural** Details are to be included on the architectural documentation.		
167.	**F1.13 –** Glazed assemblies	Glazed assemblies in an external wall must comply with AS2047 requirements for resistance to water penetration for windows, sliding doors with a frame, adjustable louvres, windows with one piece framing	**CRA**	**A design practitioner—architectural** **A design practitioner—facade**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047 requirements for resistance to water penetration. Details and design certification to be provided prior to the issue of a Construction Certificate.		
	Part F2 – Sanitary and Other Facilities					
168.	**F2.1 –** Facilities in residential buildings	Sanitary and other facilities for Class 2 and 3 buildings and Class 9c aged care buildings and for Class 4 parts of buildings must be provided in accordance with Table F2.1.	**CRA**	**A design practitioner—architectural** The following facilities will need to be provided for the Class 2/3 residents: 0 A kitchen sink and facilities for preparation of food, 0 A bath or shower, 0 A closet pan & washbasin, 0 Laundry facilities comprising of a washtub and a space for a washing machine, Clothes drying facilities comprising of 7.5m length of line or a space for one heat operated drying cabinet or appliance. **Note**: Floor wastes shall be provided to all laundries, particularly where they are situated adjacent to / within the kitchen space.		
169.	**F2.2 –** Calculation of number of occupants and fixtures	(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means. (b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females. (c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility *required* for people with a disability (other than a facility provided under F2.9) may be counted once for each sex. (d) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary products.	**Note**			
170.	**F2.3 –**	a) Except where permitted by (b), (c), (f), F2.4(a), F2.4(b) and F2.9(b), separate sanitary facilities for males and females	**CRA**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Facilities in Class 3 to 9 buildings	must be provided for Class 3, 5, 6, 7, 8 or 9 buildings in accordance with Table F2.3. (b) If not more than 10 people are employed, a unisex facility may be provided instead of separate facilities for each sex. (c) If the majority of employees are employed, a unisex facility may be provided instead of separate facilities for each sex. (d) Employees and the public may share the same facilities in a Class 6 and 9b building (other than a *school* or *early childhood centre*) provided the number of facilities provided is not less than the total number of facilities *required* for employees plus those *required* for the public. (e) Adequate means of disposal of sanitary products must be provided in sanitary facilities used by females.		**A single Unisex toilet is afforded to visitors and general staff, provided not more than 2 employees of the opposite sex is on site.**		

Table F2.3 Sanitary facilities in Class 3, 5, 6, 7, 8 or 9 buildings

User Group	Closet Pans		Urinals		Washbasins	
	Design Occupancy	Number	Design Occupancy	Number	Design Occupancy	Number
Class 3, 5, 6 and 9 other than *schools*						
Male employees	1 — 20 > 20	1 Add 1 per 20	1 — 10 11 — 25 26 —50 >50	0 1 2 Add 1 per 50	1 — 30 > 30	1 Add 1 per 30
Female employees	1 — 15 > 15	1 Add 1 per 15	N/A	N/A	1 — 30 > 30	1 Add 1 per 30

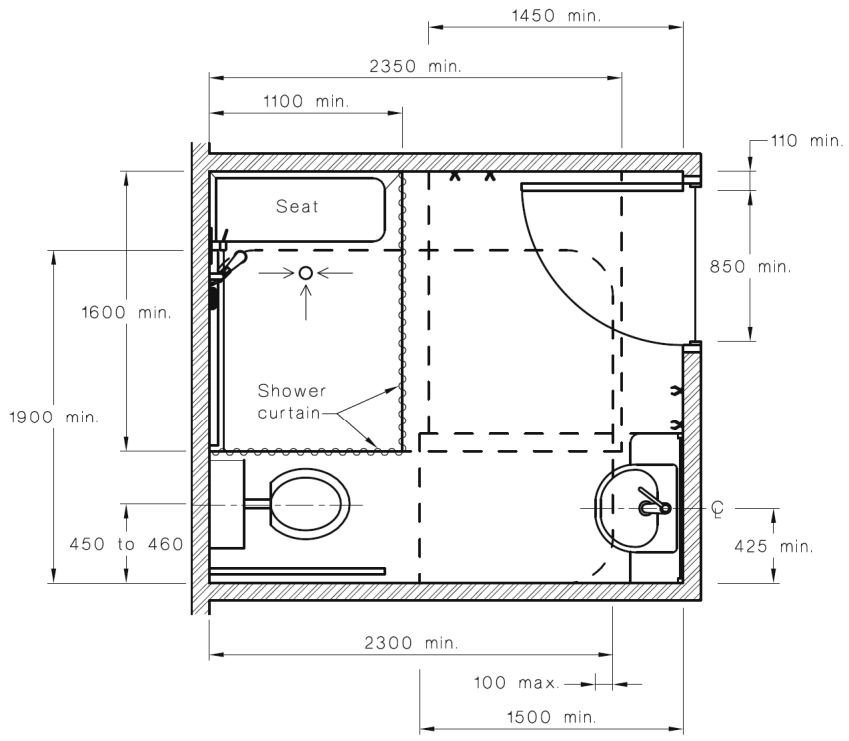
171.	**F2.4 –** Facilities for people with disabilities	Accessible unisex sanitary compartments must be provided, in accordance with Table F2.4(a), in buildings or parts that are required to be accessible. The details for the provision of disabled facilities and the standard, AS 1428.1, are set out in sub-clauses (a) to (i).	**CRA**	**A design practitioner—architectural** Final dimensions of accessible facilities are required at the Construction Certificate.		

