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& PARTNERS

**Belrose Manor Aged Care - 181  
Forest Way, Belrose**

**BCA Assessment Report S4.56  
Report 2023/2268 R1.0**

Prepared for Regis Aged Care  
March 2024



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## Project Contacts

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<b>Client:</b>	Regis Aged Care
<b>Architect:</b>	Morrison Design Partnership Architects

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## Revision History

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<b>Revision No:</b>	R1.0
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<b>Author:</b>	Josh Harvey
<b>Verifier:</b>	Jarryd Beckman

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### Disclaimer:

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



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## Executive Summary

An assessment of the design of the proposed S4.56 design of the project at Belrose Manor Aged Care - 181 Forest Way, Belrose 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 a Performance Solution to satisfy the Performance Requirements of the BCA.

### Summary of BCA Parameters:

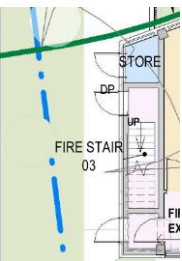
<b>Building Use:</b>	Carpark & Age Care Facility
<b>Class of Occupancy</b>	Class 7a & Class 9c
<b>Type of Construction Required</b>	Type A
<b>Rise Storeys:</b>	Four (4)
<b>Number of Storeys:</b>	Four (4)
<b>Effective Height:</b>	10.7 m (RL 173.80- RL 163.10)

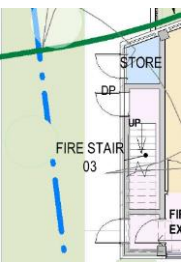


# 1. Issues Requiring Resolution

## 1.1. Issues requiring amendments to plans, additional details or documentation.

The following issues either need to be resolved or require further details and/or documentation to be provided to ensure compliance before issuing the Construction Certificate.

Item	DTS Clause	Description	Requirement to Satisfy BCA
1.	NSW C3D6 & Specification 11	Class 9 buildings	The Ground Floor smoke compartment currently measures 547m <sup>2</sup> . The design is to be revised to have the smoke compartment not greater than 500m <sup>2</sup> .
2.	Clause C3D9 & C3D10	Separation of classifications in the same storey	<p>The Lower Ground Floor contains Class 7a &amp; Class 9c parts, the Class 7a parts are required to be fire separated from the Class 9c parts to achieve an FRL 120.</p> <p>Alternatively, no separation is required between the different classifications, providing the travel distances and compartment sizes within the Ground Floor can be achieved.</p>
3.	Clause C4D4 & C4D5	Separation of external walls and associated openings in different fire compartments	<p>As discussed within the body of this report, the Lower Ground Floor contains class 7a and 9c parts.</p> <p>The fire compartmentation strategy needs to be finalised as to where the line of fire separation will be provided.</p> <p>Further design development is required to determine the compartmentation strategy.</p>
4.	Clause C4D6 & C4D7	Doorways in fire walls	<p>Further design development is required with regards to the fire compartmentation strategy particular areas to address;</p> <ol style="list-style-type: none"> <li>Sliding doors within carpark compartment</li> </ol>
5.	Clause D3D25	Swinging doors	<p>It is recommended that the path of travel adjoining Fire Stair 03 is made wider to accommodate a 1000m path of travel when the doors are in the open position.</p> 





## 1.2. Fire Engineering Performance solutions required.

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

Item	DTS Clause	Description	Requirement to Satisfy BCA
1.	Clause C2D2, C3D10 & Specification 5	Type of Construction required	Cavity barriers to be installed at the slab edge where system has not been tested in accordance with AS1530.4.
2.	Clause C4D4	Separation of external walls and associated openings in different fire compartments	Due to the compartmentation strategy within the Class 9c parts there will be various openings in the external wall of the residential rooms which will be exposed to window openings in adjoining external rooms.
3.	Clause S5C8 of Specification 5	Enclosure of shafts	The laundry chute will not be enclosed at the bottom of the shaft to achieve an FRL in accordance with Spec 5.
4.	Clause S5C16 of Specification 5	Roof Lights	It is proposed to permit skylight openings to be within 3m of the unprotected glazed openings in fire separated parts of the building.
5.	Clause C4D8 & D2D16	Protection of doorways in horizontal exits	In order to meet the new test criteria, the double doors require intumescent bolts, which hold and lock the doors closed when they reach 230°, so it is not feasible to use the door as a horizontal exit. Further investigation is required to detail how compliance can be achieved or seek a Fire Engineering Performance Solution to address variations to DTS requirements
6.	Clause D2D5	Exit travel distances	The following areas have been identified as exceeding the prescriptive requirements for distance to an exit or point of choice; <ol style="list-style-type: none"> <li>1. GF terrace – The distance to an exit measured 47m</li> <li>2. Carpark area located on the Lower Ground Floor, the distance to a point of choice measures 22m.</li> <li>3. Second floor terrace the distance to a point of choice measures 26m</li> </ol>
7.	Clause D2D6	Distance between alternative exits	The following areas have been identified with distances between alternative exits exceeding 60m: <ul style="list-style-type: none"> <li>• Ground Floor terrace 121m</li> <li>• Lower ground Floor Carpark measured 63m between exits</li> </ul>
8.	Clause D2D12	Travel via fire-isolated exits	The discharge of fire isolated exits to the west elevation of the building requires occupants egressing within 6m of openings in the external wall.
9.	Clause D2D15	Discharge from exits	Within the Lower Ground Floor, the sliding door to the east elevation has been determined as the exit. A series of external stairs and ramps provide egress to the road, however, this path of travel is not considered “open space” as the path is considered not to be “adequately protected from fire” due to the various openings exposed to the path of travel.



Item	DTS Clause	Description	Requirement to Satisfy BCA
10.	Clause E1D17 & E2D21	Provisions for special hazards	EV charging stations are proposed to be installed within the carparking area.  PV Panels are proposed to be installed to the roof.  The installation of EV charging stations & PV Panels will be addressed as a Special Hazard via BCA Clause E1D17 & E2D21.
11.	Clause E2D4	Fire-isolated exits	It is proposed to omit the requirement for automatic air pressurisation to the fire isolated stairs throughout the building.
12.	Part G3	Atrium Construction	It is proposed to vary the requirements of Part G3.
13.	Part G5	Construction in Bushfire Prone Areas	There are no DtS requirements buildings located in BAL 19. The project Fire Engineer and Bush fire consultant are to prepare a Performance Solution to address Performance requirements NSW G5P1 & NSW G5P2.  For a Class 9 building that is special fire protection purpose, <b>Specification 43</b> except as amended by Planning for Bush Fire Protection

### 1.3. BCA Performance solutions required.

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

Item	Non-Compliance	DTS Clause	Description
1.	Facilities in residential buildings	F4D2	It is proposed not to provide a bath, fixed or mobile for the residents of the facility. A Performance Solution will be prepared to omit the requirements for a bath.

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 2021 and the Building Code of Australia 2022. 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.

Whilst not precluding the issue of a Development Approval, it is noted that many detailed design issues are not indicated on the drawings. These issues are designated “Compliance Readily Achievable” in the “Status” column of the assessment in **Section 13** of the report and should be resolved prior to construction.

