STEVE WATSON
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The Store - 854 Hunter Street Newcastle West

BCA Assessment Report

Report 2021/2075 R2.1

Prepared for DOMA

October 2021

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Disclaimer:

This report is based on a desktop audit of architectural drawings to be lodged as part of a Development Application for the proposed development.
Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.

This report is based on a review of the design documentation only. It represents a compliance report for "documentation to this point in time" and will be subject to amendment and expansion as project documentation develops.

Executive Summary

An assessment of the design of the proposed design of The Store - 854 Hunter Street Newcastle West has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations.

This report details the non-compliances identified that require either amendments to plans or an Alternative Solution to satisfy the Performance Requirements of the BCA.

Summary of BCA Parameters:

Building Use:	Mixed Use Development
Class of Occupancy	Class 2, 5, 6, 7a, 7b & 8
Type of Construction Required	Type A
Rise Storeys:	31
Number of Storeys:	32
Effective Height:	97.63m (Level 29 RL 101.43m - Level 00 RL 3.8m)

The design is capable of complying with the requirements of the relevant sections of the Environmental Planning Assessment Act 1979, the Environmental Planning and Assessment Regulations 2000 and the Building Code of Australia 2019 Amendment 1. Compliance is subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved.

Key issues which require additional details have been listed under Section 10.1 of this report and need to be clarified with SWP or the building certifier for the project prior to the issue of a construction certificate.

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1. Introduction

This report presents the findings of a desktop audit of architectural drawings to be lodged as part of a Development Application for the proposed development 'The Store' at Hunter Street Newcastle West against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia BCA 2019 Amendment 1.

It has been prepared by Steve Watson and Partners for DOMA

2. Purpose

The purpose of this report is to provide an assessment of the design documentation against the current requirements of the BCA.

The assessment is undertaken for the purpose of, and to the extent necessary for, construction certification to be issued under Part 6 of the NSW Environmental Planning and Assessment Act 1979 (The Act) and Environmental Planning and Assessment Regulation 2000 (EPAR).

3. Scope and Limitations

3.1. Scope

The scope of this assessment is limited to the the design documentation referenced in Appendix A of this report.

3.2. Limitations

The following limitations apply to the assessment:

- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to issue a construction certificate under Part 6 of The Act. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this 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/Premises Standard only. A detailed assessment against AS 1428 series, AS/NZS 2890.6 – 2009 and AS 4299 – 1995 is outside the scope of this report
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards.
- Structural and services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA. Other legislative requirements have not been considered. It does not address additional or specific requirements stipulated under other areas such as Safety in Design, Construction Safety, Disability Discrimination, Planning and Environment, Occupational Health and Safety, Health, Dangerous Goods, etc, which may impact on the design and use of the building. It is recommended that appropriate advice from suitably qualified consultants should be obtained for further information on these areas

4. National Construction Code BCA 2019 Amendment 1– Volume 1: Building Code of

Australia Class 2 to Class 9 Buildings

The National Construction Code (NCC) is a uniform set of technical provisions for the design and construction of buildings, structures and plumbing/drainage systems which is separated into 3 volumes. Volume 1 of the NCC is the Building Code of Australia (BCA) for Class 2 to 9 buildings which is the document to which the assessment in this report has been undertaken against. The BCA is legislated under The Act and specifies the Performance Requirements for the design and construction of Class 2 to 9 buildings that must be satisfied to achieve compliance. The Performance Requirements can only be satisfied by a Performance Solution, Deemed-to-Satisfy (DTS) solution or a combination of both.

5. Performance Solutions

The BCA is written in a performance format which allows performance based buildings. This has allowed for innovation and variation from the prescriptive deemed-to-satisfy requirements of the BCA, whilst maintaining the principle levels of health, safety and amenity of building occupants.

Performance solutions are generally adopted when a nominated deemed-to-satisfy provision appears inappropriate for the design, or when a proposed design varies from the prescriptive requirements of the BCA. Subsequently, a performance solution supported by Fire Engineering analysis can determine whether a proposed design that varies from prescriptive requirements, will satisfactorily meet the performance provisions of the BCA. Ultimately, it is with the discretion of the relevant building surveyor whether to accept a deviation from the prescriptive code requirements.

Utilising the performance provisions may result in more economical and somewhat safer building, however alternative solutions may require additional on-going maintenance. It is in this instance that all parties, such as the building owner, insurance companies, proposed tenants, etc., are aware of this decision making process and are kept informed of any additional requirements needed to maintain the level of safety.

6. Statutory Framework

The following table summarises the key statutory issues relating to fire safety and the BCA in relation to the certification of new building works.

Issue	Legislative reference	Comment
New Work	EPAR 145	All new works must comply
Residential Flat Development	EPAR 143A and 153A	Statement from a qualified designer verifying compliance with SEPP65 for residential developments
BASIX	EPAR 154B	BASIX certificate required for residential projects

6.1. New Work

Clause 145 of the EPAR requires that all new work comply with the current requirements of the BCA.

This means that all works proposed in the plans are required to comply but that existing features of an existing building need not comply with the BCA unless required to under other clauses of the legislation.

6.2. Residential flat development

Clause 143A of the EPAR requires a qualified designer to provide a statement that verifies that the plans and specifications 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* (SEPP 65) prior to the issue of a Construction Certificate. Clause 154A of the EPAR 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 SEPP 65 prior to issuing an Occupation Certificate.

6.3. Fulfilment of BASIX Commitments

Clause 154B of the EPAR requires the certifying authority to monitor fulfilment of any commitments listed on the BASIX certificate, where the BASIX certificate requires the certifying authority to monitor those commitments. A final occupation certificate must not be issued until the certifying authority is satisfied that each of the commitments has been fulfilled.

7. Methodology

7.1. Process adopted

The following method of assessment has been used in the preparation of this report:

1) Determine the basic assessment data for the building.
2) Assess the design of the building against the current Deemed-to-Satisfy requirements of Sections B, C, D, E, F, G, H and J of the BCA. Establish the status of each clause into the following categories:
    1. Clause is administrative information only **(Noted)**;
    2. Clause is or is not relevant to the proposed work **(Applicable or N/A)**
    3. The proposed work complies with the requirements of the clause **(Complies)**;
    4. Compliance with the requirements of the clause is unable to be determined from the documentation provided **(Compliance Readily Achievable)**. A recommendation in the "Comments" column will indicate what is required to achieve compliance. The design and construction teams are responsible to ensure compliance is achieved;

5. Compliance with the requirements of the clause is unable to be determined from the documentation provided. Additional details or relevant information required to verify compliance (**Additional Details Required**);
6. Proposed work does not comply with the requirements of the clause **(Does Not Comply)**. An indication will be given in the Comments field as to the nature of the issue and whether an alternative solution has been proposed to address the issue;
7. Proposed work is to be addressed on a performance basis via an Alternative Solution satisfying the relevant Performance Requirements. (**Performance Solution**);

3) Nominate the status of the design against each BCA requirement;
4) Provide comments against each BCA requirement as appropriate.

8. Description of Proposed Development

The proposed development involves the construction of Mixed-use development containing a total of 32 stories. It is located at 854 Hunter Street Newcastle West.

9. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA 2019 Amendment 1.

9.1. Assumptions

Assumptions made in the preparation of this report are listed below:

1. Level 00 will be constructed based on FRLs prescribed for class 6 Type A construction. This is the highest FRL requirement of the shared classifications on the floor. This approach has been determined to mitigate the requirement of separating building classifications within the same storey.
2. It is assumed that the substation denoted on the Level 00 will achieve a compliant separation of classifications (as prescribed in the BCA) between the remainder of the floor.
3. A suitably qualified ESD consultant will review the proposed works in order to determine compliance with Section J of the BCA.
4. A suitably qualified access consultant will undertake a detailed design review of the proposed works in order to determine compliance with Section D3 of the BCA and AS1428.1-2009 (amendment 1).
5. As the development is proposed to form a united building, the northern boundary of the site adjoining Beresford Lane is not considered to be a fire source feature for the purposes of determining compliance with the DTS provisions of the BCA.

9.2. Interpretations

A number of issues within the BCA are recognised to be interpretive in nature. Where these issues are encountered, interpretations are made that are consistent with Standard Industry Practise and/or Steve Watson & Partners policy formulated in regard of each issue.

1. Although less than 10% of the total floor area the commercial lobby and end of trip facility on Level 00 is going to be considered to form part of the Class 5 portion of the building.
2. The BOH and ancillary service areas (Bin & Services Rooms) associated to the residential component of the building will inherent the Class 2 building classification.
3. Plant rooms on Level 04, Level 28 & Level 30 will be classified as Class 2.

10. Issues Requiring Resolution

10.1. Items requiring additional details or documentation

The following items have been identified which require further details or documentation to be

provided to ensure compliance is achieved before issuing the Construction Certificate.

Item	DTS Clause	Description	Requirement to Satisfy BCA
1.	**Section J**	Energy Efficiency	Refer to details within the clause-by-clause section of this report.
2.	**Section D3 & AS1428.1**	Accessibility requirements	Refer to details within the clause-by-clause section of this report.
3.	**C1.9, C1.14**	Non-combustible External Walls	External walls and their components are required to be non-combustible. Components proposed will need to be in accordance with Clause C1.9 & C1.14.
4.	**Section E**	Services Design	Refer to details within the clause-by-clause section of this report.
5.	**Section F5**	Sound Transmission and insulation	Refer to details within the clause-by-clause section of this report.
6.	**Section F6**	Condensation management	Refer to details within the clause-by-clause section of this report.
7.	**General**	**All details for the proposed outdoor recreational areas are to be provided for review**	

10.2. Performance solutions required

It is proposed to satisfy the following non-compliances via performance solutions:

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Non-Separation of classifications on the same storey / reduced FRLS	**C2.7, C2.8, C2.9, Spec C1.1**	**Separation of classifications in the same storey** As the building has parts of different classifications located alongside one another in the same storey each building element must have the higher FRL prescribed in Specification C1.1 of the BCA or the parts must be separated by a fire wall. An alternative solution has been proposed to reduce the FRL's on Level 00 down from 180/180/180.	CP1, CP2
2.	Slab Edge Protection	**C1.1, Spec C1.1,** **C2.2**	The proposed junction between the façade, slab edge and fire walls may result in non-compliant fire separation of storeys. Where this is the case, a design is to be implemented on a performance basis	CP2, CP8
3.	Stair which does not comply with Specification D1.12 connects more than 3 stories	**D1.12, Spec D1.12**	The interconnecting commercial lobby stair does not currently meet the requirements of this clause. The stair proposed connects more than 3 storeys.	DP4, EP2.2
4.	Number of Exits required	**D1.2**	The number of exits available from the plant room level (Level 04) has been flagged with a potential non-compliance. If the roof surface external to the plant room is non-trafficable then this will be required to be addressed on a performance basis.	DP4, EP2.2
5.	Distances exceed 20m to a point of choice	**D1.4**	Refer to details within the clause-by-clause section of this report.	DP4, EP2.2
6.	Distances exceed 6m to a point of choice	**D1.4**	Refer to details within the clause-by-clause section of this report.	DP4, EP2.2
7.	Alternative exits are located within 9m	**D1.5**	The distance between exit doors is less than 9m on all scissor stair applications throughout the building.	DP4, EP2.2

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
8.	Non-compliant discharge of Fire Isolated passageway	**D1.7**	The Fire stairs also discharge into an area which is covered by more than a 3rd of it's perimeter and requires travel to the road or open space at distances greater than 6m. The external wall within 6m of the path of travel to the road is required to achieve an FRL not less than 60/60/60 and any openings are required to be protected internally in accordance with C3.4 of the BCA. Where this cannot be achieved a performance based design will need to be adopted to address this departure.	DP5
9.	Discharge from exits	**D1.10**	The discharge points of the buildings exits are not in accordance with D1.10.	DP5
10.	Fire Hydrant Booster Assembly	**E1.3**	Refer to details within the clause-by-clause section of this report.	EP1.3
11.	Size of Fire Control Room	**E1.8**	Refer to details within the clause-by-clause section of this report.	EP1.6
Note – This list has been prepared based on information detailed on the referenced design documents. Additional performance solutions may be proposed as the design develops further.				

11. Relevant Authorities

Where an alternative solution is proposed to meet the performance requirements contained in any one or more of the Category 2 fire safety provisions referral to Fire and Rescue NSW under Clause 144 of the EP&A Regulations is required.

12. Statutory Fire Safety Measures

All fire/essential safety measures installed within the building are required required to be certified upon completion of the project and prior to occupation of the building by the owner of the building, by issuing a Final Fire Safety Certificate under the Act.

The owner is also required under the Act to certify each of the Fire Safety Measures annually by issuing a Fire Safety Statement.

With performance solutions, additional or more frequent maintenance may result.

13. Conclusion

The design is capable of complying with the requirements of the relevant sections of the of the Act and EPAR and the BCA 2019 Amendment 1 subject to resolution of the identified areas of non-compliance and compliance with the recommendations provided within the report.

Further detailed regulatory reviews will need to be progressively undertaken as designs advance and become more resolved to ensure compliance is achieved by the appointed project certifier.