Table F2.4(a) Accessible unisex sanitary compartments

Class of building	Minimum accessible unisex sanitary compartments to be provided
Class 3 and Class 9c	(a) In every *accessible sole-occupancy unit* provided with *sanitary compartments* within the *accessible sole-occupancy unit*, not less than 1; and (b) at each bank of *sanitary compartments* containing male and female *sanitary compartments* provided in common areas, not less than 1.

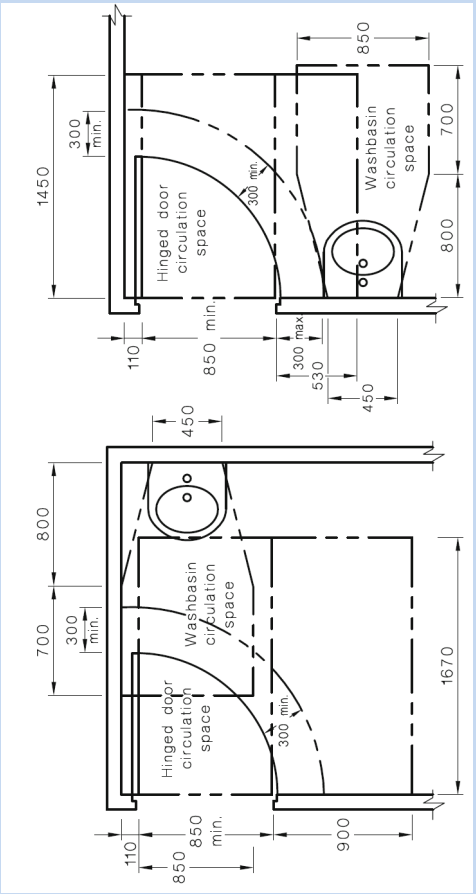
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S

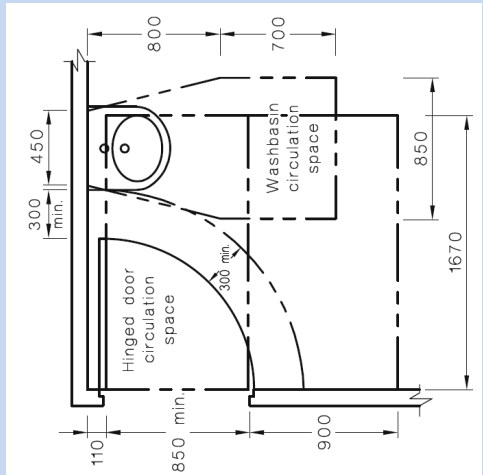
A1

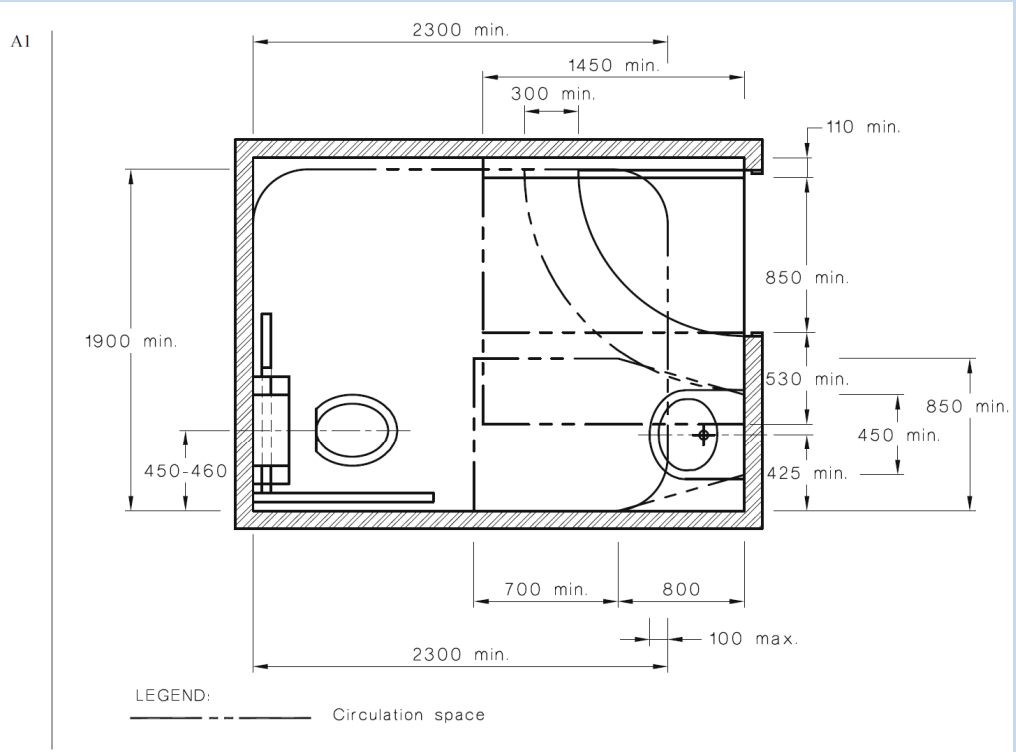
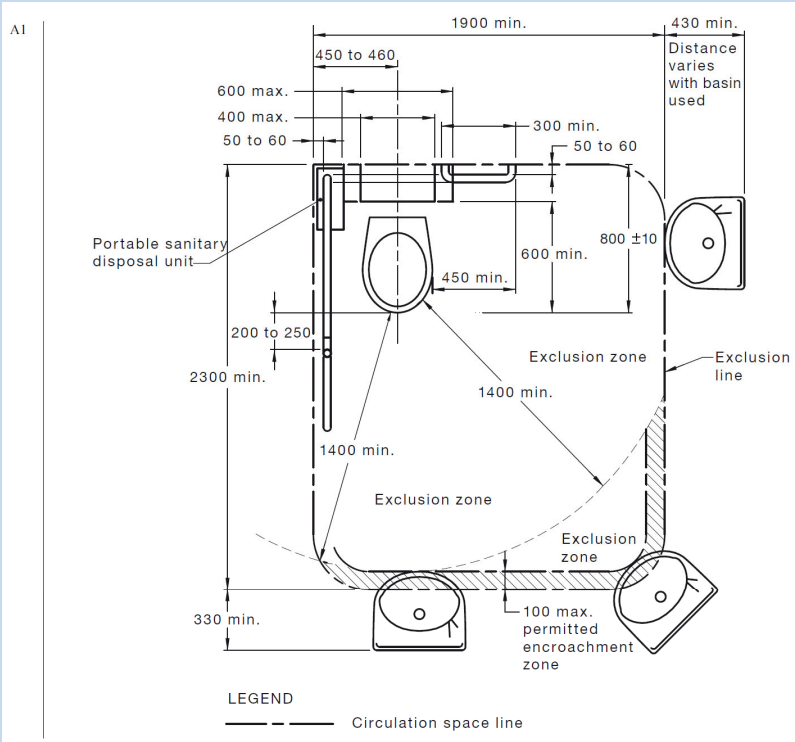


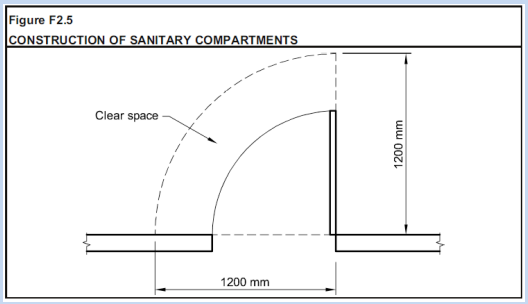
DIMENSIONS IN MILLIMETRES

FIGURE 50 SANITARY COMPARTMENT SHOWING OVERLAP OF WASHBASIN FIXTURE INTO SHOWER CIRCULATION SPACE

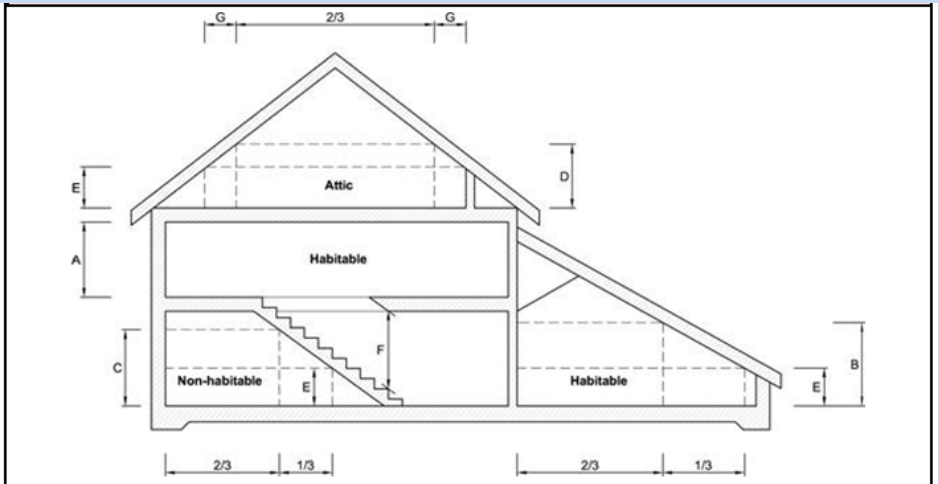




ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 DIMENSIONS IN MILLIMETRES FIGURE 52 EXAMPLE OF OVERLAPPING CIRCULATION SPACES IN A SANITARY COMPARTMENT		 NOTE: This circulation space may overlap any other circulation spaces specified in this Standard. DIMENSIONS IN MILLIMETRES FIGURE 43 CIRCULATION SPACE FOR WC PAN—RIGHT-HAND TRANSFER (LEFT-HAND TRANSFER IS MIRROR REVERSED)		
172.	**F2.5 –** Construction of sanitary compartments	(a) Other than in an *early childhood centre*, *sanitary compartments* must have doors and partitions that separate adjacent compartments and extend— (i) from floor level to the ceiling in the case of a unisex facility; or (ii) to a height of