Key issues which require additional details have been listed under **Section 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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## GLOSSARY

Building Code of Australia - BCA, National Construction Code - NCC

Deemed-to-Satisfy - DtS

Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 - EPAR (DCFS)

Environmental Planning and Assessment Act 1979 No 203 - EPAA

Environmental Planning and Assessment Regulation 2021 - EPAR



## 2. Introduction

This report presents the findings of a preliminary assessment undertaken of the proposed S4.56 architectural drawings of the purpose built nursing home complex accommodating 105 beds; associated facilities include a basement and ground level of car parking for 49 on-site vehicles; and an at-grade service vehicle area and bus parking space inclusive of fire truck access to the rear of the site at 181 Forest Way Belrose against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia BCA 2022.

The subject site is situated on the eastern side of Forest Way and is known as No 181 Forest Way Belrose, is legally identified as Lot 3 in Deposited Plan No 805710 and located within the Local Government Area of Northern Beaches Council.

Vehicle and Pedestrian Access to the development is provided via Forest Way.



Figure 1- Site Master Plan Courtesy of MDPA

The report has been prepared by Steve Watson and Partners for Regis Aged Care

## 3. 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, a modified Development Approval to be issued under Part 4 of the NSW Environmental Planning and Assessment Act 1979 No 203, Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 and Environmental Planning and Assessment Regulation 2021.



## 4. Scope and Limitations

### 4.1. Scope

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

### 4.2. Limitations

The following limitations apply to the assessment:

- 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 and the Premises Standards. 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.
- The BCA report and associated compliance advice is not intended or permitted to be relied on by any other party with respect to their obligations to ensure compliance including but not limited to the making of a compliance declaration under the NSW Design and Building Professionals Act.

## 5. National Construction Code BCA 2022- 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.

## 6. 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 principal 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 performance 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.

## 7. 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 (DCFS) S19	All new works must comply

### 7.1. New Work

Section 19 of the EPAR (DCFS) 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.

## 8. Methodology

### 8.1. 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:
  - a. Clause is administrative information only (**Noted**);
  - b. Clause is or is not relevant to the proposed work (**Applicable or N/A**);
  - c. The proposed work complies with the requirements of the clause (**Complies**);
  - d. 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;
  - e. 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**);
  - f. 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 a Performance Solution has been proposed to address the issue;
  - g. Proposed work is to be addressed on a performance basis via a Performance 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.

## 9. Assessment Data Summary

The following basic assessment data has been drawn from the provisions of the BCA 2022.



## 9.1. Assumptions

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

1. A total of 50 staff will be present in the building at any given time.

## 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. The basement carpark is not required to be provided with dedicated sanitary facilities to comply with Part F4 of the BCA as it is ancillary to the residential use of the building.
2. The sunken courtyard connects four storeys and meets the definition of an “atrium” therefore, Part G3 has been assessed.
3. It was identified in the preliminary Fire Engineering mark ups, that areas such as the scullery exceed 30m<sup>2</sup>. In the opinion of SWP a scullery type area would not be considered a high potential fire hazard, unless they contain gas cook tops, deep friers of the like. Furthermore, if we were to assess the area, it would be of the room only, not the adjoining area, the total floor area for the space would be less than 30m<sup>2</sup>.
4. There are no non-fire isolated stairs. For the purpose of this assessment, the external stair has been considered as a stair provided in accordance with BCA Clause D2D15.
5. It has been identified that a unisex shower facility has been provided. However, shower facilities are not **required** for staff in a Class 9c building. Therefore, SWP view this shower facility as above and beyond the requirements of the BCA and therefore, do not determine separate shower facilities needed to be provided for male and female staff.
6. All storeys of the building are provided with direct egress to road or open space. Therefore, the requirements of the Clause D3D5 Separation of rising and descending stair flights are not applicable. The project Fire Engineer has identified this as a non-compliance, however, at this stage each storey has access to road or open space.

## 10. Relevant Authorities

Consultation with the Fire Commissioner is required under Section 26 and 27 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 for performance-based design briefs and performance solutions prepared for a fire safety requirement if:

- (a) the building is a class 2, 3, 4, 5, 6, 7, 8 or 9 building, and
- (b) a construction certificate is required for the building work comprising the performance solution.

## 11. 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.

## 12. Conclusion



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The design is capable of complying with the requirements of the relevant sections of the of the Act and EPAR (DCFS) 2021, EPAR 2021 and the BCA 2022 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.



### 13. BCA 2022 - Clause by Clause Assessment

Clause	Description	Comment	Status										
<b>BCA Version</b>													
<b>BCA 2022</b>	<p><b>BCA version</b></p> <p>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.</p>	<p>This report assumes that the applicable BCA version is BCA 2022. In addition, requirements of the Premises Standards (PS) are covered as relevant. NCC 2022 uses a new structure and clause referencing system. This system is called Section-Part-Type-Clause (SPTC).</p> <p>An example of the (SPTC) referencing system is expanded upon below:</p> <table border="1"> <thead> <tr> <th>Ref</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Section</td> <td> <p>Refers to the applicable section of the NCC.</p> <p>e.g., <i>Section D - Access and egress</i></p> <p>Section lettering will mostly stay as per previous editions of the National Construction Code.</p> </td> </tr> <tr> <td>Part</td> <td> <p>Part identifies the part of the applicable section.</p> <p>e.g., Part D2 - Provisions for escape.</p> </td> </tr> <tr> <td>Type</td> <td> <p>Type refers to the type of Clause:</p> <p>O - Objective  F - Functional Statement  P - Performance Requirement  V - Verification Method  D - Deemed-to-Satisfy  C - Specification  G - Governing Requirements</p> </td> </tr> <tr> <td>Clause</td> <td> <p>Clause refers to the number within the Type group.</p> </td> </tr> </tbody> </table>	Ref	Description	Section	<p>Refers to the applicable section of the NCC.</p> <p>e.g., <i>Section D - Access and egress</i></p> <p>Section lettering will mostly stay as per previous editions of the National Construction Code.</p>	Part	<p>Part identifies the part of the applicable section.</p> <p>e.g., Part D2 - Provisions for escape.</p>	Type	<p>Type refers to the type of Clause:</p> <p>O - Objective  F - Functional Statement  P - Performance Requirement  V - Verification Method  D - Deemed-to-Satisfy  C - Specification  G - Governing Requirements</p>	Clause	<p>Clause refers to the number within the Type group.</p>	Noted
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Clause	<p>Clause refers to the number within the Type group.</p>												
<b>Section A: General Provisions</b>													
<b>A5G3</b>	<p><b>Suitability of materials</b></p> <p>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.</p>	<p>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.</p>	Noted										
<b>Part A6</b>	<p><b>Classification and usage</b></p> <p>Usage on each level of the building is as follows:</p>	<table border="1"> <thead> <tr> <th>LEVEL</th> <th>USE</th> <th>CLASS</th> </tr> </thead> <tbody> <tr> <td>LGF</td> <td>Carpark &amp; Age Care</td> <td>7a/9c</td> </tr> </tbody> </table>	LEVEL	USE	CLASS	LGF	Carpark & Age Care	7a/9c	Noted				
LEVEL	USE	CLASS											
LGF	Carpark & Age Care	7a/9c											