14. BCA 2019 Amendment 1 – Clause by Clause Assessment

<table>
<tr><th>Clause</th><th>Description</th><th>Comment</th><th>Status</th></tr>
<tr><td colspan="3">BCA Version</td><td></td></tr>
<tr><td>BCA 2019 Amendment 1</td><td>BCA version
The BCA is generally updated every 3 years with amendments influencing health, safety and amenity features required within the building. Legislation typically allows future BCA changes to be ignored provided substantial progress on the design of the development has previously occurred.</td><td>This report assumes that the applicable BCA version is BCA 2019 Amendment 1. In addition, requirements of the Premises Standards (PS) are covered as relevant.</td><td>Compliance Readily Achievable</td></tr>
<tr><td colspan="3">Section A: General Provisions</td><td></td></tr>
<tr><td>A5.2</td><td>Suitability of materials
Every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended.</td><td>The builder is responsible to adopt and install appropriate proprietary accredited building products and is to ensure that those products/assemblies are fit for the purpose they are intended and are installed in accordance with the manufacturer’s specifications/ requirements for that system.</td><td>Compliance Readily Achievable</td></tr>
<tr><td>Part A6</td><td colspan="2">Classification and usage
Usage on each level of the building is as follows:
<table><tr><th>LEVEL</th><th>USE</th><th>CLASS</th></tr><tr><td>B1</td><td>Storage</td><td>7b</td></tr><tr><td>00</td><td>Residential</td><td>2</td></tr><tr><td></td><td>Office</td><td>5</td></tr><tr><td></td><td>Retail</td><td>6</td></tr><tr><td></td><td>Bus interchange</td><td>9b</td></tr><tr><td></td><td>Substation</td><td>8</td></tr><tr><td>Carpark 1</td><td>Carpark</td><td>7a</td></tr><tr><td>Carpark 2</td><td>Carpark</td><td>7a</td></tr><tr><td>Carpark 3</td><td>Carpark</td><td>7a</td></tr><tr><td>Carpark 4</td><td>Carpark</td><td>7a</td></tr><tr><td>Carpark 5</td><td>Carpark</td><td>7a</td></tr><tr><td>01</td><td>Office</td><td>5</td></tr><tr><td>02</td><td>Office</td><td>5</td></tr><tr><td>03</td><td>Office</td><td>5</td></tr><tr><td>04</td><td>Plant</td><td>2</td></tr></table></td><td>Noted</td></tr>
</table>

Clause	Description		Comment	Status
	05	Residential	2	
	06	Residential	2	
	07	Residential	2	
	08	Residential	2	
	09	Residential	2	
	10	Residential	2	
	11	Residential	2	
	12	Residential	2	
	13	Residential	2	
	14	Residential	2	
	15	Residential	2	
	16	Residential	2	
	17	Residential	2	
	18	Residential	2	
	19	Residential	2	
	20	Residential	2	
	21	Residential	2	
	22	Residential	2	
	23	Residential	2	
	24	Residential	2	
	25	Residential	2	
	26	Residential	2	
	27	Residential	2	
	28	Residential	2	
	29	Residential	2	
	30	Plant	2	
	Roof	No use / Plant	2	
	Interpretation Level 00 contains a mix of retail, commercial and residential spaces. The residential lobby and BOH store / plant area have been allocated to the class 2 portion of the building. Retail tenancies and the through site link have been designated as class 6 portions and the commercial lobby which maintains a direct link to the level above and commercial use end of trip has been allocated as class 5 building space.			
Part A7	**United buildings** Buildings are deemed united when two or more buildings adjoining each other are connected and used as one building.		The existing carpark / bus depot structure and the proposed mixed-use development will create a single building which is required to comply as a United Building. Additional details will need to be provided at the approval stage evidencing this.	Additional Details Required

Clause	Description	Comment	Status
Section B: Structure			
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	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.2	**Determination of individual actions** The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.3	-	No provisions	-
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 the relevant Australian Standards in accordance with Clause B1.4 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.5	**Structural software** Structural software used in computer aided design of a building or structure that uses design criteria based on DTS provisions of the BCA must comply with the ABCB Protocol for Structural Software.	-	Applicable
B1.6	**Construction of buildings in flood hazard areas** The building if contained in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Applies to Class 2, 4, 9a and 9c buildings Confirmation from a hydraulic engineer will be required as to whether the building is located within a floor hazard area as defined under the BCA.	N/A
Part B	**Structure and importance level** Assessment of the building structure will be required for dead, live, wind, earthquake, fire and other loads required by current day AS Codes. The design of the structure must be based on the appropriate 'Importance Level' under BCA Table B1.2a.	The building has an importance level 3 in accordance with Table B1.2a.	Compliance Readily Achievable
Section C: Fire Resistance			
Part C1 – Fire Resistance and Stability			
C1.1	**Type of construction required** **Type A Construction** BCA Type A fire resisting construction is required. The following fire ratings apply: **Building Element** — **Required FRL**	Details of the proposed construction and how it will achieve the required FRL is to be provided. Certification from a structural engineer will be required for FRL's of all structural elements including existing structure.	Compliance Readily Achievable
	Loadbearing external walls, columns, beams — Generally, 90min FRL in Class 2 Portions Generally, 2 Hr FRL in	It is proposed to obtain an alternative solution to allow the structure to achieve an FRL less than 180/180/180 in class 6 portions of the building.	Performance Solution

Clause	Description		Comment	Status
		Class 5 Portions Generally, 3 Hr FRL in Class 6 portions Generally, 4 Hr FRL in Class 8 portions		
	Non-loadbearing external walls, etc. less than 3m from a fire source or boundary or less than 6m from another building on the site	Generally, 90min FRL in Class 2 Portions Generally, 2 Hr FRL in Class 5 Portions Generally, 3 Hr FRL in Class 6 portions Generally, 4 Hr FRL in Class 8 portions All areas required to be non-combustible		
	Non-loadbearing external walls etc. greater than 3m from a fire source or boundary or more than 6m from other buildings on the site.	Nil (Non-combustible)		
	Internal load-bearing walls/columns etc.;			
	Supporting a floor over	Generally, 90min FRL in Class 2 Portions (concrete/ masonry) Generally, 2 Hr FRL in Class 5 Portions (concrete/ masonry) Generally, 3 Hr FRL in Class 6 portions (concrete/ masonry) Generally, 4 Hr FRL in Class 8 portions (concrete/ masonry)		
	Supporting a roof over	90/60/30 FRL		
	Roofs	Nil with sprinkler protection (non-combustible covering)		

Clause	Description		Comment	Status
	Non-loadbearing Services Shafts	-/90/90 FRL Class 2 & 5 -/120/120 FRL Class 6 & 8 (non-combustible)		
Spec C1.1	**Fire resisting construction** *Support of another part* 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 required for the part if supports and be non-combustible. *Attachments* The method of attaching or installing a finish, lining, ancillary element or service to a building element must not reduce the fire resistance of that element. *Enclosure of shafts* Shafts required to have an FRL must be enclosed at the top and bottom by construction have an FRL not less than that required for the walls of the shaft. Shafts, other than one enclosing a fire isolated stairway or ramp, do not require an FRL at the top if the shaft extends beyond the roof covering.			Applicable
C1.2	**Calculation of rise in storeys** **Effective Height / Calculation of rise in storeys**. Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements. Effective height is defined under the BCA as 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). These parameters influence the BCA provisions applicable to the building.		The following parameters apply: Rise in storeys: 31 Effective Height: 97.63m	Noted
C1.3	**Buildings of multiple classification**		The building is required to be constructed of Type A fire resisting construction as the classification of the top storey is a Class 2.	Noted
C1.4	**Mixed types of construction**		If a fire wall divides the building in accordance with Clause C2.7, the building portions are able to be constructed in differing levels of fire-resistance determined in accordance with Clause C1.1 and C1.3.	Noted
C1.5	**Two storey Class 2, 3 or 9c buildings**		-	N/A
C1.6	**Class 4 parts of buildings**		-	N/A
C1.7	**Open spectator stands and indoor sports stadiums**		-	N/A
C1.8	**Lightweight construction** 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		Details of the proposed systems to be installed must be in accordance with a tested prototype.	Additional Details Required

Clause	Description	Comment	Status
	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.		
C1.9	**Non-combustible building elements** 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 within them including façade 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; iv. Non-loadbearing shaft being a lift, ventilating, garbage or similar shaft. The following materials may be used where non-combustible materials are required:- • Plasterboard. • Perforated gypsum. • Fibrous-plaster sheeting to AS 2185. • Fibre-reinforced cement sheeting. • Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the spread-of-flame index of the product is not greater than 0. • Sarking-type materials that do not exceed 1mm thickness and have a flammability index not greater than 5. • Bonded laminated materials where each lamina, including any core, is not combustible and each adhesive layer does not exceed 1mm thickness and the total thickness of the adhesive layers does not exceed 2mm and the spread of flame index and smoke development index of the bonded laminated material as a whole do not exceed 0 and 3 respectively. • Any product as determined by testing to AS 1530.1 • An appropriately BCA accredited product or system	Architect and Structural engineer to make provisions for this requirement in the design. A detailed review of the external cladding must be undertaken to ensure that there are no combustible materials and non-complaint claddings have not been nominated that could increase the risk of fire spread via the external façade. Ensure all façade materials have a current Certificate of Conformity or a current Certificate of Accreditation, or the like to determine their acceptance by the Fire Safety Engineer and Fire Brigade	Additional Details Required
C1.10	**Fire hazard properties** *(NSW variation for Entertainment Venues)* Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C1.10 & compliance with AS5637.1-2015	Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including: • Carpets • Vinyls (walling and flooring) • Timber flooring and wall linings • Veneered wall panelling • Spray-on insulation material	Complies

Clause	Description	Comment	Status
		• Other combustible finishes • Carpark soffit insulation fire test reports, based on 'room fire testing' will be required to meet fire brigade consent conditions if applicable.	
C1.11	**Performance of external walls in fire**	-	N/A
C1.12	This Clause has deliberately been left blank		N/A
C1.13	**Fire-protected timber: Concession** *Fire-protected timber* in a Class 2, 3 or 5 building may be used wherever an element is *required* to be *non-combustible*,	-	N/A
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 non-combustible or as specified under this clause.	Details are required to be provided at the Construction Certificate approval stage.	Applicable
Part C2 – Compartmentation and Separation			
C2.1	**Application of Part**	Clauses C2.2, C2.3 and C2.4 do not apply to a sprinkler protected carpark, open deck carpark or open spectator stand.	Applicable
C2.2	**General floor area and volume limitations (Type A construction)** The floor area and volume limitations are: Class 5: 8,000m^2 and 48,000m^3 Class 6, 7: 5,000m^2 and 30,000m^3 **Note:** • The BCA does not require Class 2 and 3 parts of the building to be considered	The floor area and volume of levels 00 – 04 are within the maximum limitations outlined by Table C2.2. Level B1: Approximately 1087m^2 Level 00: Approximately 1590m^2 Level 01: Approximately 1500m^2 Level 02: Approximately 1330m^2 Level 03: Approximately 1650m^2 Level 04: Approximately 1650m^2 ***Architect is to provide an area schedule confirming the floor area and volume of each fire compartment.***	Additional Details Required
C2.3	**Large isolated buildings**		N/A
C2.4	**Requirements for open space and vehicular access** Vehicular access / open space is provided from the public road for emergency vehicular access and is not to be used for the storage or processing of materials and must not be built upon except for guard houses and service structures as long as they do not unduly impede firefighting. Vehicular access must have a loadbearing capacity and unobstructed height to permit the operation and passage of fire brigade vehicles. Vehicular access must be capable of providing continuous access for emergency vehicles to enable travel in a forward direction from the public road around the entire building.		N/A
C2.5	**Class 9a and 9c buildings**		N/A

Clause	Description	Comment	Status
C2.6	**Vertical separation of openings in external walls**		N/A
C2.7	**Separation by fire walls** A fire wall must extend to the underside of a floor having an FRL required for a fire wall or the roof covering.		Noted
C2.8	**Separation of classifications in the same storey** As the building has parts of different classifications located alongside one another in the same storey each building element must have the higher FRL prescribed in Specification C1.1 of the BCA or the parts must be separated by a fire wall.	Level 00 will incorporate Class 2, 5 & 6 portions of the building without separation via fire rated walls. To ensure compliance the FRL suitable for a class 6 building (being the highest of the 3) will need provided to the building elements throughout level 00 to ensure compliance with C2.8. An alternative solution has been proposed to reduce the FRL's on Level 00 down from 180/180/180. ***Note:*** *if the substation is being operated by a licensed network service provider and is converting high voltage supply then the substation and associated rooms will need to be classified as Class 8 portions. Appropriate FRLs are to be implemented in the design.*	Performance Solution
C2.9	**Separation of classifications in different storeys** As different classifications are situated one above the other in adjoining storeys they must be separated in accordance with the DTS provisions of the BCA.	Where an alternative solution report is prepared to rationalise FRLS on Level 00 the solution may also include the rationalisation of FRLs of the floor separating the class 6 and class 5 portions.	Performance Solution
C2.10	**Separation of lift shafts** Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3 of the BCA		Compliance Readily Achievable
C2.11	**Stairways and lifts in one shaft**	The lifts are within their own shaft	Complies
C2.12	**Separation of equipment** Two-hour fire enclosure is required for: • lift motor rooms • emergency generators sustaining emergency equipment operating in emergency mode • central mechanical smoke control plant • boilers • 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.	Details are required to be provided at the Construction Certificate approval stage.	Applicable
C2.13	**Electricity supply system** A substation located within a building or main switchboard, which sustains emergency equipment, must be separated from the	Details are required to be provided at the Construction Certificate approval stage.	Applicable

Clause	Description	Comment	Status
	remainder of the building by 2hr fire rated construction. Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.		
C2.14	**Public corridors in Class 2 & 3 buildings** Public corridors must be divided at intervals of not more than 40m by smoke-proof walls complying with Clause 2 of Specification C2.5.	The proposed design details no public corridors which exceed 40m.	Complies
Part C3 – Protection of Openings			
C3.1	**Application of Part**		Applicable
C3.2	**Protection of openings in external walls** Openings in the external walls of the building are to be protected in accordance with C3.4, being fire rated windows, external sprinklers or the like, if: • less than 3m to side or rear boundary, • less than 6m from the far boundary of a road or lane, • Less than 6m from another building on the same allotment. Openings that require protection should not occupy more than $^1/_3$ of the storey in which they occur.	Should openings being proposed within those distances then suitable methods of protection will be required to applied. See assumption regarding the northern boundary fire source features.	Additional Details Required
C3.3	**Separation of external walls and associated openings in different fire compartments** External walls within the distances specified in Table C3.3 of the BCA are to be protected by construction with an FRL not less than 60/60/60 and the associated openings protected in accordance with Clause C3.4 of the BCA. **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	Clause C3.3 does not apply to the external walls of an SOU in a class 2 building. All other floors are expected to only contain single fire compartments. Where separate fire compartments are proposed then the angle between openings will need to be considered.	Complies
C3.4	**Acceptable method of protection** Window openings that are required to be protected are to be protected by internal or external wall wetting sprinklers with windows that are automatic closing or permanently fixed in the closed position, -/60/- fire windows that are automatic closing or permanently fixed closed or -/60/60 automatic closing fire shutters. Doorways are to be protected by internal or external wall wetting sprinklers used with doors that are self-closing or automatic closing, or -/60/30 self-closing or automatic closing fire doors. Other openings, excluding voids, to be protected with internal or external wall wetting sprinklers or	Details are required to be provided at the Construction Certificate approval stage.	Applicable