not less than 1.5 m above the floor if primary *school* children are the principal users; or (iii) 1.8 m above the floor in all other cases. (b) The door to a fully enclosed *sanitary compartment* must— (i) open outwards; or	**CRA**	**A design practitioner—architectural** Doors to the fully enclosed toilets are to open outwards, slide or be readily removable from the outside of the sanitary compartment unless there is a clear space of at least 1.2m between the closet pan within the sanitary compartment and the nearest part of the doorway.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) slide; or (iii) be readily removable from the outside of the *sanitary compartment*, unless there is a clear space of at least 1.2 m, measured in accordance with Figure F2.5, between the closet pan within the *sanitary compartment* and the doorway.		Plans submitted with the Construction Certificate Application must detail compliance with the above.  		
173.	**F2.6 –** Interpretation: Urinals and washbasins	(a) A urinal may be— (i) an individual stall or wall-hung urinal; or (ii) each 600 mm length of a continuous urinal trough; or (iii) a closet pan used in place of a urinal. (b) A washbasin may be— (i) an individual basin; or (ii) a part of a hand washing trough served by a single water tap.	**N / A**	**A design practitioner—architectural**		
174.	**F2.7 –** Warm water installations	Hot water, warm water and cooling water systems in a building other than a system only serving a sole-occupancy unit in a Class 2, 3 or Class 4 Part of a building must be installed in accordance with AS/NZS 3666.1.	**N / A**	Not Applicable in NSW		
175.	**F2.8 –** Waste	In a Class 9a & 9c health-care and aged care buildings, facilities must be provided with facilities to facilitate the emptying of containers of sewage and dirty water.	**N / A**	**A design practitioner—architectural**		
176.	**F2.9 –** Accessible adult change facilities	(a) Accessible adult change facilities required by (b) (i) must be constructed in accordance with Specification F2.9; and (ii) cannot be combined with another sanitary compartment. (b) One unisex accessible adult change facility must be provided in an accessible part of a— (i) Class 6 building that is a shopping centre having a design occupancy of not less than 3,500 people, calculated on the basis of the floor area and containing a minimum of 2 sole-occupancy units; and (ii) Class 9b sports venue or the like that— (A) has a design occupancy of not less than 35,000 spectators; or	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(B) contains a swimming pool that has a perimeter of not less than 70 m and that is required by Table D3.1 to be accessible; and (iii) museum, art gallery or the like having a design occupancy of not less than 1,500 patrons; and (iv) theatre or the like having a design occupancy of not less than 1,500 patrons; and (v) passenger use area of an airport terminal building within an airport that accepts domestic and/or international flights that are public transport services as defined in the Disability Standards for Accessible Public Transport 2002.				