Clause	Description	Comment	Status
		GF Age Care 9c FF Age Care 9c SF Age Care 9c	
<b>Part A7</b>	<b>United buildings</b>	N/A	N/A
<b>Section B: Structure</b>			
<b>B1D2</b>	<b>Resistance to actions</b> 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
<b>B1D3</b>	<b>Determination of individual actions</b> The magnitude of individual actions must be determined in accordance with Clause B1D3 of the BCA.	Certification from a qualified Structural Engineer will need to be provided at Construction Certificate stage.  The building has an importance <b>level 2</b> in accordance with Table B1D3a.	Compliance Readily Achievable
<b>B1D4</b>	<b>Determination of structural resistance of materials and forms of construction</b> The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1D4 of the BCA.	Certification from a qualified Structural Engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
<b>B1D5</b>	<b>Structural software</b> 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.	Certification from a qualified Structural Engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
<b>B1D6</b>	<b>Construction of buildings in flood hazard areas</b> A Class 2, 3, 4, 9a or 9c building located in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Hydraulic Engineer to confirm whether the building is located within a flood hazard area and compliance with this clause.	Compliance Readily Achievable
<b>Section C: Fire Resistance</b>			
<b>Part C2 - Fire Resistance and Stability</b>			
<b>C2D2</b>	<b>Type of construction required</b> <b>Type A Construction</b> BCA Type A fire resisting construction is required. Refer to Appendix Specification 5 for the required FRLs for each building element.	The building is required to be constructed as Type A Construction.  Certification from a Structural Engineer will be required for FRL's of all structural elements.  Large-scale sections illustrating how lightweight fire rated construction shall be provided for further assessment.	Compliance Readily Achievable





Clause	Description	Comment	Status
		<p>Details of the proposed method of fire separation at the junction of floors and the external wall and the junction of fire rated internal walls and the external wall are required for review. It is likely that cavity barriers will be required to be designed and installed, where internal fire rated walls do not continue to the slab edge.</p> <p>It is noted that within Australia, there are no tested systems which comply with the requirements of AS1530.4.</p> <p>It is therefore expected that the use of the cavity barriers is addressed within the Fire Engineering Strategy or a site-specific Performance Solution subject to PCA discretion.</p>	Performance Solution
<b>C2D3</b>	<p><b>Calculation of rise in storeys</b></p> <p>Effective Height / Calculation of rise in storeys.</p> <p>Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements.</p> <p>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).</p> <p>These parameters influence the BCA provisions applicable to the building.</p>	<p><b>The following parameters apply:</b></p> <p>Rise Storeys: Four (4)</p> <p>Number of Storeys: Four (4)</p> <p>Effective Height: 10.7 m (RL 173.80-RL 163.10)</p>	Noted
<b>C2D4</b>	<b>Buildings of multiple classification</b>	N/A	N/A
<b>C2D5</b>	<b>Mixed types of construction</b>	N/A	N/A
<b>C2D6</b>	<b>Two storey Class 2, 3 or 9c buildings</b>	N/A	N/A
<b>C2D7</b>	<b>Class 4 parts of buildings</b>	N/A	N/A
<b>C2D8</b>	<b>Open spectator stands and indoor sports stadiums</b>	N/A	N/A
<b>C2D9</b>	<p><b>Lightweight construction</b></p> <p>Lightweight construction used in a wall system must comply with Specification 6 - Structural tests for lightweight construction.</p> <p>Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height of not less than 1.2m above the floor and where the column is liable to be damaged must be protected by steel or other suitable material.</p>	<p>Fire rated wall types must match a tested prototype.</p> <p>Product codes should be noted on the wall type schedule and corresponding test reports provided for review.</p>	Compliance Readily Achievable
<b>C2D10</b>	<p><b>Non-combustible building elements</b></p> <p>In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:</p> <p>I. External walls and common walls, including</p>	<p>The Architect and Structural Engineer are to make provisions for this requirement in the design.</p> <p>A detailed review of the external</p>	Compliance Readily Achievable

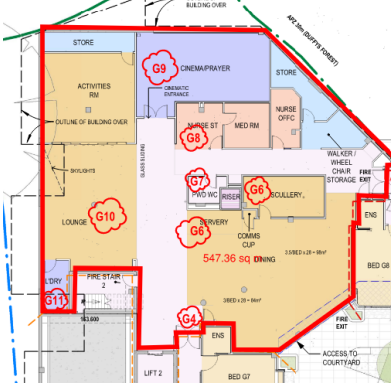


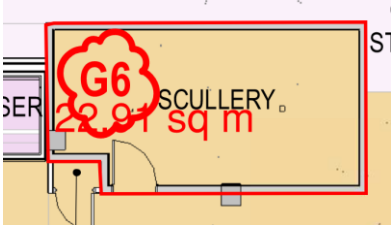


Clause	Description	Comment	Status
	<p>all components incorporated within them including façade covering, framing and insulation;</p> <p>II. The flooring and floor framing of lift pits;</p> <p>III. Non-loadbearing internal walls where they are required to be fire-resisting;</p> <p>IV. Non-loadbearing shaft being a lift, ventilating, garbage or similar shaft.</p> <p>The following materials may be used where non-combustible materials are required:-</p> <ul style="list-style-type: none"> <li>• Plasterboard.</li> <li>• Perforated gypsum.</li> <li>• Fibrous-plaster sheeting to AS 2185.</li> <li>• Fibre-reinforced cement sheeting.</li> <li>• 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.</li> <li>• Sarking-type materials that do not exceed 1mm thickness and have a flammability index not greater than 5.</li> <li>• 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 and when located externally, are fixed in accordance with C2D15.</li> <li>• Any product as determined by testing to AS 1530.1</li> <li>• An appropriately BCA accredited product or system</li> </ul>	<p>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.</p> <p>An architectural specification detailing the components of the external walls and their fire properties are needed for review including corresponding test reports verifying compliance with this clause.</p> <p>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</p> <p><b>Please refer to Appendix C2D10 at the end of the report for further details relating to non-combustible building elements.</b></p>	
C2D11	<p><b>Fire hazard properties</b> <i>(NSW variation for Entertainment Venues)</i></p> <p>Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C2D11 &amp; compliance with AS5637.1-2015.</p>	<p>Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including:</p> <ul style="list-style-type: none"> <li>• Carpets</li> <li>• Vinyls (walling and flooring)</li> <li>• Timber flooring and wall linings</li> <li>• Veneered wall panelling</li> <li>• Spray-on insulation material</li> <li>• Other combustible finishes</li> <li>• Carpark soffit insulation fire test reports, based on 'room fire testing' will be required to meet fire brigade consent conditions if applicable.</li> </ul> <p>A schedule of internal finishes and</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
		corresponding fire hazard test data for all combustible internal linings are to be submitted to the PCA demonstrate compliance with the requirements of this Clause.	
<b>C2D12</b>	<b>Performance of external walls in fire</b>	N/A	N/A
<b>C2D13</b>	<b>Fire-protected timber: Concession</b>	N/A	N/A
<b>C2D14</b>	<b>Ancillary elements</b> 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 is otherwise permitted under this clause.	At this stage details of ancillary items that may be attached to the external wall have not been provided. In particular details should be provided for the following; <ul style="list-style-type: none"> <li>• Awning, sunshade, canopy, blind or shading hood</li> <li>• signage fixed to the external wall.</li> <li>• Port Cochere</li> </ul> Further assessment is required.	Compliance Readily Achievable
<b>C2D15</b>	<b>Fixing of bonded laminated cladding panels</b> In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.	Sufficient details have not been provided at this stage externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame in accordance with C2D15. Further details are to be provided at CC stage for assessment.	Compliance Readily Achievable
<b>Part C3 - Compartmentation and Separation</b>			
<b>C3D2</b>	<b>Application of Part</b>	Clauses C3D3, C3D4 and C3D5 do not apply to a sprinkler protected carpark, an open deck carpark or an open spectator stand.	Noted
<b>C3D3</b>	<b>General floor area and volume limitations (Type A construction)</b> The floor area and volume limitations are: Class 9c: 8,000m <sup>2</sup> and 48,000m <sup>3</sup> Class 7: 5,000m <sup>2</sup> and 30,000m <sup>3</sup>  <b>Note:</b> <ul style="list-style-type: none"> <li>• The basement carpark levels are not required to be considered as they are provided with a sprinkler system throughout.</li> </ul>	Based on the compartmentation strategy of the building fire compartments will not exceed the prescriptive requirements of BCA Clause C3D3 and therefore, compliance has been achieved.  Please refer to Clause C3D6 for further information relating to 9c buildings.	Complies
<b>C3D4</b>	<b>Large isolated buildings</b>	N/A	N/A
<b>C3D5</b>	<b>Requirements for open space and vehicular access</b>	N/A	N/A
<b>C3D6</b>	<b>Class 9 buildings</b> <i>(NSW variation for Class 9c Buildings)</i> <b>Class 9c buildings</b> The building must be divided into areas not exceeding 500m <sup>2</sup> with smoke proof walls complying with Specification 11. Concessions apply to non-loadbearing internal	A review of the smoke compartment strategy has been undertaken. Compartmentation Classification Plans A1091 prepared by Morrison Design partnership.  Generally, the design details each floor	Additional Details Required