Clause	Description	Comment	Status
	construction having an FRL not less than -/60/-		
C3.5	**Doorways in fire walls** Doorways in firewalls are to 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
C3.6	**Sliding fire doors** Sliding fire doors are to be held open with an electromagnetic device, which when deactivated allows the door to be fully closed in not less than 20 seconds and not more than 30 seconds. An audible warning device and red flashing warning light must be provided. A sign stating "**WARNING – SLIDING FIRE DOOR"** in capital letters not less than 50 mm high lettering is to be provided on each side of the doorway located directly above the opening.	No sliding fire doors have been proposed.	N/A
C3.7	**Protection of doorways in horizontal exits** Doorways in horizontal exits are to be protected by a fire door, which has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.	No horizontal exits have been demonstrated on the plans.	N/A
C3.8	**Openings in fire-isolated exits** -/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways. A window or other opening in the external wall of the fire isolated exit is to be protected in accordance with Clause C3.4 if it is within 6m of, and exposed to, a window or other opening in the wall of the same building.	No openings have been demonstrated on the plans.	Noted
C3.9	**Service penetrations in fire-isolated exits** Service penetrations other than electrical wiring for essential service installations, pressurisation ducts with an FRL of -/120/60, or water pipes for fire services are permissible.	The services designers are to ensure that no services pass through the fire isolated exits (unless listed in this condition).	Compliance Readily Achievable
C3.10	**Openings in fire-isolated lift shafts** Openings in lift shafts are to be protected by -/60/- fire doors complying with AS1735.11. Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000mm^2 (175 X 200 mm).	Certification from the lift supplier is required for the installation of the new lifts.	Applicable
C3.11	**Bounding construction: Class 2, 3, 4 and 9 buildings** *(NSW variation for Class 9c Buildings and Entertainment Venues)* Doorways opening to public corridors are to be protected with self-closing -/60/30 fire doors.	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
C3.12	**Openings in floors and ceilings for services** Services passing through floors are to be placed within fire resisting shafts or in accordance with	Services penetrations of fire rated structure generally need to be fire-stopped and/or located in fire rated riser shafts. Openings in fire rated elements need to be fire resisting to maintain the function of the elements.	Compliance Readily Achievable

Clause	Description	Comment	Status
	Clause C3.15.	Details are required to be provided at the Construction Certificate approval stage.	
C3.13	**Openings in shafts** In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage, or other service shaft must be protected by: • If it is 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 • A self-closing -/60/30 fire door or hopper, or • An access panel with an FRL of not less than -/60/30, or • If the shaft is a garbage shaft - a door or hopper of non-combustible construction.	Details are required to be provided at the Construction Certificate approval stage.	Applicable
C3.14	-	This clause has deliberately been left blank	-
C3.15	**Openings for service installations** Services penetrations through a building elements (other than an external wall or roof) that are required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with a tested system or with Specification C3.15 Methods and materials used are to be 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. , or differ from a prototype assesmbly of the service, building element and protection method in accordance with Section 4 of AS 4072.1 Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1.	Any system used must be a certified system and installed in accordance with the tested method. Specifications of the methods of fire sealing need to be provided.	Compliance Readily Achievable
C3.16	**Construction Joints** Construction joints in elements required to have a fire resistance with respect to integrity and insulation must be protected.	Construction joints are to be installed in accordance with a tested prototype in accordance with AS1530.4.	Applicable
C3.17	**Columns protected with lightweight construction to achieve an FRL**	Where applicable - columns must be protected in accordance with the identical tested prototype.	Applicable
Section D: Access and Egress			
Part D1 - Provision for Escape			
D1.1	**Application of Part**	-	Applicable
D1.2	**Number of exits required** *(NSW variation for Entertainment Venues)* At least two exits need to serve all areas of every storey as follows: • High rise buildings over 25m in effective height	The provision of egress from the plant rooms will need to be further assessed to ensure compliance with this condition is achieved by means of the DTS provision of the BCA or on a performance basis.	Additional Details Required

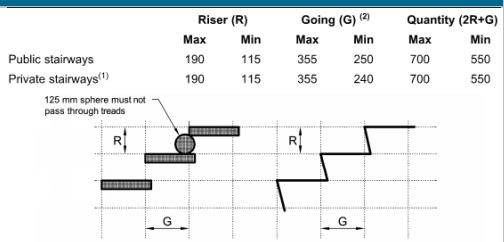
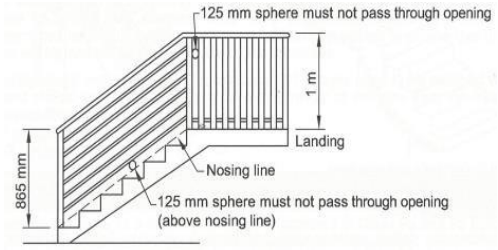
Clause	Description	Comment	Status
	• Class 2 or 3 building subject to C1.5 Access to an exit must be provided without passing through another SOU.	The number of exits available from the plant room level (Level 04) has been flagged with a potential non-compliance. If the roof surface external to the plant room is non-trafficable then this will be required to be addressed on a performance basis.	
D1.3	**When fire-isolated stairways and ramps are required** Every stair in a Class 5 to 9 building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building, or 2 storeys in a non-sprinkler protected building.	The plans currently detail a non-fire isolated stair connecting Levels 00 – Level 03. Options to address this stair on a performance basis have been outlined in clause D1.9.	Additional Details Required
D1.4	**Exit travel distances** No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m. The distance to an exit OR point of choice to two alternative exits from the door of an SOU must not exceed 6m.	The nominated exits in the building are listed in appendix D1.4 of the report. The following areas have been identified with distances exceeding 20m to a point of choice: 1. **Office Floors (East Tower) |** Travel from the east tower to a point of choice exceeds 20m. In anticipation of a fitout the distances to a point of choice should be extended via an alternative solution report. Typically, an upper limit of 29m to a point of choice is the maximum permissible distance justifiable on a performance basis (office floors only). 2. **Level 005 function room / store room and lobby** | Travel to the a point of choice (when relying only on internal fire stairs) exceeds 20m. 3. **Outdoor Recreational Area Level 005 |** Distances to a point of choice from the outdoor recreational area are assumed to exceed 20m. Additional details are required to be provided. The following areas have been identified with exit travel distances exceeding 40m: 1. **Outdoor Recreational Area Level 005 |** Distances to a single exit from the outdoor recreational are assumed to exceed 40m. Additional details are required to be provided. The following areas have been identified with distances exceeding 6m to a point of choice or exit from the door to an SOU: 1. **Level 005 West Tower |** Up to 10.7m measured 2. **North facing apartments on the typical low-rise towers (East & West) |** Up to 8.5m measured 3. **South facing apartments on the typical low-rise towers (East & West) |** Up to 10.7m measured 4. **North facing apartments on the**	Does Not Comply

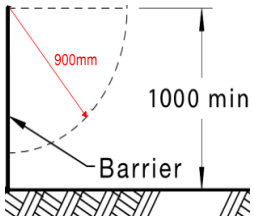
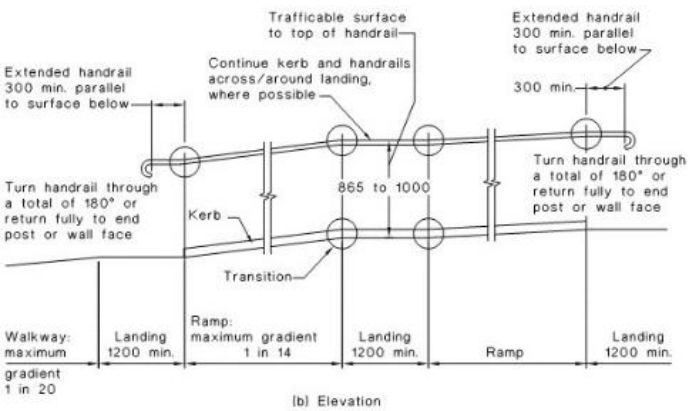
Clause	Description	Comment	Status
		typical high-rise towers (East & West) **|** Up to 8.5m measured 5. **South facing apartments on the typical high-rise towers (East & West)** **|** Up to 10.7m measured 6. **North facing apartments on the level 23 (East & West towers) |** Up to 9m measured 7. **North facing apartments on the level 24 (East & West towers) |** Up to 9m measured 8. **North facing apartments on the level 25 (West tower) |** Up to 9m measured 9. **South facing apartments on the level 25 (West tower) |** Up to 7m measured 10. **North facing apartments on the level 25 (East tower) |** Up to 7m measured 11. **North facing apartments on the level 26 (West Tower) |** Up to 8.5m measured 12. **North facing apartments on the level 26 (East tower) |** Up to 7m measured 13. **North facing apartments on the level 27 (West tower) |** Up to 9m measured Plant room egress on level 04 is to be reassessed by the architect. Currently there are no means accessing the fire stair from the eastern portion (stair pressurisation room) without exiting the building and traversing a potentially non-trafficable surface. Extended travel distances will need to be addressed on a performance basis.	
D1.5	**Distance between alternative exits** The following travel distance limits apply: • ≤ 20m to a single exit or to a point of choice to alternative egress paths, and • ≤ 6m to an exit or point of choice from the door of an SOU, and • ≤ 40m to the closest alternative exit; • ≤ 60m travel distance between alternative exits and not less than 9m between alternative exits; • Exit paths to alternative exits should not converge at any point to be less than 6m apart.	The following areas have been identified with distances between alternative exits exceeding 60m: 1. Nil The distance between exit doors is less than 9m on all scissor stair applications throughout the building.	Does Not Comply
D1.6	**Dimensions of exits and paths of travel to exits** *(NSW variation for Entertainment Venues)*	No issues have been identified based on the plans provided.	Applicable
D1.7	**Travel via fire-isolated exits**	The Fire stairs also discharge into an area which is covered by more than a 3rd of it's perimeter and requires travel to the road or open space at distances greater than 6m.	Does Not Comply

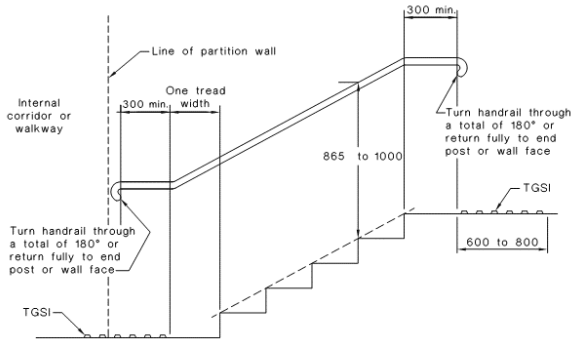
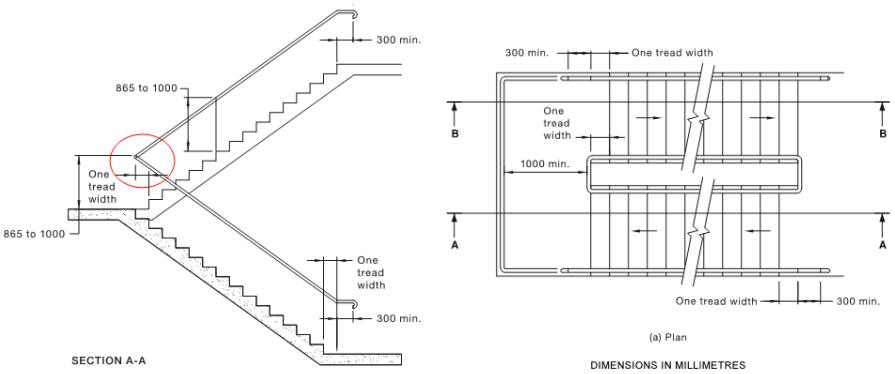
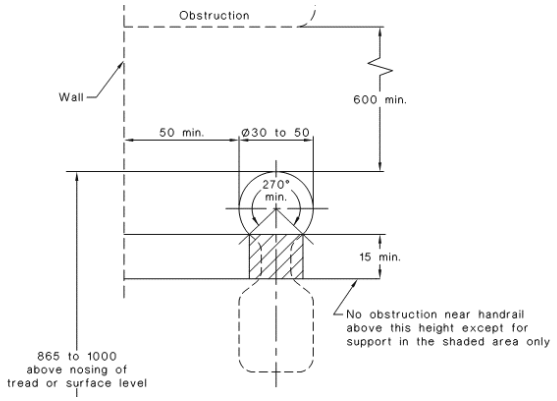
Clause	Description	Comment	Status
		As the discharge of the exits currently necessitates passing within 6m of part of an external wall of the building the external wall & openings within the wall will need to protected in accordance with the requirements of this condition. The external wall within 6m of the path of travel to the road is required to achieve an FRL not less than 60/60/60 and any openings are required to be protected internally in accordance with C3.4 of the BCA.	
D1.8	**External stairways or ramps in lieu of fire-isolated exits** External stairs or ramps may be used instead of fire-isolated stairs to a building under 25m in effective height, subject to: • Stair to be non-combustible construction. • Exit doors onto the stair to be 1-hour fire rated. • Exit paths via the stair must be shielded if within 6m of openings in external wall of building.	-	N/A
D1.9	**Travel by non-fire-isolated stairways or ramps**		N/A
D1.10	**Discharge from exits** *(NSW variation for Entertainment Venues)* An exit must not be blocked nor be capable of being blocked at its point of discharge. The discharge points of alternative exits must be located as far apart as practical.	The discharge points of the building's exits are not in accordance with D1.10.	Does Not Comply
D1.11	**Horizontal exits** Horizontal exits must have a clear area on the side of the fire wall, to which the occupants are evacuating, to accommodate the total number of persons serviced by the horizontal exit of not less than 0.5m^2 per person in any other case	-	N/A
D1.12	**Non-required stairways, ramps or escalators**	The interconnecting commercial lobby stair does not currently meet the requirements of this clause. The stair proposed connects more than 3 storeys.	Does Not Comply
D1.13	**Number of persons accommodated**	Confirmation of the proposed building occupants numbers on the floors outside of residential SOUs will need to be provided.	Additional Details Required
D1.14	**Measurement of distances**	-	Noted
D1.15	**Method of measurement**	-	Noted
D1.16	**Plant rooms, lift machine rooms and electricity network substations: Concession** A ladder may be used in lieu of a stairway as an exit from: a) a plant room with a floor area not more than 100m^2, or b) all but one point of egress from a plant room	The plans would not indicate a reliance on the concessions of D1.16.	N/A