	Part F3 – Room Sizes					
177.	**F3.1 –** Height of rooms and other spaces	The height of rooms and other spaces must be not less than— (b) in a Class 5, 6, 7 or 8 building— (i) except as allowed in (ii) and (f) — 2.4 m; and (ii) a corridor, passageway, or the like — 2.1 m; and (d) in a Class 9b building— (i) a *school* classroom or other *assembly building* or part that accommodates not more than 100 persons — 2.4 m; and (ii) a theatre, public hall or other *assembly building* or part that accommodates more than 100 persons — 2.7 m; and (iii) a corridor— (A)that serves an *assembly building* or part that accommodates not more than 100 persons — 2.4 m; or (B)that serves an *assembly building* or part that accommodates more than 100 persons — 2.7 m; and (iv)the number of persons accommodated must be calculated according to D1.13; and (f) in any building— (i) a bathroom, shower room, *sanitary compartment*, other than an *accessible* adult change facility, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like — 2.1 m; and (ii) a commercial kitchen — 2.4 m; and (iii) above a stairway, ramp, landing or the like — 2 m measured vertically above the nosing line of stairway treads or the floor surface of the ramp, landing or the like; and (iv)a *required accessible* adult change facility — 2.4 m.	**Complies**	**A design practitioner—architectural** Ceiling Heights look compliant.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		 **Note:** The letters in the diagram represent the following minimum dimensions: A = 2.4 m In a *habitable room* (excluding a kitchen). B = 2.4 m In a *habitable room* with a sloping ceiling for at least two-thirds of the floor area of the room or space. C = 2.1 m In a non-*habitable room* with a sloping ceiling for at least two-thirds of the floor area of the room or space. D = 2.2 m In an attic with a sloping ceiling for at least two-thirds of the floor area of the room or space. E = 1.5 m For the purpose of calculating the floor area of a room or space, any ceiling height of less than 1.5 m is excluded. F = 2.0 m In a stairway (measured vertically above the nosing line). The combined dimensions of G must not exceed one-third of the floor area (See E above) of the room or space.				
	Part F4 – Light and Ventilation					
178.	**F4.1 –** Provisions of natural light	Natural light must be provided in: (a) **Class 2 buildings and Class 4 parts of buildings** — to all *habitable rooms*. (b) **Class 3 buildings** — to all bedrooms and dormitories. (c) **Class 9a and 9c buildings** — to all rooms used for sleeping purposes. (d) **Class 9b buildings** — to all general purpose classrooms in primary or secondary *schools* and all playrooms or the like for the use of children in an *early childhood centre*.	**Note**	Natural light must be provided to all habitable rooms.		
179.	**F4.2 –**	(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	**Complies**	**A design practitioner—architectural**		

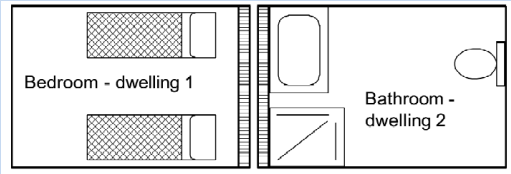
ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Methods and extent of natural light	obstructions of not less than 10% of the floor area of the room; and (B) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; 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) Except in a Class 9c building, in a Class 2, 3 or 9 building or Class 4 part of a building 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 – 1m; and (ii) In a patient care area or other room used for sleeping purposes in a Class 9a building – 3m; and (iii) 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) In a Class 9c building, a required window must be transparent and located – (i) in an external wall with the window sill not more than 1 m above the floor level; and where the window faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall.				
180.	**F4.3 –** Natural light borrowed from adjoining room	(a) Natural light to a room in a Class 2 building or Class 4 part of a building or in a *sole-occupancy unit* of a Class 3building, may come through one or more glazed panels or openings from an adjoining room (including an enclosed verandah) if— (i) both rooms are within the same *sole-occupancy unit* or the enclosed verandah is on common property; and (ii) the glazed panels or openings have an aggregate light transmitting area of not less than 10% of the *floor area* of the room to which it provides light; and (iii) the adjoining room has— (A) *windows*, excluding *roof lights*, that—	**Note**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(aa)have an aggregate light transmitting area of not less than 10% of the combined *floor areas* of both rooms; and (bb)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 (B) *roof lights*, that— (aa) have an aggregate light transmitting area of not less than 3% of the combined *floor areas* of both rooms; and (bb) are open to the sky; or (C) a proportional combination of *windows* and *roof lights required* by (A) and (B). (b) The areas specified in (a)(ii) and (a)(iii) may be reduced as appropriate if direct natural light is provided from another source.				
181.	**F4.4 –** Artificial lighting	(a) Artificial lighting must be provided – (i) in required stairways, passageways, and ramps; and (ii) if natural light of a standard equivalent to that required by F4.2 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in – (A) Class 4 parts of a building — to sanitary compartments, bathrooms, shower rooms, airlocks and laundries; and (B) Class 2 buildings — to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways–and other spaces used in common by the occupants of the building; and (C) Class 3, 5, 6, 7, 8 and 9 buildings — 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. (b) The artificial lighting system must comply with AS/NZS 1680.0.	**CRA**	Lighting to all areas is to comply with AS 1680.0.		
182.	**F4.5 –** Ventilation of rooms	A *habitable room*, office, shop, factory, workroom, *sanitary compartment*, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have— (a) natural ventilation complying with F4.6; or (b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1.	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** Ventilation shall be provided throughout the building by means of natural ventilation complying with Clause F4.6 or mechanical ventilation complying with the		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				requirements of AS1668.2 and AS3666.1 as required by Clause F4.5 of the BCA. Details and design certification to be provided by mechanical engineer prior to the issue of a Construction Certificate.		