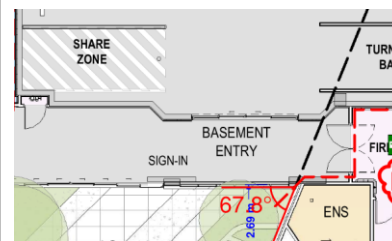
Clause	Description	Comment	Status
	<p>walls that are not required smoke walls and if a building is Type C construction.</p> <p>Ancillary use areas containing equipment or materials that are high potential fire hazard must be smoke separated from the sole occupancy units. Ancillary use areas include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Kitchen and related food preparation areas with a floor area of more than 30m<sup>2</sup>,</li> <li>• Room used predominately for the storage of medical / administrative records having a floor area of more than 10m<sup>2</sup>.</li> <li>• Laundry, where items of equipment are of the type that are potential fire sources.</li> </ul> <p>Smoke doors within fire compartments not provided with a zone pressurisation system must provide a smoke reservoir of at least 400mm.</p> <p>Smoke doors need to be solid core and self-closing or 200°C resistant toughened glass. Smoke seals must be fitted. If doors are electromagnetically held open, they should be linked to smoke detectors located within 1.5m of the doors.</p> <p>Ducts through smoke walls need smoke dampers</p>	<p>area divided into smoke compartments do not exceed 500m<sup>2</sup>, however, one fire compartment on Ground Floor currently measures 548m<sup>2</sup> in excess of the 500m<sup>2</sup> permitted.</p> <p>The design is to be revised to have the smoke compartment not greater than 500m<sup>2</sup>, alternatively the project Fire Engineer may assess over sized smoke compartment via Performance Solution Report.</p>  <p>Smoke doors within fire compartments not provided with a zone pressurisation system must provide a smoke reservoir of at least 400mm.</p> <p>Please provide standard details of smoke reservoir adjoining smoke doors for further assessment.</p> <p>All internal walls, between and bounding sole-occupancy units and bounding a public corridor in a resident use area must:</p> <ol style="list-style-type: none"> <li>(i) be lined on each side with standard grade plasterboard not less than 13 mm thick or a material with at least an equivalent level of fire protection; and</li> <li>(ii) if provided with cavity insulation, contain only non-combustible insulation; and</li> <li>(iii) extend to the underside of—             <ol style="list-style-type: none"> <li>(A) the floor next above; or</li> <li>(B) a ceiling lined with standard grade plasterboard not less than 13mm thick or an equivalent noncombustible material; or</li> <li>(C) a non-combustible roof covering; and</li> </ol> </li> <li>(iv) not incorporate</li> </ol>	

Clause	Description	Comment	Status
		<p>any penetrations above door head height unless the penetrations are adequately stopped to prevent the free passage of smoke; and</p> <p>(iv) be smoke sealed with intumescent putty or other suitable material at any construction joint, space or the like between the top of the wall and the floor, ceiling or roof..</p> <p><b>NOTE:</b> It was identified in the preliminary Fire Engineering mark ups, that areas such as the scullery exceed 30m<sup>2</sup>. In the opinion of SWP a scullery type area would not be considered a high potential fire hazard, unless they contain gas cook tops, deep friers of the like. Furthermore, if we were to assess the area, it would be of the room only, not the adjoining area, the total floor area for the space would be less than 30m<sup>2</sup>.</p> 	
C3D7	<b>Vertical separation of openings in external walls</b>	It is proposed to provide the building with a sprinkler system in accordance with AS2118.1-2017, therefore the requirements of BCA Clause C3D7 are not applicable.	N/A
C3D8	<p><b>Separation by fire walls</b></p> <p>A fire wall must extend to the underside of a floor having an FRL required for a fire wall or the roof covering.</p>	<p>Fire walls are to be constructed in accordance with C3D8 to separate fire compartments located within the same storey.</p> <p><b>Separation of fire compartments</b> — A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of—</p> <ul style="list-style-type: none"> <li>(a) a floor having an FRL required for a fire wall; or</li> <li>(b) the roof covering.</li> </ul>	Noted



Clause	Description	Comment	Status
C3D9	<p><b>Separation of classifications in the same storey</b></p> <p>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 5 of the BCA or the parts must be separated by a fire wall.</p>	<p>The Lower Ground Floor contains Class 7a &amp; Class 9c parts, the Class 7a parts are required to be fire separated from the Class 9c parts to achieve an FRL 120.</p> <p>Alternatively, no separation is required between the different classifications, providing the travel distances and compartment sizes within the Lower Ground Floor can be achieved.</p> <p>Sufficient details have not been submitted at this stage, however compliance is readily achievable.</p>	Additional Details Required
C3D10	<p><b>Separation of classifications in different storeys</b></p> <p>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.</p>	<p>Floor slabs are required to achieve an FRL 120/120/120 between the carpark and residential levels.</p> <p>Slabs separating residential levels can achieved FRL 60/60/60 in accordance with BCA Clause C3D6.</p> <p>Please submit architectural drawings/structural drawings which nominate the required FRL and design certification specifically referencing the relevant BCA Clauses at Construction Certificate stage</p>	Compliance Readily Achievable
C3D11	<p><b>Separation of lift shafts</b></p> <p>Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C4 of the BCA.</p>	<p>The lift connects four (4) storeys and is therefore required to be contained within a fire isolated lift shaft.</p> <p>Compliance is readily achievable subject to fire Compartment drawings, wall schedule nominating the buildup and nominated FRL are to be submitted for further assessment.</p>	Compliance Readily Achievable
C3D12	<p><b>Stairways and lifts in one shaft</b></p>	<p>The lift is contained within its own shaft</p>	Complies
C3D13	<p><b>Separation of equipment</b></p> <p>2hr fire separation is required for:</p> <ul style="list-style-type: none"> <li>Lift motor rooms.</li> <li>Emergency generators sustaining emergency equipment operating in emergency mode.</li> <li>Central mechanical smoke control plant.</li> <li>Boilers.</li> <li>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.</li> </ul>	<p>The Ground Floor contains an area nominated as a generator, it is assumed that the generator is not required to sustain power during an emergency.</p>	Noted
C3D14	<p><b>Electricity supply system</b></p> <p>A substation located within a building or main switchboard that sustains emergency equipment must be separated from the remainder of the building by 2hr fire rated construction.</p>	<p>The substation is located external to the building.</p> <p>It has been assumed that switch boards within the building are not required to</p>	Noted