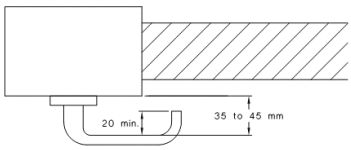
Clause	Description	Comment	Status
	with a floor area not more than 200m^2.		
D1.17	**Access to lift pits** Access requirements apply to lift pits over 3m in depth.	Lift consultant to confirm.	Additional Details Required
D1.18	**Egress from early childhood centres** Every part of a class 9b early childhood centre must be wholly within a storey that provides direct egress to a road or open space These requirements do not apply in a building with a rise in storeys of not more than 2, where the class 9b early childhood centre is the only use in that building.	-	N/A
Part D2 – Construction of Exits			
D2.1	**Application of Part** *(NSW variation for Entertainment Venues)*	-	Applicable
D2.2	**Fire-isolated stairways and ramps** Fire resisting shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
D2.3	**Non-fire-isolated stairways and ramps** Required stairs in a building having a rise in storeys of not more than 2 must be constructed only of reinforced or prestressed concrete, or steel not less than 6mm thick or timber that has a finished thickness of not less than 44mm and an average density of not less than 800 kg/m^3 at a moisture content of 12%.	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
D2.4	**Separation of rising and descending stair flights**	No issues have been identified on the plans.	Complies
D2.5	**Open access ramps and balconies**	-	N/A
D2.6	**Smoke lobbies**	Where a smoke lobby is proposed the floor area of the lobby is to be not less than 6m and is required to be constructed by smoke proof construction.	Applicable
D2.7	**Installations in exits and paths of travel** Electrical meters and motors, distribution boards and telecommunication boards must not be accessed from fire isolated exits and, if located in corridors leading to exits, should occur in non-combustible or fire protective smoke sealed enclosures. No openings to ducts conveying hot products of combustion permitted in required exits. Gas or fuel services not permitted in required exits. Electric or services equipment in paths of travel to exits must be within a non-combustible and smoke sealed enclosure.	Install non-combustible linings to the internal walls, ceiling and doors of relevant cupboards and install smoke seals to the doors.	Applicable

Clause	Description	Comment	Status
D2.8	**Enclosure of space beneath stairs and ramps** If the space below a fire-isolated stairway is within the fire isolated shaft it must not be enclosed to form a cupboard or similar enclosed space. 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.	Confirmation is to be provided if any storage is proposed to be provided under any stair.	Compliance Readily Achievable
D2.9	**Width of required stairways and ramps** A stairway or ramp more than 2m in width is only counted as having a width of 2m unless it is divided by a continuous handrail or balustrade between landings and each division is less than 2m wide.	-	Noted
D2.10	**Pedestrian ramps** Ramps serving as required exit must have a gradient not less steep 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.	-	N/A
D2.11	**Fire-isolated passageways** Fire isolated passageways are to have an FRL equivalent to the fire resisting stair shaft as specified in Specification C1.1 when tested from the outside	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
D2.12	**Roof as open space** The roof is required to have an FRL of not less than 120/120/120 and not incorporate any roof lights or other openings within 3m of the path of travel.	Details are required to be provided at the Construction Certificate approval stage. The egress strategy for the proposed outdoor recreational area will need to be subject to a performance solution report where compliance with the DTS provisions of the BCA cannot be verified.	Additional Details Required
D2.13	**Going and risers** *(NSW variation for Entertainment Venues)* To provide safe passage, stairways must comply with the following: • minimum 2 risers / maximum 18 in each flight • risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max. • Adjacent risers, or between adjacent goings a variation no greater than 5mm is permitted and the largest and smallest riser within the flight or the largest and smallest going within a flight is not to exceed a variation of 10mm. • Under the requirements of AS1428.1-2009 open riser are not permitted. • All treads to be fitted with non-slip finish or non-skid strips. • Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D2.14 when tested in accordance with AS 4586	Further detail of the stairs will need to be provided to confirm compliance	Additional Details Required

Clause	Description	Comment	Status
			
D2.14	**Landings** Ramps Surfaces, stair tread surfaces or nosing strips, and stair landing surfaces, or landing nosing strips to a flight below, must achieve slip-resistance classifications to AS4586-2013 as follows: **Application** / **Dry Surface Conditions** / **Wet Surface Condition** 1:14 or steeper ramps — P4 or R11 — P5 or R12 Ramps of 1:14 to 1:20 — P3 or R10 — P4 or R11 Tread or Landing Surface — P3 or R10 — P4 or R10 Nosing Strip or Landing Strip — P3 — P4	Certification / test reports on the slip resistance of the surfaces will need to be provided on constructed elements.	Additional Details Required
D2.15	**Thresholds** *(NSW variation for Entertainment Venues)* Steps should not occur at doorways without a threshold landing except as follows: • In a building required to be accessible and the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS1428.1, • Or in any other case a single 190mm step is permitted at doors leading to the exterior.	Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway	Applicable
D2.16	**Barriers to prevent falls** *(NSW variation for Entertainment Venues)* Requirements apply to the provision and design of barriers at locations where a person could fall 1m or more. Generally, 125mm maximum gap size limits apply between balusters or rails and a 1m minimum height applies, with alternate dimensions permitted in fire isolated stairs and industrial areas.  Where the level of the surface below is 4m or more, a balustrade or other barrier must not facilitate climbing of horizontal elements between 150mm and 760mm above the floor. Climbable elements cannot be located within	Details are required to be provided at the Construction Certificate approval stage.	Additional Details Required

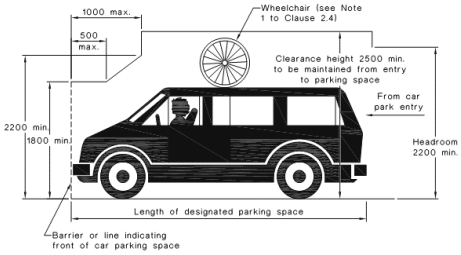
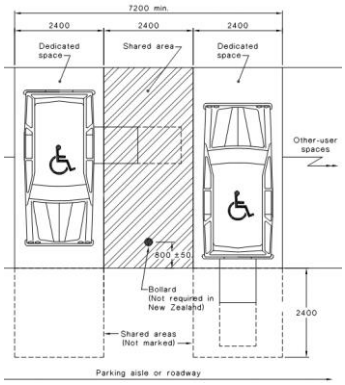
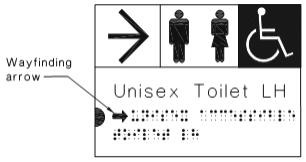
Clause	Description	Comment	Status
	900mm of the top rail of each balustrade where the fall is greater than 4m. This measurement is taken in an arc as seen in the extract below 		
D2.17	**Handrails** Handrails to exits including parts of fire isolated exit serving an area required to be accessible to people with disabilities must comply with Clause 12 of AS1428.1, viz: • Handrails not to obstruct circulation space • 30-50mm diameter • 865-1000mm above nosing line of stairs • 865-1000mm above ramps and landings • Consistent height throughout • 50mm grip clearance and no obstructions to handhold • Continuous at internal (return) landings • Provided with handrail extensions and 180 degree curled ends	Handrail details to be confirmed by the access consultant Handrails are to be provided in compliance with Clause D3.3 and include the following- **Non-Fire Isolated Stairways and Ramps** All stairs and ramps not used as an emergency exit are to have handrails installed on both sides that comply with Clause 10 & 11 of AS1428.1-2009 **Fire Isolated Stairways and Ramps** In Fire Isolated Stairways & Ramps a handrail is required to be installed to at least one side of stair flights and located not less than 865mm above the nosing's of stair treads and the floor surfaces of landings **Consistent Handrail Heights for all stairways** The height of the top of the handrail, measured at a height of between 865mm – 1000mm vertically from the stair nosing shall be consistent throughout the ramp (or stairs) and any landings. All stairs including fire stairs are required to be designed to comply with Clause 12 of AS1428.1 – 2009	Compliance Readily Achievable
	Ramps  (b) Elevation DIMENSIONS IN MILLIMETRES FIGURE 14 RAMP HANDRAILS **Stairways**		

Clause	Description	Comment	Status
	 SECTIONAL VIEW DIMENSIONS IN MILLIMETRES FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY  SECTION A-A (a) Plan DIMENSIONS IN MILLIMETRES **Handrail Profile** 		
D2.18	**Fixed platforms, walkways, stairways and ladders** Platforms, walkways, stairs, ladders and the like that give access to and around plant and equipment, machine rooms, attic spaces and other low use areas of the building are permitted provided that construction details are to AS1657.	Certification to AS1657 is to be provided where plant rooms are proposed to have these fixtures.	Applicable
D2.19	**Doorways and doors** *(NSW variation for Entertainment Venues)* Must not be revolving door, roller shutter or tilt door. Can be fitted with a sliding door if it leads directly to open space and can be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.	Auto sliding doors at the entries into the building must comply with these requirements	Applicable

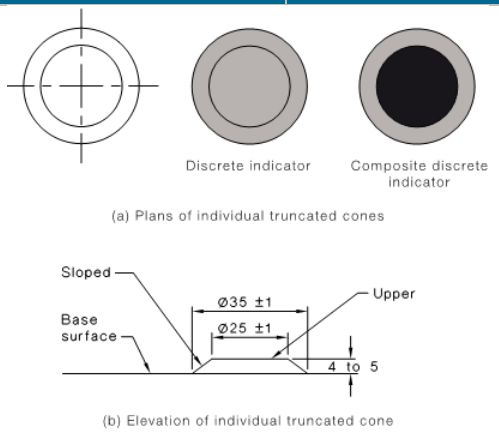
Clause	Description	Comment	Status
D2.20	**Swinging doors** Defined exit doors that serve a part of a building with a floor area over 200m^2 must swing outward in the direction of exit travel. Must not encroach more than 500mm into the required width of the stair or 100mm when fully open and swing in the direction of travel.	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
D2.21	**Operation of latch** *(NSW variation for Entertainment Venues)* Exit doors should be provided with "free handle" egress via a downward or pushing action and, if serving an area accessible to people with disabilities, must have non-slip "D" pull handles with 35-45mm hand clearances.  (a) Isometric view  (b) Plan view Where the latch operation device is not located on the door leaf itself- • 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 hinged door, between 1 m and 2 m from the door leaf in any position; • and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. • braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. Doors in a Class 9b building (other than schools or early childhood centres) serving a storey or room accommodating more than 100 people must be provided with a panic bar.	All exit doors and doors in the path of travel must comply.	Compliance Readily Achievable
D2.22	**Re-Entry from Fire-Isolated Exits** Fire isolated stair doors must facilitate re-entry from within the stair back onto the floor on every 4th level at all times and on all levels in the event of a fire alarm, where serving a health care or aged care building or where the exit stair serves a storey above 25m in effective height. Doors of fire-isolated exits must not be locked from the inside of a fire-isolated exit, unless:	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable

Clause	Description	Comment	Status
	Option 1 • All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; **AND** • On at least every fourth storey, the doors are not able to be locked at all and are sign posted stating re-entry is available at that level. Option 2 • All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; **AND** • An intercommunication or audible/visual alarm system is provided within the stair to assist persons who may accidentally be locked within the stair.		
D2.23	**Signs on doors** Signage in capital letters not less than 20mm high to be provided on doors as follows i. An automatic door held open by an automatic hold-open device: **FIRE SAFETY DOOR - DO NOT OBSTRUCT** ii. for a self-closing door **FIRE SAFETY DOOR** **DO NOT OBSTRUCT** **DO NOT KEEP OPEN** iii. for a door discharging from a fire-isolated exit **FIRE SAFETY DOOR - DO NOT OBSTRUCT**	Under Clause 183 of the Environmental Planning and Assessment Regulation 2000 a notice is to be displayed in a conspicuous location adjacent to a doorway providing access to but not within a fire isolated stairway, passageway or ramp. The words "**OFFENCES RELATING TO FIRE EXITS**" are to be provided in letters at least 8mm high and the remaining words are to be at least 2.5mm high. The notice is to state the following: **OFFENCES RELATING TO FIRE EXITS** It is an offence under the Environmental Planning and Assessment Act 1979 (a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or (b) to interfere with or obstruct the operation of any fire doors, or (c) to remove, damage or otherwise interfere with this notice.	Compliance Readily Achievable
D2.24	**Protection of openable windows** Windows serving a residential bedroom or serving an early childhood centre must be protected where the floor is 2m or more above the external surface below. Window openings must be provided with protection if the floor below the window is 2m or more above the surface beneath in the bedrooms of Class 2 or 3 buildings or Class 9b early childhood centre. Where the window sill is below 1.7m above the floor level, the openable portion of the window must be protected with • a device to restrict the window opening or • a screen with secure fittings A device or screen required must: • not permit a 125mm sphere to pass through the window opening or screen; and	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable

Clause	Description	Comment	Status
	• resist an outward horizontal action of 250N against the window restrained by a device or screen protecting the opening and have a child resistant release mechanism if the screen or device is able to be removed, unlocked or overridden. Where the fall distance from the floor to the surface below is 4m or more or where a release device occurs to a required screen, an additional barrier at 865mm above floor level is required and must be non-climbable with gaps no greater than 125mm between elements.		
D2.25	**Timber stairways: Concession**	-	N/A
NSW D2.101	**Doors in the path of travel in an Entertainment Venue**	-	N/A
Part D3 – Access for People with Disabilities			
D3.1	**General building access requirements** Access is generally required for persons with a disability throughout all areas unless specifically exempted.	Access is required throughout. Consultation with the access consultant is required	Applicable
D3.2	**Access to buildings** External access to the building for people with a disability must be provided: • From main pedestrian entry points at the allotment boundary. • Through the principle pedestrian entrance. • Through at least 50% of all pedestrian entries. • From accessible car parking spaces. • For buildings over 500m², so that an accessible entry occurs within 50m of any non-accessible entry. From any another accessible building on the site.		Applicable
D3.3	**Parts of the building to be accessible** All parts of the building must be accessible to people with a disability except for areas where access would be inappropriate due to the particular use or areas that would pose a health or safety risk to people with a disability. Every ramp, except a fire isolated ramp, must comply with Clause 10 if AS 1428.1. Every stairway, except a fire isolated stairway, must comply with Clause 11 of AS 1428.1. A fire isolated stairway must comply with Clause 11(f) and (g) of AS 1428.1. Every passenger lift must comply with Clause E3.6. Access ways must have passing spaces and turning spaces complying with AS 1428.1. A ramp or passenger lift need not be provided to serve a storey or level other than the entrance storey of a class 5, 6, 7b or 8 building containing not more than 3 storeys and with a floor area of each storey, excluding the entrance floor, of not more than 200m^2. Pile height or pile thickness of carpets shall comply with the requirements of this Clause and AS 1428.1. Refer to access consultant's report.		Applicable
D3.4	**Exemptions** Certain areas may not need to be accessible if the area is deemed inappropriate because of the particular use or the area would pose a health or safety risk for people with disabilities.		Applicable
D3.5	**Accessible carparking** The accessible parking spaces must comply with AS/NZS 2890.6 – 2009. General requirements are:		Applicable