183.	**F4.6 –** Natural ventilation	(a) Natural ventilation provided in accordance with F4.5(a) must consist of openings, *windows*, doors or other devices which can be opened— (i) with a ventilating area not less than 5% of the *floor area* of the room *required* to be ventilated; and (ii) open to— (A) a suitably sized court, or space open to the sky; or (B) an open verandah, carport, or the like; or (C) an adjoining room in accordance with F4.7	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** See Clause F4.5		
184.	**F4.7 –** Ventilation borrowed from adjoining room	Natural ventilation to a room may come through a *window*, opening, door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same *sole-occupancy unit* or the enclosed verandah is common property, and— (a) in a Class 2 building, a *sole-occupancy unit* of a Class 3 building or Class 4 part of a building— (i) the room to be ventilated is not a *sanitary compartment*; and (ii) the *window*, opening, door or other device has a ventilating area of not less than 5% of the *floor area* of the room to be ventilated; and (iii) the adjoining room has a *window*, opening, door or other device with a ventilating area of not less than 5% of the combined *floor areas* of both rooms	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering** See Clause F4.5		
185.	**F4.8 –** Restriction on position of water closets and urinals	*Sanitary compartments* must not open directly into— (a) a kitchen or pantry; or (b) a public dining room or restaurant; or (c) a dormitory in a Class 3 building; or (d) a room used for public assembly (which is not an *early childhood centre*, primary *school* or *open spectator stand*); or (e) a workplace normally occupied by more than one person	**N / A**	**A design practitioner—architectural**		
186.	**F4.9 –** Airlocks	If a *sanitary compartment* is prohibited under F4.8 from opening directly to another room— (a) in a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part of a building— (i) access must be by an airlock, hallway or other room; or	**N / A**	**A design practitioner—architectural**		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(ii) the *sanitary compartment* must be provided with mechanical exhaust ventilation; and (b) in a Class 5, 6, 7, 8 or 9 building (which is not an *early childhood centre*, primary *school* or *open spectator stand*)— (i) access must be by an airlock, hallway or other room with a *floor area* of not less than 1.1 m2 and fitted with *self-closing* doors at all access doorways; or (ii) the *sanitary compartment* must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.				
187.	**F4.10 –** -		**-**	No provisions		
188.	**F4.11 –** Carparks	Every storey of a carpark, except an open-deck carpark, must have – (a) a system of mechanical ventilation complying with AS 1668.2; or (b) a system of natural ventilation complying with Section 4 of AS 1668.4.	**CRA**	**A design practitioner—architectural** **A design practitioner—mechanical engineering**		
189.	**F4.12 –** Kitchen local exhaust	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where— (a) any cooking apparatus has— (i) a total maximum electrical power input exceeding 8 kW; or (ii) a total gas power input exceeding 29 MJ/h; or (b) the total maximum power input to more than one apparatus exceeds— (i) 0.5 kW electrical power; or (ii) 1.8 MJ/hour gas, per m2 of *floor area* of the room or enclosure.	**Note**	**A design practitioner—architectural** **A design practitioner—mechanical engineering**		
	Part F5 – Sound Transmission and Insulation N/A					
	Clause	Description	**Status**	Comments		
190.	**F5.0 –** Deemed-to-Satisfy Provisions		**Note**	Informational		
191.	**F5.1 –** Application of Part		**Note**	Informational– The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c buildings.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
192.	**F5.2 –** Determination of airborne sound insulation ratings	A form of construction required to have an airborne sound insulation rating must— (a) have the required value for weighted sound reduction index (Rw) or weighted sound reduction index with spectrum adaptation term (Rw + Ctr) determined in accordance with AS/NZS 1276.1or ISO717.1using results from laboratory measurements; or (b) comply with Specification F5.2.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		
193.	**F5.3 –** Determination of impact sound insulation ratings	(a) A floor in a building required to have an impact sound insulation rating must – (i) have the required value for weighted normalized impact sound pressure level (Ln,w) determined in accordance with ASISO717.2 using results from laboratory measurements; or (ii) comply with Specification F5.2. (b) A wall in a building required to have an impact sound insulation rating must – (i) for a Class 2 or 3 building be of discontinuous construction; and (ii) for a Class 9c building, must – (A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or (B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2. (c) For the purpose so of this Part, discontinuous construction means a wall having a minimum 20mm cavity between 2 separate leaves, and (i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and (ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		