Clause	Description	Comment	Status														
	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.	sustain emergency equipment in emergency mode, emergency lighting, exit signage and smoke detection systems are provided likely to be provided with batter back up.															
C3D15	Public corridors in Class 2 & 3 buildings	N/A	N/A														
<b>Part C4 - Protection of Openings</b>																	
C4D2	Application of Part	Noted	Noted														
C4D3	<p><b>Protection of openings in external walls</b></p> <p>Openings in the external walls of the building are to be protected in accordance with C4D5, being fire rated windows, external sprinklers or the like, if they are:</p> <ul style="list-style-type: none"> <li>• Less than 3m to side or rear boundary,</li> <li>• Less than 6m from the far boundary of a road or lane,</li> <li>• Less than 6m from another building on the same allotment.</li> <li>• Openings that require protection should not occupy more than <math>\frac{1}{3}</math> of the external wall of the storey in which it is located.</li> </ul>	N/A	N/A														
C4D4	<p><b>Separation of external walls and associated openings in different fire compartments</b></p> <p>External walls within the distances specified in Table C4D4 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 C4D5 of the BCA.</p> <table border="1"> <thead> <tr> <th>Angle between walls</th> <th>Min. Distance</th> </tr> </thead> <tbody> <tr> <td>0° (walls opposite)</td> <td>6 m</td> </tr> <tr> <td>more than 0° to 45°</td> <td>5 m</td> </tr> <tr> <td>more than 45° to 90°</td> <td>4 m</td> </tr> <tr> <td>more than 90° to 135°</td> <td>3 m</td> </tr> <tr> <td>more than 135° to less than 180°</td> <td>2 m</td> </tr> <tr> <td>180° or more</td> <td>Nil</td> </tr> </tbody> </table>	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	<p>As previously discussed within the body of this report, the Lower Ground Floor contains class 7a and 9c parts.</p> <p>At this point, the fire compartmentation strategy needs to be finalized as to where the line of fire separation will be provided.</p> <p>Further design development is required to determine the compartmentation strategy and the implications on adjoining fire compartments to determine where openings require protection in accordance with BCA Clause C4D4 at Construction Certificate stage.</p>	Additional Details Required
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	Description	Comment	Status
		<p>Due to the compartmentation strategy within the Class 9c parts there will be various openings in the external wall of the residential rooms which will be exposed to window openings in adjoining fire compartments.</p> <p>The project Fire Engineer has advised that a Performance Solution will be provided to address variations to the DtS requirements.</p>	Performance Solution
C4D5	<p><b>Acceptable method of protection</b></p> <p>Window openings are to be protected by internal or external wall wetting sprinklers and must automatically close or be permanently fixed in the closed position, -/60/- fire windows that are automatic closing or permanently fixed closed or -/60/60 automatic closing fire shutters.</p> <p>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.</p> <p>Other openings, excluding voids, are to be protected with internal or external wall wetting sprinklers or construction having an FRL not less than -/60/-.</p>	<p>The method of protection proposed where required will vary from the requirements of BCA Clause C4D5 and will be addressed via Fire Engineering Performance Solution.</p>	Performance Solution
C4D6	<p><b>Doorways in fire walls</b></p> <p>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.</p>	<p>Various fire walls will be designed to create multiple compartments within the floor area of the residential areas.</p> <p>Doors located within fire walls on residential levels are required to achieve a minimum FRL -/60/30, where doors are located within the fire wall within the carpark compartment doors must achieve a FRL -/120/30.</p> <p>Further design development is required with regards to the fire compartmentation strategy particular areas to address;</p> <ol style="list-style-type: none"> <li>Sliding doors within carpark compartment</li> </ol>	Additional Details Required
C4D7	<p><b>Sliding fire doors</b></p> <p>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.</p> <p>An audible warning device and red flashing warning light must be provided.</p>	<p>Further design development is required in relation to the fire compartmentation on Lower Ground Floor level.</p> <p>Where it is proposed to have the fire compartmentation line along the sliding door opening of the carpark the</p>	Additional Details Required



Clause	Description	Comment	Status
	A sign stating "WARNING - SLIDING FIRE DOOR" in capital letters not less than 50 mm high is to be provided on each side of the doorway directly above the opening.	sliding door will need to be provided in accordance with C4D7.	
<b>C4D8</b>	<p><b>Protection of doorways in horizontal exits</b></p> <p>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.</p>	<p>Sufficient details have not been provided at this stage.</p> <p>However, compliance is readily achievable subject to detailed design development.</p> <p>A door schedule which correspondence with architectural compartment/FRL drawings is to be submitted at CC stage.</p> <p><b>Note:</b> In order to meet the new test criteria, the double doors require intumescent bolts, which hold and lock the doors closed when they reach 230°, so it is not feasible to use the door as a horizontal exit. Further investigation is required to detail how compliance can be achieved.</p>	Compliance Readily Achievable
<b>C4D9</b>	<p><b>Openings in fire-isolated exits</b></p> <p>-/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways.</p> <p>A window or other opening in the external wall of the fire isolated exit is to be protected in accordance with Clause C4D5 if it is within 6m of, and exposed to, a window or other opening in the wall of the same building.</p>	<p>Sufficient details have not been provided at this stage.</p> <p>However, compliance is readily achievable subject to detailed design development.</p> <p>A door schedule which correspondence with architectural compartment/FRL drawings is to be submitted at CC stage.</p>	Compliance Readily Achievable
<b>C4D10</b>	<p><b>Service penetrations in fire-isolated exits</b></p> <p>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 not permissible.</p>	<p>Service drawings have not been provided at this stage.</p> <p>It is assumed compliance can readily be achieved.</p> <p>Service contractors are to ensure that no services other than those associated with fire services are contained within the fire isolated stairs.</p>	Compliance Readily Achievable
<b>C4D11</b>	<p><b>Openings in fire-isolated lift shafts</b></p> <p>Openings in lift shafts are to be protected by -/60/- fire doors complying with AS1735.11.</p> <p>Lift indicator panels are to be backed by construction having an FRL of not less than -/60/60 if they exceed 35,000mm<sup>2</sup> (175 X 200 mm).</p>	<p>Certification from the lift supplier or a lift specification noting compliance is needed for review.</p>	Compliance Readily Achievable
<b>C4D12</b>	<b>Bounding construction: Class 2 and 3 buildings and Class 4 parts</b>	N/A	N/A
<b>C4D13</b>	<p><b>Openings in floors and ceilings for services</b></p> <p>Services passing through floors are to be placed within fire resisting shafts or in accordance with Clause C4D15.</p>	<p>A schedule of penetrations prepared by a suitably qualified passive fire consultant nominating the types of openings requiring protection and the method of protection including test reports for each fire-stopping product is required to be provided to the PCA at</p>	Compliance Readily Achievable