Clause	Description	Comment	Status
	• 2.4m x 5.4m. • 2.2m head clearance for access and egress routes to and from accessible car spaces. • 2.5m head clearances over accessible car spaces. • Flat even surfaces. • Designated and sign posted for disabled users.   		
D3.6	**Signage** Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness in accordance with AS1428.1 must identify every accessible sanitary facility and space with a hearing augmentation system. Every doorway required to be provided with an exit sign under Clause E4.5 is to be provided with braille and tactile signage that states "**EXIT**" and identify the floor level "**LEVEL #**".  Signage must be provided within a room containing hearing augmentation identifying the type of hearing augmentation, the area covered in the room and if receivers are being used and where the receivers can be obtained. Signage identifying ambulant accessible sanitary facilities in accordance with AS 1428.1 must be located on the door of the facility.  	Signage details must be in accordance with AS1428.1 - 2009 and Specification D3.6 of the BCA.	Applicable

Clause	Description	Comment	Status
	  Where the pedestrian entrance is not accessible, directional signage in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance. Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage must be placed 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.		
D3.7	**Hearing augmentation** A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed— i) in a room in a Class 9b building; or ii) in an auditorium, conference room, meeting room or room for judicatory purposes; or iii) at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider An induction loop must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system; or A system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than— A) if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and B) if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and C) if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons; and if the room or space accommodates more than 2000 persons, 55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons.		N/A
D3.8	**Tactile indicators (TGSIs)** Tactile indicators are to be provided to all stairways, ramps and escalators must be provided to warn people who are blind or have a vision impairment that they are approaching: • a stairway, other than a fire-isolated stairway, • an escalator, passenger conveyor or moving walk, • a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp, or • in the absence of a suitable barrier an overhead: ○ obstruction less than 2 m above floor level, other than a doorway ○ an access way meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point Tactile ground surface indicators must comply with sections 1 and 2 of AS/NZS 1428.4.1		Applicable

Clause	Description	Comment	Status
			
D3.9	**Wheelchair seating spaces in Class 9b assembly buildings** Where fixed seating is provided in a Class 9b assembly building, wheelchair seating spaces comply with AS 1428.1 must be provided in accordance with Table D3.9.	-	N/A
D3.10	**Swimming pools** Not less than 1 means of accessible water entry/exit in accordance with Specification D3.10 must be provided. An accessible entry/exit must be by means of— i) a fixed or movable ramp and an aquatic wheelchair; or ii) a zero depth entry and an aquatic wheelchair; or iii) a platform swimming pool lift and an aquatic wheelchair; or iv) a sling-style swimming pool lift. Latching devices on gates and doors forming part of a swimming pool safety barrier need not comply with AS 1428.1.	Details are required to be provided at the Construction Certificate approval stage.	Additional Details Required
D3.11	**Ramps** On an access way a series of connected ramps must not have a combined vertical rise of more than 3.6m. A landing for a step ramp must not overlap a landing of another step ramp or ramp.	Refer to access consultant's report.	Additional Details Required
D3.12	**Glazing on an accessway** On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	Glazed shopfronts will need to have solid and non-transparent decals installed in accordance with AS 1428.1	Applicable
Section E: Services and Equipment			
Part E1 – Fire Fighting Equipment			
E1.1	-	This Clause has deliberately been left blank	-

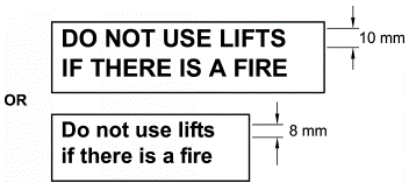
Clause	Description	Comment	Status
E1.2	-	This Clause has deliberately been left blank	-
E1.3	**Fire hydrants** The building requires a fire hydrant system in accordance with AS 2419.1 – 2005. Where a sprinkler system is installed in the building in accordance with AS 2118.1, AS 2118.6 the fire hydrant booster protection requirements of clauses 7.3(c)(ii) and 7.3(d)(iii) of AS 2419.1 do not apply The fire brigade booster assembly is required to be installed in accordance with AS2419.1 – 2005 except that it may be located between 3.5m and 10m of the building where the assembly is protected by an adjacent fire-rated freestanding wall that— • achieves an FRL of not less than 90/90/90; and • 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 • extends to a height of not less than 2 m above finished ground level.	Full compliance with AS2419.1 will be required unless varied via fire brigade approval. The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the internal hydrants and must provide design certification to accompany the drawings certifying the design complies with Clause E1.3 of the BCA and AS2419.1 – 2005 (noting any non-compliances, which are to be addressed as an Alternative Solution). *Note 1: The hydrant hose must extend at least 1m into rooms to be counted for coverage.* *Note 2: If full coverage is not provided from hydrants located within the stairs alone. Intermittent hydrant outlets can be installed to achieve a compliant coverage. The hydrants are to be located not more than 25m from another hydrant to allow for progressive attack.* *Note 3: As the building has an effective height of greater than 25m the system is required to be installed in the configuration of a ring main* *Note 4: as the building has multiple entrances the booster cannot be placed insight of main entrance of the building. This is to be addressed on a performance basis.* *Note 5: where the fire hydrant booster cannot be located in accordance with AS2419.1 a performance solution will be required to address the departure in compliance. Currently the plans depict the "Sprinkler Booster" as being located imbedded into the external wall.* *Note 6: Vertical sections of the hydrant ring main will not be in their own fire isolated exit due to the nature of the scissor stairs* *Note 7: Location of Fire Hydrant / Sprinkler Tank room is required to be assessed by the services engineer to ensure compliance with the relevant standard.*	Performance Solution
E1.4	**Fire hose reels** Fire hose reel coverage to AS2441-2005 is required throughout with hose reels located adjacent to stairs and exits. Where coverage is not achieved with hose reels located Additional hose reels are permitted to be located along the paths of travel to achieve coverage where Hoses are not permitted to pass through fire or smoke doors to achieve hose reel cover. Note: Fire hose reels not required to: -	The hydraulic engineer must ensure that compliant coverage is provided to all class 5, 6, 7a & 7b areas of the building and must provide design certification to accompany the drawings certifying the design complies with Clause E1.4 of the BCA and AS2441 – 2005.	Compliance Readily Achievable

Clause	Description	Comment	Status
	• Class 2, 3, 4, 5 and 9c buildings; • Class 8 electricity network substations; • Classrooms and associated corridors in primary and secondary schools		
E1.5	**Sprinklers** Fire sprinkler protection to AS2118.1-2017 and AS2118.6-2012 as relevant is a mandatory requirement for the project if:- • The building effective height exceeds 25m. (If any part of the development exceeds 25m effective height, all parts of the complex require sprinklers.) • Class 2 building and any other class of building containing a Class 2 part, throughout the whole building including any part of another class, if any part of the building has a rise in storey of 4 or more and an effective height of not more than 25m. • Has an enclosed carpark with more than 40 cars Sprinkler pumps and valves must be accessible from the street. Sprinkler system activation must be linked to an audible occupant warning system. Sprinkler hazard Class under AS2118 needs to be agreed where uncertainty of usage under Appendix 1 of the Code occurs.	The services engineer is to provide detailed design documents and design certification for the sprinkler design confirming compliance Specification E1.5 or Specification E1.5a. Any non-sprinkler protected areas and other AS2118 departures need to be identified and included in the fire engineering review (EP1.4). These areas need to be confirmed but could include: • Apartment balconies. • External under croft areas • Radiation therapy bunkers • PC3 laboratories • Chemical stores • Dangerous goods stores • Flammable liquids stores • MRI/PET areas • Server rooms • Operating theatres (TBC) • Data centres and related UPS • Bridge links to adjacent buildings • Shower recesses or low risk bathroom areas or the like	Applicable
E1.6	**Portable fire extinguishers** Portable Fire Extinguishers are required be installed to Table E1.6 and AS 2444 requirements, at: • Throughout Class 5 buildings • emergency services switchboards • kitchens • flammable liquid stores • at nurses' stations • special risk areas • where fire hose reels are not installed Class 2, 3 or 4 residential areas are to be protected by 2.5kg ABE type fire extinguishers located in common areas on the storey served and located not more than 10m from each sole occupancy unit entry door.		Applicable
E1.7	-	This Clause has deliberately been left blank	-
E1.8	**Fire control centre** A fire control centre for Fire Indicator, Fire Fans Control and Emergency Intercom panels is required for buildings of over 25m in effective height or buildings over 18,000m^2 in area, at a location readily available for firefighting operations and located at or near the main building entry. ***Buildings over 50m in effective height require a fire rated fire control room with prescribed requirements for layout, access, location and equipment with the following features:*** • 2 hr FRL concrete/masonry construction.		Compliance Readily Achievable

Clause	Description	Comment	Status

	• Low hazard linings (per fire stairs)
	• No extraneous services passing through
	• 2 hr fire FRL doors
	• No penetrations through floor over
	• 2-hour fire dampers, etc.
	• Doors must open into room
	• Two access points needed, one from front entry foyer of building and one from public place.
	• Contents required:
	  - FIP
	  - Controls for pumps, fans and other emergency gear
	  - Phone
	  - Whiteboard and pinup board
	  - Plan layout table
	  - Tactical fire plans
	• May also contain
	  - MECP
	  - Lift annunciation panels
	  - Gas/electric controls
	  - Emergency generator backup
	• Dedicated fire isolated pressurisation system to ventilate with 30 air changes required.		

E1.9	**Fire precautions during construction** Fire services are required during construction, including fire hydrants and hose reels which must be active and operational after the building reaches a construction stage effective height of 12m. When the building reaches 12m effective height: • All required hydrants and hose reels must be operational on every storey covered by a roof or floor slab over, except for the two uppermost storeys. • Any required booster connections must be installed.	Further discussion required with builder to determine that this is included in their program. BCA compliance with respect to fire services during construction can be problematic as hydrants with required pressures and flows and booster connections often cannot be achieved at the required time. A temporary fire protection system, possibly with temporary boosters and no fire pumps, may need to be agreed with the fire brigade. This needs to be put in place early in the construction programme and may require liaison with the builder and his fire services contractor.	Applicable
E1.10	**Provisions for special hazards**	-	Noted
Part E2 – Smoke Hazard Management			
E2.1	**Applicable of Part**	Part is not applicable to • open deck car parks • open spectator stands • a Class 8 electricity network substation with a floor area not more than 200m^2 • storerooms, etc. less than 30m^2 • sanitary compartments • plant rooms or the like	Applicable
E2.2	**Smoke hazard management - General requirements** **Residential buildings** The following smoke hazard management systems are required: • Stair pressurisation for fire isolated stairs serving a storey over 25m effective height.		Applicable

Clause	Description	Comment	Status
	• Automatic smoke detection and alarm system complying with AS1670 or AS3786 interconnected smoke alarms within residential areas and sole occupancy units. Common area detection for general occupant warning are also required. The following general requirements apply: • Stair pressurisation and air-handling shutdown activation must be via smoke detectors located per AS1668.1 and within 3m of the lift doors at each level. The system should also be linked to the building occupant audible alarm system. • For buildings above 25m in effective height, activation of any residential corridor alarm should sound an audible warning to Clause 4.3.4 of AS1670.4 throughout all apartments to achieve a sound level of 75 dB(A) at the bedhead within the apartment. **Retail buildings** The following smoke hazard management systems are required: Air handling plant not forming part of a smoke hazard management system must be installed to operate as a zoned smoke control system under AS1668.1, or should shut down in fire mode and be fitted with dampers to prevent smoke spread between different fire compartments. **Commercial buildings** The following smoke hazard management systems are required for the commercial portions: • Zone pressurisation system between the vertically separated fire compartments in accordance with AS1668.1		
E2.3	**Provisions of special hazards**	-	Noted
Part E3 – Lift Installations			
E3.1	**Lift installations** Electric and electrohydraulic lifts must comply with the design requirements of BCA Specification E3.1.	Certification of lift design to be provided	Applicable
E3.2	**Stretcher facility in lifts** Buildings greater than 12m in effective height require a lift sized to accommodate a stretcher of 2m x 0.6m x 1.4m high. The lift must serve every level to which lift access is provided.	Ensure a suitably sized lift serves each level.	Applicable
E3.3	**Warning against use of lift in fire** Warning signage is required at lift doors advising that lifts should not be used in the event of a fire.	Signage to be installed stating. 	Applicable
E3.4	**Emergency lifts** Emergency lifts of prescribed size, operation and fire isolation are required in buildings where: • the building has an effective height over 25m, or • a patient care area occurs in a health care building at a level that does not have direct access to a road or open space. ***Where more than two passenger lifts serve a storey, two emergency lifts must be provided, and these must be in separate shafts if multiple lift shafts occur.*** The following requirements apply to an emergency lift: • ***Must serve all storeys served by a passenger lift.*** • ***Must be contained in a fire rated shaft.*** • ***If the building effective height exceeds 75m, must have a 600kg rating if not provided with a stretcher facility or a 900kg rating if stretcher facility is provided.***		Additional Details Required

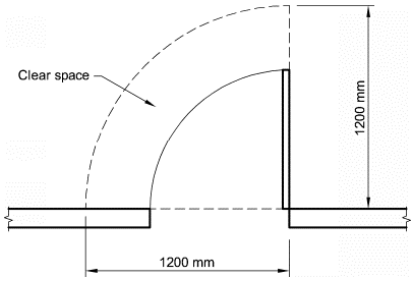
Clause	Description	Comment	Status
	• If serving a patient care area in a health care building, have minimum clear car dimensions of 2280mm depth, 1600mm width and 2300 mm height. Doors must be 1300mm wide and 2100mm high. (All dimensions measured clear of all obstructions including handrails.) If serving a patient care area in a health care building, must be connected to a standby power system where installed.		
E3.5	**Landings**	-	Noted
E3.6	**Passenger lifts** Every passenger lift must be one of the types identified n Table E3.6a, have accessible features in accordance with Table E3.6b and not reply on a constant pressure device for its operation if the lift car is fully enclosed.	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
E3.7	**Fire service control** Where lifts serve a storey above 12m in effective height: • A fire service control switch is required for each lift or lift group. • A lift car fire service drive control is required for each lift.	Certification of lift design to be provided	Applicable
E3.8	**Residential care buildings**	-	N/A
E3.9	**Fire service recall control switch** The fire service control switch must be located at the landing nominated by the appropriate authority and, when activated, must return all lifts to the nominated floor. If a lift car drive control has been activated, it shall override the landing fire service control switch.	Certification of lift design to be provided	Applicable
E3.10	**Lift car fire service drive control switch** The lift car service drive control must be activated from within the lift car. The switch is to be located between 600mm and 1500mm above the lift car floor and be labelled '**FIRE SERVICE**" in indelible white lettering on red background. The "**OFF**" and "**ON**" positions are to be identified.	Certification of lift design to be provided	Applicable
Part E4 – Emergency Lighting, Exit and Warning Systems			
E4.1	**-**	This clause has been intentional left blank	-
E4.2	**Emergency lighting requirements** Emergency lighting is to be provided throughout the building.	Emergency lighting is to be provided in: • every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway. • Every passageway, hallway, corridor or the like, that is part of the path of travel to an exit. • In every room having a floor area more than 100m^2 that does not open to a	Compliance Readily Achievable

Clause	Description	Comment	Status

		corridor or space that has emergency lighting or to a road or open space.
		• In any room having a floor area more than 300m^2.
		• In every required non-fire isolated stairway
		• To every room or space that has public access in a Class 6 building if:
		  • the floor area is more than 300m^2;
		  • or if any point on the floor is more than 20m from the nearest doorway opening directly to the road or open space; or
		  • if the egress involves a vertical rise within the building of more than 1.5m.	