194.	**F5.4 –** Sound insulation rating of floors	(a) A floor in a Class 2 or 3 building must have an Rw + Ctr (airborne) not less than 50 and an Ln,w (impact) not more than 62 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification. (b) A floor in a Class 9c building separating sole-occupancy units must have an Rw not less than 45	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
195.	**F5.5 –** Sound insulation rating of walls	(a) A wall in a Class 2 or 3 building must – (i) have an Rw + Ctr (airborne) not less than 50, if it separates sole-occupancy units; and (ii) have an Rw (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and (iii) comply with F5.3(b) if it separates – (A) a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or (B) a sole-occupancy unit from a plant room or lift shaft. (b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an Rw not less than 30. (c) A wall in a Class 9c building must have an Rw not less than 45 if it separates – (i) sole-occupancy units; or (ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room. (d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c building from a kitchen or laundry must comply with F5.3(b). (e) Where a wall required to have sound insulation has a floor above, the wall must continue to – (i) the underside of the floor above; or (ii) a ceiling that provides the sound insulation required for the wall. (f) Where a wall required to have sound insulation has a roof above, the wall must continue to – (i) the underside of the roof above; or (ii) a ceiling that provides the sound insulation required for the wall.	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance A wall in a Class 2 part must have an Rw + Ctr (Airborne) not less than 50 where it separates: 0 Sole occupancy units, and 0 Sole Occupancy Units from a kitchen, laundry, dirty utility, bathroom (not associated with the unit) or the like. A wall of a Sole Occupancy unit which adjoins a kitchen, laundry, dirty utility, bathroom or the like must: For other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery (i.e., discontinuous)  		
196.	**F5.6 –** Sound insulation rating of services	This clause details the separation requirements for services. The requirements only apply to services which pass through more than one sole-occupancy unit or are located in a wall or floor cavity which separates sole-occupancy units. F5.6 does not apply if the pipe is only located in a single unit or any part of a Class A 2, 3 or 9cA building which is not part of a sole-occupancy unit	**CRA**	**A design practitioner—architectural** Acoustic Engineer to Confirm walls type compliance Where a duct, soil, waste or water supply pipe including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one Sole Occupancy Unit, the duct or pipe must be separated		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
				from the rooms of any SOU unit by construction with an Rw + Ctr (airborne) not less than: a) 40 if the adjacent room is a habitable room (other than a kitchen) or 25 if the adjacent room is a kitchen or non-habitable room.		
197.	**F5.7 –** Sound isolation of pumps		**CRA**	**A design practitioner—architectural** A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating pump.		
	Part F6 – Condensation Management					
	Clause	Description	**Status**	Comments		
198.	**F6.0 –** Deemed-to-Satisfy Provisions	Part F6 aims to limit the amount of condensation that can accumulate within a building by requiring that water vapor be extracted to a point external to the building. It only applies to residential building classifications which are considered to be more susceptible to the accumulation of moisture due to the building's intended function and use.	**CRA**	Informational **Definitions** • **Pliable building membrane** – means a water barrier as classified by AS/NZS 4200.1. • **Water control layer** – means a pliable building membrane or the exterior cladding when no pliable building membrane is present. **Water sensitive materials** – means materials that have an inherent capacity to absorb water vapour and include timber, plasterboard, plywood, oriented strand board and the like.		
199.	**F6.1 –** Application of Part	Only applies to sole-occupancy units of a Class 2 building and a Class 4 part of building.	**Note**	Informational		
200.	**F6.2 –** Pliable building membrane	(a)Where a *pliable building membrane* is installed in an *external wall*, it must— (i) comply with AS/NZS 4200.1; and (ii) be installed in accordance with AS 4200.2; and (iii) be a vapour permeable membrane for *climate zones* 6, 7 and 8; and (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. (b) Except for single skin masonry and single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.	**CRA**	**A design practitioner—architectural** Where a pliable building membrane is installed in an external wall it shall comply with AS/NZS 4200.1 and installed in accordance with AS 4200.2.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
201.	**F6.3 –** Flow rate and discharge of exhaust systems	(a) An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of – (i) 25L/s for a bathroom or sanitary compartment; and (ii) 40 L/s for a kitchen or laundry. (b) Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. (c) Exhaust from a bathroom, sanitary compartment or laundry must be discharged- (i) directly or via a shaft or duct to outdoor air or (ii) to a roof space that is ventilated in accordance with F6.4.	**CRA**	**A design practitioner—architectural** Details including a design statement is to be provided to demonstrate compliance with F6.3.		