Clause	Description	Comment	Status
		CC Stage.	
<b>C4D14</b>	<p><b>Openings in shafts</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>• 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</li> <li>• A self-closing -/60/30 fire door or hopper, or</li> <li>• An access panel with an FRL of not less than -/60/30, or</li> <li>• If the shaft is a garbage shaft - a door or hopper of non-combustible construction.</li> </ul>	<p>Sufficient details have not been provided at this stage.</p> <p>However, compliance is readily achievable subject to detailed design development.</p> <p>A door schedule which correspondence with architectural compartment/FRL drawings is to be submitted at CC stage.</p>	Compliance Readily Achievable
<b>C4D15</b>	<p><b>Openings for service installations</b></p> <p>Services penetrations through a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with a tested system or Specification 13.</p> <p>Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and must achieve the required FRL or resistance to the incipient spread of fire or other specified method.</p> <p>Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1.</p>	<p>A schedule of penetrations prepared by a suitably qualified passive fire consultant nominating the types of openings requiring protection and the method of protection including test reports for each fire-stopping product is required to be provided to the PCA at CC Stage.</p>	Compliance Readily Achievable
<b>C4D16</b>	<p><b>Construction Joints</b></p> <p>Construction joints in elements required to have a fire resistance with respect to integrity and insulation must be protected.</p>	<p>Construction joints are to be fire protected in a manner identical to a prototype tested in accordance with AS4072.1 and AS1530.4 to achieve the required FRL or must otherwise comply with the requirements of this clause.</p>	Compliance Readily Achievable
<b>C4D17</b>	<p><b>Columns protected with lightweight construction to achieve an FRL</b></p>	<p>Columns must be protected in accordance with the identical tested prototype. Product codes should be noted on architectural plans and corresponding test reports provided for review.</p>	Compliance Readily Achievable
<b>Specification 5 - Fire-resisting construction</b>			
<b>S5C1</b>	<b>Scope</b>	Noted	Noted
<b>S5C2</b>	<p><b>Exposure to fire-source features</b></p> <p>Shielding elements must have an FRL of not less than 30/-/-.</p> <p>Concessions apply for parts of external walls of another building 15m above the building concerned or if the exposed part is below the finished ground level at the property boundary.</p>	Noted	Noted

Clause	Description	Comment	Status
	<p>(a) Above fire-source feature</p> <p>(b) Below fire-source feature</p>		
S5C3	<p><b>Fire protection for a support of another part</b></p> <p>Supporting elements must generally maintain required FRLs unless a concession is available under this clause.</p>	To minimise the risk that a building element required to have a fire-resistance level (FRL) will fail during the failure of another element required to give it vertical or lateral support	Noted
S5C4	<p><b>Lintels</b></p> <p>A lintel must generally maintain the FRL required for the part of the building in which it is situated unless it can otherwise comply with this clause.</p>	To minimise the risk that the failure of a lintel over an opening in a wall required to have a fire-resistance level will result in the failure of the wall during lintel over a fire.	Noted
S5C5	<p><b>Method of attachment not to reduce the fire-resistance of building elements</b></p> <p>The method of attaching or installing a finish, lining, ancillary element or service installation to a building element must not reduce the fire-resistance of that element to below that required.</p>	Noted	Noted
S5C6	<p><b>General concessions</b></p> <ul style="list-style-type: none"> <li>(1) &amp; (2) Concessions are applicable for some steel and timber columns in predominantly single storey buildings.</li> <li>(3) Concessions are available for non-combustible rooftop plant enclosures.</li> <li>(4) Curtain walls fully protected with external sprinklers do not require an FRL.</li> <li>(5) Concessions are applicable for balconies not more than 2 storeys above ground that are not the only path of travel toward an exit.</li> </ul>	<p><b>Structures on roofs</b> — A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains—</p> <ul style="list-style-type: none"> <li>(ii) lift motor equipment; or</li> <li>(iii) one or more of the following: <ul style="list-style-type: none"> <li>(a) Hot water or other water tanks.</li> <li>(b) Ventilating ductwork, ventilating fans and their motors.</li> <li>(c) Air-conditioning chillers.</li> <li>(d) Window cleaning equipment.</li> <li>(e) Other service units that are non-combustible and do not contain flammable or</li> </ul> </li> </ul>	Noted



Clause	Description	Comment	Status
		combustible liquids or gases.	
S5C7	<b>Mezzanine floors: Concession</b>	N/A	N/A
S5C8	<p><b>Enclosure of shafts</b></p> <p>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.</p> <p>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.</p>	<p>Within the laundry room on Lower Ground Floor a laundry chute it proposed.</p> <p>The laundry chute will not be enclosed at the bottom of the shaft to achieve an FRL in accordance with Spec 5.</p> <p>A Fire Engineer is to be engaged at CC stage to address variations of the DtS requirements.</p>	Performance Solution
S5C9	<b>Carparks in Class 2 and 3 buildings</b>	N/A	N/A
S5C10	<b>Residential care building: Concession</b>	N/A	N/A
S5C11	<p><b>Type A fire-resisting construction – fire-resistance of building elements</b></p> <p>a) All elements must achieve the FRL specified in Table 3.</p> <p>b) Internal walls requiring an FRL must extend to the underside of the floor above, to the roof, or to the underside of a ceiling with resistance to the incipient spread of fire of not less than 60 minutes.</p> <p>c) Loadbearing internal walls (including shafts) and fire walls must be constructed from masonry, concrete or fire-protected timber that complies with this clause.</p> <p>d) The FRLs for external columns also apply to internal columns facing and within 1.5 of a window that is exposed to a fire source feature.</p>	<p>It is assumed the building can readily comply.</p> <p>Sufficient details have not been provided at this stage to demonstrate compliance.</p> <p>In the storey directly below the roof the wall shall extend to the underside of a non-combustible roof covering.</p> <p>The Structural Engineer is to provide design drawings and certification specifically referencing applicable BCA clauses, relevant Australian Standards and any applicable Fire Engineering Performance Solution Report with regards to the structural design.</p>	Compliance Readily Achievable
S5C12	<p><b>Type A fire-resisting construction –concession for floors</b></p> <p>Floors do not require an FRL if they are:</p> <p>a) Laid on the ground.</p> <p>b) In Class 2, 3, 5 or 9 buildings and the space below is not a storey nor used for ancillary purposes.</p> <p>c) Timber stage floors over a floor with the required FRL, where the space below is not used (e.g. store room).</p> <p>d) Within Class 2, 3 and 4 sole-occupancy units.</p> <p>e) Open-access and above a floor with the required FRL.</p>	The Lower Ground Floor slab need not be provided with an FRL.	Noted
S5C13	<b>Type A fire-resisting construction – floor loading of Class 5 and 9b buildings: Concession</b>	N/A	N/A
S5C14	<b>Type A fire-resisting construction – roof superimposed on concrete slab: Concession</b>	N/A	N/A
S5C15	<p><b>Type A fire-resisting construction – roof: Concession</b></p> <p>Roofs do not require an FRL if they are non-</p>	The building will be provided with a sprinkler system in accordance with	Noted