E4.3	**Measurement of distances**	-	Noted
E4.4	**Design and operation of emergency lighting** Emergency lighting must comply with to AS2293.1	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
E4.5	**Exit signs** 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 horizontal exit 4. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting.	Compliance Readily Achievable
E4.6	**Direction signs** *(NSW variation for Entertainment Venues)* 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		Applicable
E4.7	**Class 2 and 3 buildings and Class 4 parts: Exemptions**	This exemption can be applied to the class 2 portions of the building.	Applicable
E4.8	**Design and operation of exit signs** 1. Exit signs are to operate in accordance with AS 2293.1. 2. Photo luminescent exit sign are to comply with Specification E4.8	-	Applicable
E4.9	**Emergency warning and intercom systems** An emergency warning and intercom system complying with AS 1670.4 must be installed throughout the building.	Details demonstrating compliance and design certification will be required from services consultants at Construction Certificate stage.	Applicable

Clause	Description	Comment	Status
Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0	**Water proofing of external walls** Weatherproofing of external wall systems must be in accordance with BCA Verification Method FV1.	A test report on the proposed wall system is to be provided. The test report must include the following information: (i) Name and address of the person supervising the test. (ii) Test report number. (iii) Date of the test. (iv) Cladding manufacturer's name and address. (v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any. (vi) Test sequence with the pressures used in all tests. (vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing.	Applicable
F1.1	**Stormwater drainage** Stormwater drainage must comply with AS/NZS 3500.3.	Hydraulic drawings and design certification to be provided at Construction Certificate stage.	Applicable
F1.2	-	This clause has deliberately been left blank	-
F1.3	-	This clause has deliberately been left blank	-
F1.4	**External above ground membranes** External waterproofing membrane systems for roofs, decks, balconies and the like must comply with AS4654 Parts 1 and 2.	The standard membrane detailing for waterproofing including minimum upturn termination lengths, requirements for stepped balcony details at doorways and windows and provision of continuous grates where stepping does not occur.	Applicable
F1.5	**Roof coverings**	Details are required to be provided at the Construction Certificate approval stage.	Compliance Readily Achievable
F1.6	**Sarking** Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.	-	Applicable
F1.7	**Water proofing of wet areas in buildings** Water proofing of wet areas within a building to comply with AS 3740.	Compliant waterproofing and water resisting requirements for building elements in wet areas are required throughout the building. Details can be identified in Table F1.7 of BCA 2019 Amendment 1.	Additional Details Required
F1.8	-	This clause has deliberately been left blank	-
F1.9	**Damp-proofing** Moisture from the ground must be prevented from reaching the lowest floor timber and the walls above the lowest floor joists, the walls above the dam proof course and the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. Damp proof course must consist of a material that complies with AS/NZS 2904 or an impervious		Applicable

Clause	Description	Comment	Status
	termite shield in accordance with AS 3660.1.		
F1.10	**Damp-proofing of floors on the ground** A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab.		Applicable
F1.11	**Provision of floor wastes** The floor of each bathroom and laundry in each sole occupancy of the Class 2 and 3 building portions must have a floor waste and the floor graded to the floor waste to permit drainage of water.		Applicable
F1.12	**Subfloor ventilation** The lower ground sub floor space is to be cleared of all building debris and vegetation and be cross ventilated in accordance with Table F1.12 by evenly distributed openings provided in the external walls Additionally the sub floor space is to contain no dead air spaces and be graded to prevent water ponding under the building.		N/A
F1.13	**Glazed assemblies** 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.		Applicable
Part F2 – Sanitary and Other Facilities			
F2.1	**Facilities in residential buildings**	Each SOU is required to contain: - A kitchen sink and facilities for the preparation and cooking of food. - Bath or shower - Closet pan - Washbasin - Laundry facilities	Applicable
F2.2	**Calculation of number of occupants and fixtures**	-	Noted
F2.3	**Facilities in Class 3 to 9 buildings** Toilet facilities are required in appropriate numbers based on the number of persons accommodated.	Refer to appendix F2.3 of this report.	Applicable
F2.4	**Accessible sanitary facilities** Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey.	Class 2 Portions: Only required where sanitary facilities are provided on common property. Class 5, 6 & 7 Portions: required on every storey containing sanitary facilities	Applicable
F2.5	**Construction of sanitary compartments** Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from outside.	All hinged doors that swing inward to sanitary facilities and do not comply with achieving a 1200mm clearance to pan are required to be installed with lift-off hinges 	Applicable
F2.6	**Interpretation: Urinals and washbasins**	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
F2.7	*(NSW variation – Deleted)*	-	-

Clause	Description	Comment	Status
F2.8	**Waste management**	-	N/A
F2.9	**Accessible adult change facilities** Note: applies to- • Shopping centre >3,500 people • Sports venue >35,000 people • Swimming pool >70m perimeter • Museum, art gallery, theatre >1,500 patrons • Airport terminal	-	N/A
Part F3 – Room Heights			
F3.1	**Height of rooms and other spaces** Generally, a minimum ceiling height of 2.4m is required throughout. Corridors, kitchens, laundries are permitted to have a ceiling height not less than 2.1m		Applicable
Part F4 – Light and Ventilation			
F4.1	**Provision of natural light** Natural lighting aggregating 10% of room floor area is required as follows: • To all habitable rooms in residential buildings. • In bedrooms and dormitories of hotels, motels and the like. • To rooms used for sleeping in health care and aged care buildings. To school classrooms and early childhood centres.		Applicable
F4.2	**Methods and extent of natural lighting**	Windows and roof lights are permitted to be used as a source of natural light.	Applicable
F4.3	**Natural light borrowed from adjoining room**	Glazed panels are able to be utilised to borrow natural light from adjoining rooms.	Applicable
F4.4	**Artificial lighting** The artificial lighting system must comply with AS/NZS 1680.0.	Design details and certification from an electrical engineer is required	Applicable
F4.5	**Ventilation of rooms** *(NSW variation for Public Health Regulation)* Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F4.6 or mechanical ventilation complying with the requirements of AS1668.2 as required by Clause F4.5 of the BCA.	Design details and certification from an mechanical engineer is required	Applicable
F4.6	**Natural ventilation**	Natural ventilation may be provided by a operable window or other device.	Applicable
F4.7	**Ventilation borrowed from adjoining room**	Rooms opening onto another room in an SOU with an operable window or other device are able to be utilised to borrow natural ventilation.	Applicable
F4.8	**Restriction on location of sanitary compartments**	The sanitary facilities cannot open directly into; - a kitchen / pantry - a workplace normally occupied by more than one person The design may be addressed via compliance with F4.9	Additional Details Required
F4.9	**Airlocks**	In a sole occupancy unit in a class 2 building	Additional

Clause	Description	Comment	Status
		access to a sanitary compartment is required via an airlock, hallway or other room. Alternatively, the sanitary facility needs to be provided with mechanical exhaust ventilation .	Details Required
F4.10	-	This clause has intentionally been left blank	-
F4.11	**Carparks** Basement carparks must be provided with a system of mechanical ventilation complying with AS 1668.2	-	N/A
F4.12	**Kitchen local exhaust ventilation** A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2, where: • any cooking apparatus has a total maximum electrical power input exceeding 8kW, or • a total gas power input exceeding 29 MJ/h, or the total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8 MJ gas per metre square of the room or enclosure.		Applicable
Part F5 – Sound Transmission and Insulation			
F5.1	**Application of Part** Applicable to Class 3, 3 and 9c buildings	**A detailed assessment will need to be undertaken by a qualified acoustic consultant at the Construction Certificate stage to verify compliance.**	Applicable
F5.1	**Determination of airborne sound insulation ratings** Construction required to have an airborne sound insulation rating must have the value for weighted sound reduction index (R_w) or weighted sound reduction index with spectrum adaptation term ($R_w + C_{tr}$) determined in accordance with AS/NZS1276.1 or ISO717.1 using result from laboratory measurements, or comply with Specification F5.2 of the BCA.		Compliance Readily Achievable
F5.3	**Determination of impact sound insulation ratings** A floor required to have an impact sound insulation rating must have the required value for weighted normalised impact sound pressure level with spectrum adaptation term ($L_{n,w}+C_I$) determined in accordance with AS/ISO 717.2 using results from laboratory measurements or comply with Specification F5.2 of the BCA. Walls that are required to have an impact sound insulation rating must be of discontinuous construction.		Compliance Readily Achievable
F5.4	**Sound insulation rating of floors** Floors separating sole occupancy units or separating sole occupancy units from a plant room, lift shaft, public corridor, public lobby or the like or parts of different classifications must have an $R_w + C_{tr}$ of not less than 50 and an $L_{n,w} + C_I$ of not more than 62.		Compliance Readily Achievable
F5.5	**Sound insulation rating of walls** Walls must have an $R + C_t$ of not less than 50 if it separates sole occupancy units and an R_w of 50 if it separates a sole occupancy unit from a plant room, lift shaft, public corridor, public lobby or the like or parts of different classifications. Compliance with F5.3(b) is required if the wall separates a bathroom, sanitary compartment, laundry or kitchen in one sole occupancy unit from a habitable room (excluding a kitchen) in another adjoining unit or a sole occupancy unit from a plant room or lift shaft. Doors incorporated the walls that separate sole-occupancy units from a stairway, public corridor, public lobby or the like, provided the door assembly has an R_w not less than 30. Where a wall required to have sound insulation has a floor above, the wall must continue to the underside of the floor above or a ceiling that provides the sound insulation required for the wall. Where a wall required to have sound insulation has a roof above, the wall must continue to the underside of the roof above or a ceiling that provides the sound insulation required for the wall.		Compliance Readily Achievable

Clause	Description	Comment	Status
F5.6	**Sound insulation rating of internal services** Services passing through more than one sole-occupancy unit must be separated from the rooms by construction with an $R_w + C_{tr}$ (airborne) not less than: a) 40 if the adjacent room is a habitable room (other than a kitchen); or b) 25 if the adjacent room is a kitchen or non-habitable room. Note if a stormwater pipe passes through a sole –occupancy unit it must be separated in accordance with (a) and (b).		Compliance Readily Achievable
F5.7	**Sound isolation pumps** A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.		Compliance Readily Achievable
Part F6 – Condensation management			
F6.1	**Application of part** This part applies to a sole-occupancy unit of a Class 2 building or Class 4 part of a building.		Applicable
F6.2	**Pliable building membrane** Where a pliable building membrane is installed in an external wall it must: • comply with AS/NZS 4200.1; and • be installed in accordance with AS 4200.2; and • be a vapour permeable membrane for climate zones 6, 7 and 8; and • be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. 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.		Applicable
F6.3	**Flow rate and discharge of exhaust systems** An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of— • 25 L/s for a bathroom or sanitary compartment; and • 40 L/s for a kitchen or laundry. Exhaust from a kitchen must be discharged directly or via a shaft or duct to outdoor air. Exhaust from a bathroom, sanitary compartment, or laundry must be discharged— • directly or via a shaft or duct to outdoor air; or to a roof space that is ventilated in accordance with F6.4.		Applicable
F6.4	**Ventilation of roof spaces** 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. Openings required above must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is greater than 22°, or 1/150 of the respective ceiling area if the roof pitch is less than or equal to 22°. 30% of the total unobstructed area required above must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.		Applicable
Section G: Ancillary Provisions			
Part G1- Minor Structures and components			
G1.1	**Swimming pools** *(NSW variation for swimming pools)*		Applicable
G1.2	**Refrigerated chambers, strong rooms and vaults**		Applicable
G1.3	**Outdoor play spaces**	-	N/A

Clause	Description	Comment	Status
	Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which complies with AS 1926.1.		
NSW G1.101	**Provision for cleaning windows** A safe manner of cleaning windows is to be provided as windows are located 3 or more storeys above ground level.	The windows must either be able to be cleaned wholly from within the building, or a method complying with the Construction Safety Act 1912 and Regulations is required.	Applicable
Part G2 - Boilers, pressure vessels, heating appliances, fire places, chimneys and flues			
G2.1	-	This clause has intentionally been left blank	-
G2.2	**Installation of appliances**	-	N/A
G2.3	**Open fireplaces**	-	N/A
G2.4	**Incinerator rooms**	-	N/A
Part G3 - Atrium Construction			
G3.1	**Application of Part**	-	N/A
Part G4 - Construction in Alpine Areas			
G4.1	**Application of Part**	-	N/A
Part G5 - Construction in Bushfire Prone Areas			
G5.1	**Application of Part**	-	N/A
Part G6 – Occupiable outdoor areas			
G6.1	**Application of Part** Applies to occupiable outdoor areas in addition to other deemed-to-satisfy provisions of the BCA. Part G6 takes precedent where there is a difference to the deemed-to-satisfy provisions of Sections C, D, E, F & G. Except for clause G6.2, Part G6 does not apply to occupiable outdoor areas of individual resident rooms or outdoor occupiable areas less than 10m^2.		Applicable
G6.2	**Fire hazard properties** A lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index ($SMOGRA_{RC}$)	Proposed materials used in outdoor occupiable areas are subject to C1.10 requirements as this clause.	Additional Details Required
G6.3	**Fire separation** For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.		Additional Details Required
G6.4	**Provision for escape** For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.	Egress requirements under Part D1 apply to occupiable outdoor areas.	Additional Details Required
G6.5	**Construction of exits**	Construction of exits requirements under	Additional