202.	**F6.4 –** Ventilation of roof spaces	(a) Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings. (b) Openings required by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22 degrees, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22 degrees.	**CRA**	**A design practitioner—architectural** Where an exhaust system covered by F6.3 discharges directly or via a shaft or duct into a roof space, the roof space must be ventilated to outdoor air through evenly distributed openings		
	SECTION G – ANCILLARY PROVISIONS **Part G1 – Minor Structures and Components**					
	Clause	Description	**Status**	Comments		
203.	**G1.1 –** Swimming pools	This clause prescribes the standard for fencing of swimming pools. Sub-clauses (a) to (e) set out when the provisions of **G1.1** apply and the minimum standard for swimming pool fencing as required in AS1926.1. **Note:** In NSW the fencing of swimming pools is regulated by the Swimming Pools Act.	**N / A**	**A design practitioner—architectural**		
204.	**G1.2 –** Refrigerated chambers, strong-rooms and vaults	(a) A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must have— (i) a door which is capable of being opened by hand from inside without a key; and (ii) internal lighting controlled only by a switch which is located adjacent to the entrance doorway inside the chamber, strongroom or vault; and (iii) an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights required by (a)(ii) are switched on; and (iv) an alarm that is—	**N / A**	**A design practitioner—architectural** A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must be capable of being opened from the inside by hand without a key. This clause also sets out the acceptable safety standards for a cooling chamber or strongroom by installation of dedicated controls within the chamber or vault and the external lights that indicate that the space is in use.		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
		(A) located outside but controllable only from within the chamber, strongroom or vault; and (B) able to achieve a sound pressure level outside the chamber, strongroom or vault of 90 dB(A) when measured 3 m from the sounding device. (b) A door required by (a)(i) in a refrigerated or cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m.				
205.	**G1.3 –** Outdoor play spaces	The outdoor play space must be enclosed on all sides with a barrier which complies with AS 1926.1-2007 to restrict the children from exiting the premises. The above requirements do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre.	**N / A**	**A design practitioner—architectural**		
206.	**G1.101 –** Provision for cleaning windows	A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. A building satisfies this requirement where the windows can be cleaned wholly from within the building; or provision is made for the cleaning of the windows by a method complying with the occupational Health and Safety Act 2000 and regulations made under that Act. 0 A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. 0 A building satisfies (a) where- the windows can be cleaned wholly from within the building	**CRA**	**A design practitioner—architectural** Details are to be provided at the CC Stage		
207.	**Part G2 –** Heating appliances, fireplaces, chimneys and flues	The installation of a stove, heater or similar appliance in a building must comply with: • Domestic solid-fuel burning appliances — Installation: AS/NZS 2918. For boilers and pressure vessels: Specification G2.2	**Note**	**A design practitioner—architectural**		
208.	**Part G3 –** Atrium construction		**N / A**	**A design practitioner—architectural**		
209.	**Part G4 –** Construction in alpine areas		**N / A**	**A design practitioner—architectural**		
210.	**NSW Part G5 –**	The building is to be design in accordance with AS3959 except where amended by a Planning for Bush Fire Protection; and	**N / A**	**A design practitioner—architectural** A Bush Fire Report is to confirm compliance with AS3959		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
	Construction in bushfire prone areas	For Section 9 Construction for Bushfire Attach Level FZ (BAL-FZ). The building subject to BAL-FZ must comply with specific condition of development consent at this level. or; Se Also NSW Rural Fire Services under section 4.14 of the Environmental Planning and Assessment Act 1979 or, As modified by development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997.				
211.	**Part G6 –** Occupiable outdoor areas	Application of Part Except G6.2, DTS provision do not apply to OOA of a class 2, 3, 9c and 4 building.	**Note**			
212.	**Part G6.2 –** Fire Hazard Properties	As per C1.10, all OOA's must comply with C1.10 expect where amended by (b) (i) Average specific extinction area (ii) Smoke-Development Index (iii) Smoke development rate (iv) Smoke growth rate	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
213.	**Part G6.3 –** Fire Separation	Noted	**Note**			
214.	**Part G6.4 –** Provision for escape	Noted – Travel distances comply with D1.4, and D1.5 of the BCA for all OOA's.	**Complies**	**A design practitioner—architectural**		
215.	**Part G6.5 –** Construction of Exits	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
216.	**Part G6.6 –** Fire fighting equipment	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
217.	**Part G6.7 –** Lift installations	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
218.	**Part G6.8 –** Visibility in an emergency, exit signs and warning system	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		

ITEM	Clause	Reference	Status	Comments	DETAIL SHOWN ON CC PLANS OR SPECIFICATION	RFI'S
219.	**Part G6.9 –** Light and Ventilation	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
220.	**Part G6.10 –** Fire Orders	Noted	**CRA**	**A design practitioner—architectural** Details are to be confirmed at the CC Stage		
	SECTION H – SPECIAL USE BUILDINGS					
	N / A					
	SECTION J – ENERGY EFFICIENCY					
	Clause	Description	**Status**	Comments		
1.	**NSW J(A) –** Energy Efficiency – Class 2 Buildings and Class 4 Parts		**Note**	**A design practitioner—architectural** See Basix report		