Clause	Description	Comment	Status
	combustible and: b) The building is sprinkler protected; c) The building has a rise in storeys of 3 or less; d) Is a Class 2 or 3 building; or e) The building is less than 25m in effective height and a ceiling with a RISF60 is installed below the roof.	AS2118.1-2017. Therefore, this concession may be applied to the building.	
S5C16	<b>Type A fire-resisting construction – roof lights</b> Roof lights must: (a) Not occupy more than 20% of the roof area; (b) Be not less than 3m from a fire source feature, non-fire separated external walls projecting above, any roof light in an adjoining SOU or fire separated part of the building.	The Ground Floor Will contain a skylight providing light to the lower ground floor. There are various compartments fire separated between the ground and first floor. Technically the skylight is required to be not less than 3m from any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C4D5.  The Fire Engineer is to address variations to the DtS requirements via Fire Engineering Performance Solution.	Performance Solution
S5C17	<b>Type A fire-resisting construction – internal columns and walls: Concession</b> Class 9 - In a building not more than 25m effective height and with a non-combustible roof complying with Clause 3.5, internal columns and walls (other than fire walls and shaft walls) may have ; (i) with rise in storeys exceeding 3: FRL 60/60/60; or (ii) (ii) with rise in storeys not exceeding 3: no FRL.	The concession is applicable on the basis that the building is of Class 9 - fully sprinklered.  The internal fire rated walls directly below the roof may be reduced to FRL 60/60/60.	Compliance Readily Achievable
S5C18	<b>Type A fire-resisting construction – open spectator stands and indoor sports stadiums: Concession</b>	N/A	N/A
S5C19	<b>Type A fire-resisting construction – carparks</b>	N/A	N/A
S5C20	<b>Type A fire-resisting construction – Class 2 and 3 buildings: Concession</b>	N/A	N/A
<b>Section D: Access and Egress</b>			
<b>Part D2 - Provision for Escape</b>			
D2D2	<b>Application of Part</b>	Noted	Noted



Clause	Description	Comment	Status
	This part does not apply to the internal parts of a sole-occupancy in a Class 2 or 3 building or Class 4 part of a building.		
<b>D2D3</b>	<p><b>Number of exits required</b></p> <ul style="list-style-type: none"> <li>At least two exits need to serve each storey of :</li> <li>Class 9 buildings: <ul style="list-style-type: none"> <li>Storeys containing Class 9c sleeping areas.</li> <li>Storeys or mezzanines accommodating more than 50 persons.</li> </ul> </li> </ul> <p>At least one exit must serve each part of storey divided into fire compartments in a Class 9a or 9c building and Class 9b early childhood centre.</p> <p>Access to an exit must be provided without passing through another SOU.</p>	<p>At least two exits have been provided from all parts of the building therefore, compliance with BCA Clause D2D3 has been demonstrated.</p> <p>In the 9c parts, at least one exit has been provided from every part of a storey which has been divided into fire compartments in accordance with C3D3 or C3D6.</p>	Complies
<b>D2D4</b>	<p><b>When fire-isolated stairways and ramps are required</b></p> <p>Every stair in a Class 5 to 9 building must be fire isolated.</p>	Every stair within the building has been designed and documented as a Fire Isolated stair.	Complies
<b>D2D5</b>	<p><b>Exit travel distances</b></p> <p>The BCA limits maximum travel distances to a point of choice and to an exit.</p> <p>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.</p> <p>(Note Specification 18 concession for sprinkler protected Class 2 and 3 buildings not more than 25m in effective height)</p>	<p>In a Class 9c building, horizontal exits may be counted as required exits if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartment which has at least one required exit which is not a horizontal exit.</p> <p>The following areas have been identified as exceeding the prescriptive requirements;</p> <ol style="list-style-type: none"> <li>GF terrace – The distance to an exit measured 47m</li> <li>Within carpark area located on the Lower Ground Floor, the distance to a point of choice measures 22m.</li> <li>Second floor terrace the distance to a point of choice measures 26m</li> </ol> <p>The client has advised that a Fire Engineer will be engaged at CC stage to address variations to the DtS requirements of the BCA.</p>	Performance Solution
<b>D2D6</b>	<p><b>Distance between alternative exits</b></p> <p>Alternative exits must be at least 9m apart and no more than:</p> <ul style="list-style-type: none"> <li>All other cases - 60m apart.</li> </ul> <p>Alternative paths of travel must not converge such that they become less than 6m apart.</p>	<p>The following areas have been identified with distances between alternative exits exceeding 60m:</p> <ul style="list-style-type: none"> <li>Ground Floor terrace 121m</li> <li>Lower ground Floor Carpark measured 63m between exits</li> </ul>	Performance Solution



Clause	Description	Comment	Status
D2D7	<b>Height of exits, paths of travel to exits and doorways</b> Except for doorways, paths of travel must have a clear height of at least 2m.	Sufficient details have not been provided at this stage to demonstrate compliance.  However compliance is readily achievable subject to detailed design development at CC stage.	Compliance Readily Achievable
D2D8	<b>Width of exits and paths of travel to exits</b> <i>(NSW variation for Access and egress)</i>	Based on an assessment of the architectural drawings, generally widths of exits and paths of travel are provided with a minimum of 1000mm clearance, therefore, the requirements of D2D8 have been satisfied.  The specific provisions relating to Class 9c parts have been satisfied whereby public corridors achieve; <ul style="list-style-type: none"><li>(i) 1.5 m; and</li><li>(ii) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom.</li></ul>	Complies
D2D9	<b>Width of doorways in exits or paths of travel to exits</b> <i>(NSW variation for Access and egress)</i>	Based on an assessment of the architectural drawings, all doorways serving as a required exit or located within the path of travel to an exit achieve a minimum width of 800mm, resident use are provided with a minimum of 870mm and doorways leading from public corridors provided with a minimum 1070mm.	Complies
D2D10	<b>Exit width not to diminish in direction of travel</b>	Where exits discharge to the roof as open space and require occupants egressing along a series of ramps, paths or stairs, the egress width does not diminish.	Complies
D2D11	<b>Determination and measurement of exits and paths of travel to exits</b>	Egress widths are measured clear of any obstructions and are to comply with the requirements of this clause.	Noted
D2D12	<b>Travel via fire-isolated exits</b>	The discharge of fire isolated exits to the west elevation of the building requires occupants egressing within 6m of openings in the external wall.  Any window openings protected internally in accordance with C4D5, unless variations to the DtS requirements are addressed via Fire Engineering Performance Solution.	Performance Solution
D2D13	<b>External stairways or ramps in lieu of fire-isolated exits</b>	N/A	N/A
D2D14	<b>Travel by non-fire-isolated stairways or ramps</b>	There are no non-fire isolated stairs. For the purpose of this assessment, the external stair has been considered as a stair provided in accordance with BCA Clause D2D15	Noted

Clause	Description	Comment	Status
D2D15	<p><b>Discharge from exits</b> (NSW variation for Entertainment Venues)</p> <p>An exit must not be blocked nor be capable of being blocked at its point of discharge.</p>	<p>It is considered that the discharge of exits are located whereby they will not become blocked, however external factors are outside the control of SWP.</p> <p>All gates or the like in the path of travel to road or open space shall have complaint door hardware and shall be free passage in the direction of travel.</p> <p>Within the Lower Ground Floor, the sliding door has been determined as the exit. A series of external stairs and ramps provide egress to the road, however, this path of travel is not considered “open space” as the path is considered not to be “adequately protected from fire” due to the various openings exposed to the path of travel.</p> <p>The client has advised that a Fire Engineer will be engaged at CC stage to address variations to the DtS requirements via Performance Solution.</p> 	<p>Compliance Readily Achievable</p> <p>Performance Solution</p>
D2D16	<p><b>Horizontal exits</b></p> <p>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<sup>2</sup> per person in any other case.</p>	<p>Horizontal exits are proposed throughout the development.</p> <p>In 9c buildings horizontal exits may be counted as required exits if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartment which has at least one required exit which is not a horizontal exit.</p> <p>The clear area on the opposite side of the fire wall achieves 2.5 m<sup>2</sup> per patient/resident.</p> <p><b>Note:</b> In order to meet the new test criteria, the double doors require intumescent bolts, which hold and lock the doors closed when they reach 230°.</p>	<p>Compliance Readily Achievable</p>