Clause	Description	Comment	Status
	For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	Part D2 apply to occupiable outdoor areas.	Details Required
G6.6	**Fire fighting equipment** Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	Fire fighting equipment required under Part E1 to be designed to include occupiable outdoor areas.	Additional Details Required
G6.7	**Lift installations** For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.	Lift designs required under Part E3 to be designed to include occupiable outdoor areas.	Additional Details Required
G6.8	**Visibility in an emergency, exit signs and warning systems** For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.	Emergency lighting, exits signs and emergency warning and intercom systems to be designed to include occupiable outdoor areas.	Applicable
G6.9	**Light and ventilation** For the purposes of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.		Applicable
G6.10	**Fire orders** For the purposes of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.		N/A
Section H: Special Use Buildings – Auditoriums, Public Halls, Public Transport Buildings			
Part H1 - Class 9b Buildings			
H1.1	**Application of Part** *(NSW variation for Entertainment Venues)* For a Class 9b building that is an entertainment venue refer to NSW Part H101.	-	N/A
NSW Part - H101 Entertainment Venues other than Temporary Structures and Drive-In Theatres			
H101.1	**Application of Part** This Part applies to every entertainment venue as described in the Environmental Planning and Assessment Regulation 2000.	-	N/A

Clause	Description	Comment	Status
NSW Part - H102 Temporary Structures			**N/A**
NSW Part - H103 Drive-In Theatres			**N/A**
Part H2 - Public Transport Buildings			**N/A**
Part H3 - Farm Building and Farm Sheds			**N/A**
NSW Section J: Energy Efficiency Energy Efficiency for buildings requires buildings to reduce greenhouse gas emissions by efficiently using energy. A building's services must have features that facilitate the efficient use of energy. The discipline of Energy Efficiency with the BCA has become a specialised field where compliance with BCA Section J is to be certified with the issue of a Certificate of Compliance – Design from the relevant Services Engineer/Consultant. The purpose of this section is to provide a brief explanation of which areas are to achieve compliance with BCA Section J – Energy Efficiency during design and construction. The BCA should be referenced for exact requirements, clarification and further explanation. ***ESD consultant to review the proposed works and determine compliance.***			
Section J	**Energy efficiency measures** Energy efficiency measures are prescribed for the following building elements to limit energy consumption:- • Building fabric • External glazing • Building sealing • Air movement. • Air-conditioning and ventilation systems. • Artificial lighting and power • Hot water supply • Access for maintenance	Compliance assumed, although further information is required to confirm compliance. A performance based BCA JV3 assessment may be adopted for the project if compliance with BCA deemed to satisfy provisions are problematic. ***ESD consultant to review the proposed works and determine compliance.***	Additional Details Required
NSW Subsection J(A) Energy Efficiency - Class 2 Buildings			
NSW Part J(A)1 - Building Fabric			
NSW J(A) 1.1	**Application of Part** Applies to thermal insulation where the Development Consent specifies that the insulation is to be provided. ***ESD consultant to review the proposed works and determine compliance.***		Applicable
NSW J(A) 1.2	**Compliance with BCA provisions** The buildings are required to comply with the national provisions of Clause J0.2(b) to (e) except the reference to "Where required" in J1.2 is deemed to refer to "Where a development consent" specifies that insulation is to be provided. ***ESD consultant to review the proposed works and determine compliance.***		Applicable
NSW Part J(A)2 - Building Sealing			
NSW J(A) 2.1	**Application of Part** Applies to elements forming part of the envelope, excluding; • a building in climate zone 2 and 5 where the only means of air-conditioning is by using an evaporative cooler, and • a building ventilation opening that is necessary for the safe operation of a gas appliance, and parts that cannot be fully enclosed. ***ESD consultant to review the proposed works and determine compliance.***		Applicable
NSW J(A) 2.2	**Compliance with BCA provisions**	Class 2 parts of a building must comply with the national provisions of J3.2, J3.3, J3.4, J3.5, J3.6 and J3.7	Applicable

Clause	Description	Comment	Status
J3.2	**Chimneys and flues**		Applicable
J3.3	**Roof lights**		Applicable
J3.4	**Windows and doors** A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space or a habitable room.		Applicable
J3.5	**Exhaust fans** A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space or a habitable room in climate zones 4, 6, 7 and 8.		Applicable
J3.6	**Construction of roofs, walls and floor** Roofs, external walls, external floors and any opening must be constructed to minimise air leakage in accordance with Clause J3.6(b) when forming part of the external fabric of a conditioned space or a habitable room or a public area in climate zones 4, 6, 7 and 8.		Applicable
J3.7	**Evaporative coolers**		Applicable
NSW Part J(A)3 - Air-Conditioning and Ventilating Systems			
NSW J(A)3.1	**Application of Part**	Applies to Class 2 parts of building . ***ESD consultant to review the proposed works and determine compliance.***	Applicable
NSW J(A)3.2	**Compliance with BCA provisions**	Class 2 parts of a building must comply with the national provisions of J5.2(a) to (d) and (f) to (g), J5.3, J5.4.	Applicable
J5.2	**Air conditioning and ventilating systems** An air-conditioning unit or system must comply with the requirements of Clause J5.2 and Specification J5.2		Applicable
J5.3	**Time switch** A time switch in accordance with Specification J6 must be provided to control: • an air-conditioning system of more than 10kWr, or • a ventilation system with an air flow rate or more than 1000L/s, or a heating systems of more than $10kW_{heating'}$		Applicable
J5.4	**Heating and chilling systems** Systems that provide heating or chilling for air-conditioning systems must comply with Clause J5.4 and Specification J5.4.		Applicable
NSW Part J(A)4 - Hot Water Supply			
NSW J(A) 4.1	**Application of Part**	ESD consultant to review the proposed works and determine compliance.	Applicable
NSW J(A) 4.2	**Compliance with BCA provisions**	Class 2 parts of the building need to comply with the national BCA provisions of Clause J7.2. The class 2 portions need not comply with J7.3 & J7.4 as those matters are addressed under BASIX.	Applicable
J7.2	**Hot water supply** A hot water system, other than a solar hot water supply system in climate zones 1, 2 and 3, must be designed and installed in accordance with Section 8 of AS/NZS 3500.4.		Applicable

Clause	Description	Comment	Status
NSW Part J(A)5 - Facilities for Energy Monitoring			
NSW J(A) 5.1	**Application of Part**	This Part applies to Class 2 buildings except within SOU's. ***ESD consultant to review the proposed works and determine compliance.***	Applicable
NSW J(A) 5.2	-	This clause has deliberately been left blank	-
NSW (J) 5.3	**Compliance with BCA provisions**	Class 2 parts of the building must comply with the national BCA provisions of J8.3 below.	Applicable
J8.3	**Facilities for energy monitoring** A building or sole-occupancy unit with a floor area of more than 500 m^2 must have the facility to record the consumption of gas and electricity. A building with a floor area of more than 2,500 m^2 must have the facility to record individually the energy consumption of A/C plant, lighting, appliances, central hot water supply, internal transport devices and other ancillary plant. The provisions of (b) do not apply to a Class 2 building with a floor area of more than 2,500 m^2 where the total area of the common areas is less than 500 m^2		Applicable
NSW Subsection J(B) Energy Efficiency - Class 5 to 9 Buildings			
NSW J(B)1 - Compliance with BCA Provisions. Class 3 and Class 5 to 9 buildings must comply with all of the provisions of the national **Section J** that are applicable to the relevant classifications, except as varied by **NSW J3.1** Application of Part. ***ESD consultant to review the proposed works and determine compliance.***			
Part J0 - Energy Efficiency			
J0.1	**Application of Part**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J0.2	**Heating and cooling loads of sole-occupancy units of a Class 2 building or a Class 4 part**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J0.3	**Ceiling fans**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J0.4	**Roof thermal breaks**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J0.5	**Wall thermal breaks**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
Part J1 - Building Fabric			
J1.1	**Application of Part**	Applies to building elements forming the envelope. The building is located within Climate Zone 5.	Applicable
J1.2	**Thermal construction – general** Insulation must comply with AS/NZS 4859.1 and be installed in accordance with Clause J1.2.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable

Clause	Description	Comment	Status
J1.3	**Roof and ceiling construction** A roof or ceiling must achieve a Total R-Value greater than or equal to R3.7 for an upward direction of heat flow. The solar absorptance of the upper surface of a roof must not be more than 0.45.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J1.4	**Roof lights**	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J1.5	**Walls and glazing** The Total System U-Value of wall-glazing construction must not be greater than U1.1. The Total System U-Value of wall-glazing construction must be calculated in accordance with Specification J1.5a and the requirements of this clause. The solar admittance of externally facing wall-glazing construction must be greater than the values specified in Table J1.5c and are to be calculated in accordance with Specification J1.5a.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J1.6	**Floors** The floor must achieve a Total R-Value of 2.0 for downwards heat flow.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
Part J2 - Glazing			-
Part J3 - Building Sealing			
J3.1	**Application of Part**	Applies to elements forming the envelope. Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J3.2	**Chimneys and flues**	-	N/A
J3.3	**Roof lights**	-	N/A
J3.4	**Windows and doors** A seal to restrict air infiltration must be fitted to each edge of an external door, openable external window or the like when serving a conditioned space.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J3.5	**Exhaust fans** A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J3.6	**Construction of roofs, walls and floors** Roofs, walls, floors and any opening must be constructed to minimise air leakage in accordance with Clause J3.6(b) when forming part of the external fabric of a conditioned space. These requirements do not apply to openings, grilles and the like required for smoke hazard management.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Applicable
J3.7	**Evaporative coolers**	-	N/A

Clause	Description	Comment	Status
Part J4 - This Part has deliberately been left blank			
Part J5 - Air-conditioning and Ventilation Systems			
J5.1	**Application of Part**	Applies to the building.	Applicable
J5.2	**Air-conditioning system control** An air-conditioning system must be capable of being deactivated when the building or part of a building served by that system is not occupied. An air-conditioning system must comply with requirements specified under this clause.	The mechanical engineer is to design and certify the A/C system to comply with the requirements under this Clause.	Applicable
J5.3	**Mechanical ventilation system control** The mechanical ventilation system must comply with the requirements specified under this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.4	**Fan systems** Fans, ductwork and duct components that form part of an air-conditioning system or mechanical ventilation system must comply with the requirements of thus clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.5	**Ductwork insulation** Ductwork and fittings in an air-conditioning system must be provided with insulation complying with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.6	**Ductwork sealing** Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.7	**Pump systems** Pumps and pipework that form part of an air-conditioning system must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.8	**Pipework insulation** Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation complying with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.9	**Space heating** A heater used for air-conditioning or as part of an air-conditioning system must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.10	**Refrigerant chillers** An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable

Clause	Description	Comment	Status
	J5.10b when determined in accordance with AHRI 551/591.		
J5.11	**Unitary air-conditioning equipment** Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
J5.12	**Heat rejection equipment** The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air-cooled condenser must have a motor rated power in accordance with the requirements of this clause	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause.	Applicable
Part J5 - Artificial Lighting and Power			
J6.1	**Application of Part**	Applies to the building.	Applicable
J6.2	**Artificial lighting** For artificial lighting, the aggregate design illumination power load must not exceed the sum of the allowances obtained by multiplying the area of each space by the maximum illumination power density in Table J6.2a. Aggregate design illumination power is to be calculated in accordance with requirements of this clause.		Applicable
J6.3	**Interior artificial lighting and power control** The power control for artificial interior lighting must comply with the requirements of Clause J6.3. Artificial lighting of a room or space must be individually operated by a switch or other control device in accordance with Specification J6.		Applicable
J6.4	**Interior decorative and display lighting** Interior decorative and display lighting, such as for foyer mural or art displays, must be controlled separately from other artificial lighting as specified in Clause J6.4. Window display lighting must be controlled separately from other display lighting.		Applicable
J6.5	**Artificial lighting around the perimeter of a building** Artificial lighting around the perimeter of a building must be controlled by a daylight sensor or time switch as specified in Clause J6.5.		Applicable
J6.6	**Boiling water and chilled water storage units** Power supply to a boiling water or chilled water storage unit must be controlled by a time switch in accordance with Specification J6.		Applicable
J6.7	**Lifts** Lifts must be configured to:- • ensure artificial lighting and ventilation in the car are turned off when it is unused for 15 minutes; • achieve the idle and standby energy performance level in Table 6.7a; achieve the energy efficiency class in Table 6.7b; or if a dedicated goods lift energy efficiency class D in accordance with ISO 25745-2.		Applicable
J6.8	**Escalators and moving walkways**	-	N/A
Part J7 - Heated Water Supply and Swimming Pool and Spa Pool Plant			
J7.1	-	This Clause has deliberately been left blank	-

Clause	Description	Comment	Status
J7.2	**Heated water supply** A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three – Plumbing Code of Australia	-	Applicable
J7.3	**Swimming pool hearing and pumping**	Details are required to be provided at the Construction Certificate approval stage.	Additional Details Required
J7.4	**Spa pool heating and pumping**	Details are required to be provided at the Construction Certificate approval stage.	Additional Details Required
Part J8 - Facilities for Energy Monitoring			
J8.1	**Application of Part**	Applies to the building.	Applicable
J8.2	-	This Clause has deliberately been left blank	-
J8.3	**Facilities for energy monitoring** A building with a floor area of more than 2,500m^2 must have the facility to record individually the energy consumption of: I. air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans; and II. artificial lighting; and III. appliance power; and IV. central hot water supply; and V. internal transport devices including lifts, escalators and travelators where there is more than one serving the building; and VI. other ancillary plant. Energy meters required by (b) must be interlinked by a communication system that collates the time-of-use energy consumption data to a single interface monitoring where it can be stored, analysed and reviewed.	An energy monitoring facility is required for the building. Details are required to be provided at the Construction Certificate approval stage.	Applicable

15. Appendix A – Referenced Documentation

The following documentation was used in the preparation of this report:

Drawing No.	Title	Issue	Date	Drawn By
DA.01.01	Site Plan	2	06.07.21	Bates Smart Pty Ltd
DA.01.02	Site Analysis Plan	2	06.07.21	Bates Smart Pty Ltd
DA.03.B1	Level B1 Plan	1	21.09.21	Bates Smart Pty Ltd
DA.03.00	Level 00 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.01	Level 01 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.02	Level 02 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.03	Level 03 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.04	Level 04 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.05	Level 05 Plan	4	21.09.21	Bates Smart Pty Ltd
DA.03.06	Typical Low Rise Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.19	Typical High Rise Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.23	Level 23 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.24	Level 24 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.25	Level 25 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.26	Level 26 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.27	Level 27 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.28	Level 28 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.29	Level 29 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.30	Level 30 Plan	3	21.09.21	Bates Smart Pty Ltd
DA.03.31	Roof Plan	2	06.07.21	Bates Smart Pty Ltd
DA.09.01	Hunter Street Elevation	3	21.09.21	Bates Smart Pty Ltd
DA.09.02	Beresford Lane Elevation	2	21.09.21	Bates Smart Pty Ltd
DA.09.03	Northern Elevation	3	21.09.21	Bates Smart Pty Ltd
DA.09.04	Western Elevation – West Tower	3	21.09.21	Bates Smart Pty Ltd
DA.09.05	Eastern Elevation – East Tower	3	21.09.21	Bates Smart Pty Ltd
DA.09.06	Western Elevation – East Tower	3	21.09.21	Bates Smart Pty Ltd
DA.10.01	Section AA	3	21.09.21	Bates Smart Pty Ltd
DA.10.02	Section BB	3	21.09.21	Bates Smart Pty Ltd
DA.10.03	Section CC	3	21.09.21	Bates Smart Pty Ltd

16. Appendix B – Draft Statutory Fire Safety Measures

Draft Schedule of Statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors And Hoppers To Fire Resisting Shafts	BCA 2019 Amendment 1 Clause C3.13 and tested prototypes (AS 1530.4 – 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA 2019 Amendment 1 Clause D2.21.
Automatic Fire Detection And Alarm System *(Smoke Detection System)*	BCA 2019 Amendment 1 Clause 4 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System *(Smoke Alarm System)*	BCA 2019 Amendment 1 Clause 3 of Specification E2.2a and AS 3786 – 2014
Automatic Fire Detection And Alarm System *(Smoke Detection System To Operate Zone Smoke Control Or Stair Pressurisation System)*	BCA 2019 Amendment 1 Clause 6 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System *(Smoke Detection System To Automatically Shutdown Air-Handling System)*	BCA 2019 Amendment 1 Clause 6 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System *(Smoke Detection System To Activate Smoke Exhaust System)*	BCA 2019 Amendment 1 Clause 5 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Suppression Systems *(Sprinklers)*	BCA 2019 Amendment 1 Specification E1.5 and AS 2118.1 – 2017
Automatic Fire Suppression Systems *(Residential Sprinkler System)*	BCA 2019 Amendment 1 Specification E1.5 and AS2118.4 – 2012 or FPAA101D – 2018 or FPAA101H – 2018
Automatic Fire Suppression Systems *(Combined Sprinkler And Hydrant System)*	BCA 2019 Amendment 1 Specification E1.5 and AS 2118.6 – 2012
Emergency Lifts	BCA 2019 Amendment 1 Clause E3.4
Emergency Lighting	BCA 2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Emergency Warning And Intercommunication System	BCA 2019 Amendment 1 Clause E4.9, Specification G3.8 and AS 1670.4 – 2018
Exit Signs	BCA 2019 Amendment 1 Clause E4.5, NSW E4.6, E4.7, E4.8 and AS/NZS 2293.1 – 2018
Fire Alarm Monitoring System	BCA 2019 Amendment 1 Clause 8 of Specification E2.2a and AS 1670.3 – 2018
Fire Control Room	BCA 2019 Amendment 1 Specification E1.8
Fire Dampers	BCA 2019 Amendment 1 Clause C3.15 and AS 1668.1 – 2015 (AS 1682.1 – 2015 and AS 1682.2 – 2015)
Fire Doors	BCA 2019 Amendment 1 Specification C3.4 and AS/NZS 1905.1 – 2015

Measure	Standard of Performance
Fire Hydrants Systems	BCA 2019 Amendment 1 Clause E1.3 and AS 2419.1 – 2005
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2019 Amendment 1 Clause C3.15, Specification C3.15, AS 1530.4 – 2014, AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2019 Amendment 1 Clause E1.4 and AS 2441 – 2005
Lightweight Construction	BCA 2019 Amendment 1 Specifications C1.8, Clause A2.3 and AS 1530.4 – 2014
Mechanical Air Handling System *(Air-Handling System Design To Operate As A Smoke Control System)*	BCA 2019 Amendment 1 Clause E2.2 and AS 1668.1 – 2015
Mechanical Air Handling System *(Automatic Air Pressurisation System)*	BCA 2019 Amendment 1 Table E2.2a and AS 1668.1 – 2015
Mechanical Air Handling System *(Zone Smoke Control System)*	BCA 2019 Amendment 1 Table E2.2a and AS 1668.1 – 2015
Mechanical Air Handling System *(Automatic Smoke Exhaust System)*	BCA 2019 Amendment 1 Specification E2.2b
Portable Fire Extinguishers	BCA 2019 Amendment 1 Clause E1.6 and AS 2444 – 2001
Smoke Dampers	BCA 2019 Amendment 1 Clause 3 of Specification C2.5 and AS 1682.1 – 2015 and AS 1682.2 – 2015
Smoke Doors	BCA 2019 Amendment 1 Specification C3.4
Solid Core Doors	BCA 2019 Amendment 1 Clause C3.11 and NSW C3.11(d)
Stand-By Power Systems	BCA 2019 Amendment 1 Clause 6 of Specification G3.8
Wall Wetting Sprinkler And Drencher Systems	BCA 2019 Amendment 1 Clause C3.4, Specification G3.8
Warning And Operational Signs	BCA 2019 Amendment 1 Clauses C3.6, D1.17, NSW D2.19, D2.23, E3.3, G4.3 and NSW H101.8 and Specifications D1.12, E1.8 and G3.8

Note the fire safety schedule will need to be amended subject to the inclusion of a fire engineered performance solution.

17. Appendix C1.1 – Fire Rating Requirements

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, 9 or 7a	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 1.5m	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 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
ROOFS	90/60/30	120/ 60/ 30	180/60/30	240/ 90/ 60

18. Appendix C1.10 – Early Fire Hazard Properties for Materials

Floor materials, floor coverings and wall and ceiling lining materials are required to comply with BCA prescribed fire hazard properties and AS5637.1-2015

Floor Linings and Floor Coverings	
General Non Sprinklered Areas	Minimum 2.2 (or 4.5 for Class 3 areas and 9a patient care areas) kw/m^2 critical radiant heat flux and, a maximum smoke development rate of 750 percent minutes.
General Sprinklered Areas	Minimum 1.2(or 2.2 for Class 3, 9a patient care, and 9c residential use areas) kw/m^2 critical radiant heat flux
Fire Isolated Exits and Fire Control Rooms	Minimum 2.2/(or 4.5 for Class 3, 9a and 9c areas) kw/m^2 critical radiant heat flux
Lift Cars	Minimum 2.2 kw/m^2 critical radiant heat flux

Wall Linings and Ceiling Linings	
Generally	Variously Group 1,2, or 3 materials (more restrictive Group number for non-sprinklered areas, public corridors, health care corridors and other prescribed locations) when tested to AS/ISO 9705 or clause 3 of BCA Spec A2.4 and AS/NZ 3837
Fire Isolated Exits	Group 1 material when tested as above
Lift Cars	Group 1 or 2 materials when tested as above

In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m^2/g.

Other than above, construction materials generally need to achieve as1530.3 early fire hazard indices requirements as follows:	
Generally	Spread of flame Index not > 9 Smoke developed index not > 8
Sarking	Flammability Index not > 5
Fire Isolated Exits and Fire Control Rooms	Spread of Flame Index 0 Smoke Developed Index not > 2 Sarking Flammability 0
Non Fire Isolated Stairs & Escalators and Auditorium Fixed Seating	Spread of Flame Index 0 Smoke Developed Index not > 5
Lifts	To AS 1735.2
Air Ducts	To AS4254

19. Appendix C2.2 – Floor Areas and Volumes

Floor areas and volumes of each storey

Floor	Approx. Area (m^2)	Approx. Volume (m^3)	Comment
Level B1	1087	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.
Level 00	1590	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.
Level 01	1500	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.
Level 02	1330	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.
Level 03	1650	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.
Level 04	1650	TBA	Estimates only have been provided. The exact numbers are to be confirmed by the architect at CC stage.

Nominated Fire Compartments

The BCA does not require Class 2 buildings to be considered.

Fire compartment schedule is to be provided.

Compartment	Approx. Area (m^2)	Approx. Volume (m^3)	Comment
TBA	TBA	TBA	TBA

20. Appendix D1.4 – Exits

The exits from the building are set out below:

Exit No	Location	Type	Grid Ref	No of storeys connected / passed by	Comments
1.	Ground floor	Perimeter	N/A	1	Multiple exits have been identified on the ground floor. All provide egress via perimeter doors or connections into existing fire isolated corridors
2.	East Tower Core	Fire Isolated	N/A	31	Stair type is considered to be a scissor stair
3.	West Tower Core	Fire Isolated	N/A	32	Stair type is considered to be a scissor stair

21. Appendix D1.13 – Populations/Exit Width Assessment

Zone / Level	GFA (m^2)	Population Density @ (m^2/ person)	Population	Aggregate Exit Width required	Exit width provided
Level 00	1590	-	-	-	>11m
Level 01	1500	10	150	1.5m	4m
Level 02	1330	10	133	1.5m	4m
Level 03	1650	10	165	1.75m	4m
Level 04	1650	10	165	1.75m	4m

NOTE 1: Egress widths are not required to be calculated on the Class 2 floors containing only SOUs.

NOTE 2: Egress width from the ground floor exceeds the maximum permitted occupants on the floor.

22. Appendix D2.24 – Protection of Openable Windows

Building Use	Openable Windows		
	<2m above surface beneath	>2m above surface beneath	>4m above surface beneath
Bedrooms	No restrictions	Window located less than 1.7m above bedroom floor:- • Must be protected by device to restrict window opening **OR** screen with secure fittings; AND • No opening greater than 125mm; AND • Device and screen must resist outward horizontal action of 250N; AND • Have child resistant release if device or screen is able to be removed, unlocked or overridden; AND • If device or screen is able to be removed, unlocked or overridden minimum 865mm barrier required to protect window. Note: No 865mm barrier required if device or screen is permanent and cannot be removed, unlocked or overridden Window located min. 1.7m above bedroom floor • No restrictions	Comments as per >2m above surface beneath
Other rooms (i.e. lounge, dining room etc)	No restrictions	No restrictions	Barrier required • Min. 865mm above floor • No openings exceeding 125mm • No climbable elements between 150-760mm above floor
All other buildings	No restrictions	No restrictions	Barrier required • Min. 865mm above floor • No openings exceeding 125mm • No climbable elements between 150-760mm above floor

23. Appendix D3 – Significant Accessibility Requirements

Access for wheelchair users and people with disabilities generally must be to AS1428.1-2009. Principle requirements are:

- Continuous accessible paths of travel throughout
- Minimum 1m wide travel paths with maximum 3-5mm joints, lips, level changes etc.
- No deep pile carpets or grates with large slots.
- Walls or 75-150mm kerbs at travel path sides or if level change occurs to cause a wheelchair hazard.
- 1.8m wide x 2m long wheelchair passing spaces at 20m intervals in passageways where a direct line of sight is not available.
- Turning spaces at 20m intervals and within 2m of dead end access ways. 1.5m x 1.5m 90 deg turning spaces (with splayed internal corner) and 1.54m x 2.07m long 180 deg turning spaces are required including at dead ends in passageways.
- Step ramps, kerb ramps and threshold ramps as prescribed.
- 1:14 maximum ramps with 9m between landings.
- 1.9m x 1 in 10 (maximum 190mm rise) step ramps
- 1.52m x 1 in 8 (maximum 190mm rise) kerb ramps.
- 30-50mm handrails with 300mm extensions and curls and 50mm clearances on both sides of steps, ramps, etc.
- 850mm clear width doors with 340 - 900mm latch side clearances and 1220-1670mm approach clearances depending on arrangements.
- Stairs and ramps set back from building lines and corridors to allow space for handrail extensions and TGSIs.
- Decals to glazing.
- 900-1100mm door hardware height.
- Lever handle hardware with low opening forces.
- Landings at doorways, direction changes and at intervals on ramps and inclined walkways.
- Walkways with colour contrast borders.
- Flat even surfaces.
- Colour contrasted hand rails and door frames.
- “D” pull handles to doors.
- Continuous protected paths from disabled persons’ car spaces to lifts, access points, etc.
- Ambulant disabled persons’ toilets with grab rails and outward swinging doors or longer cubicles.
- Prescribed types of water entry arrangements for swimming pools depending on pool size.
- Non fire enclosed stairs with opaque risers.
- Fire stairs and non-fire enclosed stairs with colour contrasting nosing strips.
- All switches and controls 900-1100mm above floor level.

The following general requirements apply to accessible toilets:

- Unisex facility.
- ~1.9 x 2.7m or 2.3 x 2.4m minimum room dimensions depending on arrangements. (~2.2m x 1.6m if AS1428.1-2001 concession applies).
- 30-40mm grab rails with 50-60mm clearances.
- Doors with appropriate clearances and circulation spaces and able to be operated externally in emergencies
- Washbasins with clearances as required.
- Shielded hot water pipes.
- Mirror, shelf, dispensers and coat hooks.
- Mirrored layout for alternative facilities

24. Appendix F2.3 – Requirements for Sanitary Facilities

The status of sanitary facilities required by Part F2 of the BCA are set out below:

Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
5	Levels 01 - 03	165	Male	83	5	2*	3	1	3	3*
			Female	83	6	3*	N/A		3	3*
			Unisex Disabled	-	1	1	N/A		1	

Notes:

1. A common unisex accessible facility may be counted once for both male and female facilities in accordance with Clause F2.2(c) of the BCA;
2. Staff and patrons are permitted to share the same facilities in accordance with Clause F2.3(d) of the BCA;
3. At least one ambulant sanitary compartment must be provided within each the male and female facilities complying with Section 16 of AS1428.1 – 2009.
4. A WC is able to be used in place of a urinal.

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