Clause	Description	Comment	Status
		so it is not feasible to use the door as a horizontal exit. Further investigation is required to detail how compliance can be achieved.	
D2D17	Non-required stairways, ramps or escalators	N/A	N/A
D2D18	Number of persons accommodated	Based on the number of beds and the total number of staff, it is expected at any one time there will be no more than 200 persons accommodated throughout the building. <b>50 Staff</b> <b>105 beds for occupants</b>	Noted
D2D19	Measurement of distances	Noted	Noted
D2D20	Method of measurement	Noted	Noted
D2D21	<b>Plant rooms, lift machine rooms and electricity network substations: Concession</b> 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 <sup>2</sup> , or b) all but one point of egress from a plant room with a floor area not more than 200m <sup>2</sup> .	Mechanical Plant and Hydraulic plant are nominated on the roof.  It is assumed to be level gradient without the necessity for ladders.	Noted
D2D22	<b>Access to lift pits</b> Access requirements apply to lift pits over 3m in depth.	Lift consultant to confirm.	Compliance Readily Achievable
D2D23	Egress from primary schools	N/A	N/A
<b>Part D3 - Construction of Exits</b>			
D3D2	<b>Application of Part</b> <i>(NSW variation for Entertainment Venues)</i>	Noted	Noted
D3D3	<b>Fire-isolated stairways and ramps</b> 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.	The Structural Engineer is required to provide design certification at CC stage with regards to the structural design for the fire isolated stairways.	Compliance Readily Achievable
D3D4	<b>Non-fire-isolated stairways and ramps</b>	N/A	N/A
D3D5	<b>Separation of rising and descending stair flights</b>	All storeys of the building are provided with direct egress to road or open space. Therefore, the requirements of the Clause are not applicable.  <b>Note:</b> The project Fire Engineer has identified this as a non-compliance, however, at this stage each storey has access to road or open space.	Complies
D3D6	<b>Open access ramps and balconies</b>	N/A	N/A
D3D7	<b>Smoke lobbies</b>	N/A	N/A
D3D8	<b>Installations in exits and paths of travel</b>	Distribution board enclosures must	Compliance





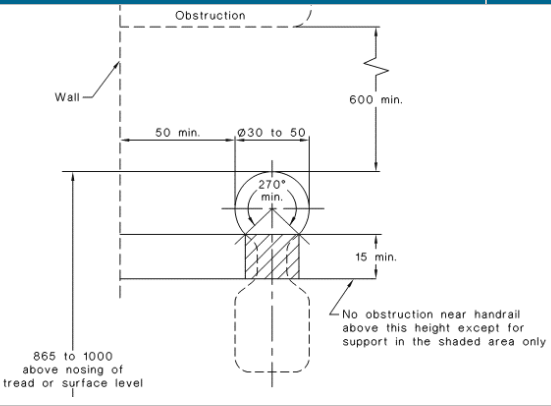

Clause	Description	Comment	Status
	<p>Electrical meters and motors, distribution boards and telecommunication boards must not be accessed from fire isolated exits and, if located in corridors leading to exits, should occur in non-combustible or fire protective smoke sealed enclosures.</p> <p>No openings to ducts conveying hot products of combustion permitted in required exits.</p> <p>Gas or fuel services not permitted in required exits.</p> <p>Electric or services equipment in paths of travel to exits must be within a non-combustible and smoke sealed enclosure.</p>	<p>either be non-combustible or a fire protective covering with doorways or openings suitably sealed against smoke spreading from the enclosure.</p> <p>Compliance should be illustrated on the architectural drawings.</p> <p>Please provide a door schedule for further assessment at CC stage.</p>	Readily Achievable
D3D9	<b>Enclosure of space beneath stairs and ramps</b>	N/A	N/A
D3D10	<p><b>Width of required stairways and ramps</b></p> <p>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.</p>	Stairways exceed 2m width.	Noted
D3D11	<p><b>Pedestrian ramps</b></p> <p>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 D4 it must comply with AS1428.1.</p> <p>The surface of the ramp must have a non-slip finish.</p>	Pedestrian ramps are expected not to exceed a 1:8 gradient.	Compliance Readily Achievable
D3D12	<b>Fire-isolated passageways</b>	N/A – There are no proposed fire isolated passageways.	N/A
D3D13	<b>Roof as open space</b>	N/A	N/A
D3D14	<p><b>Going and risers</b></p> <p><i>(NSW variation for Entertainment Venues)</i></p> <p>To provide safe passage, stairways must comply with the following:</p> <ul style="list-style-type: none"> <li>• minimum 2 risers / maximum 18 in each flight</li> <li>• risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max.</li> <li>• 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.</li> <li>• Under the requirements of AS1428.1-2009 open riser are not permitted.</li> <li>• All treads to be fitted with non-slip finish or non-skid strips.</li> <li>• Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D3D15 when tested in accordance with AS 4586</li> </ul>	Sufficient details have not been provided at this stage for assessment however, compliance is readily achievable subject to detailed design development at CC Stage.	Compliance Readily Achievable


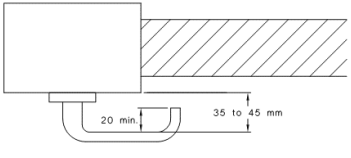
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	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Riser (R)</th> <th colspan="2">Going (G) <sup>(2)</sup></th> <th colspan="2">Quantity (2R+G)</th> </tr> <tr> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> </tr> </thead> <tbody> <tr> <td>Public stairways</td> <td>190</td> <td>115</td> <td>355</td> <td>250</td> <td>700</td> <td>550</td> </tr> <tr> <td>Private stairways<sup>(1)</sup></td> <td>190</td> <td>115</td> <td>355</td> <td>240</td> <td>700</td> <td>550</td> </tr> </tbody> </table> <p>125 mm sphere must not pass through treads</p>		Riser (R)		Going (G) <sup>(2)</sup>		Quantity (2R+G)		Max	Min	Max	Min	Max	Min	Public stairways	190	115	355	250	700	550	Private stairways <sup>(1)</sup>	190	115	355	240	700	550		
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D3D15	<p><b>Landings</b></p> <p>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:</p> <table border="1"> <thead> <tr> <th><u>Application</u></th> <th><u>Dry Surface Conditions</u></th> <th><u>Wet Surface Condition</u></th> </tr> </thead> <tbody> <tr> <td>1:14 or steeper ramps</td> <td>P4 or R11</td> <td>P5 or R12</td> </tr> <tr> <td>Ramps of 1:14 to 1:20</td> <td>P3 or R10</td> <td>P4 or R11</td> </tr> <tr> <td>Tread or Landing Surface</td> <td>P3 or R10</td> <td>P4 or R10</td> </tr> <tr> <td>Nosing Strip or Landing Strip</td> <td>P3</td> <td>P4</td> </tr> </tbody> </table>	<u>Application</u>	<u>Dry Surface Conditions</u>	<u>Wet Surface Condition</u>	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	<p>The spatial requirements for landings within stairs have been demonstrated on the architectural drawings.</p> <p>A finishes schedule specifying ramp and stairway finishes and corresponding slip resistance certification/test reports are needed for review.</p>	Compliance Readily Achievable												
<u>Application</u>	<u>Dry Surface Conditions</u>	<u>Wet Surface Condition</u>																												
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D3D16	<p><b>Thresholds</b></p> <p><i>(NSW variation for Entertainment Venues)</i></p> <p>Steps should not occur at doorways without a threshold landing except as follows:</p> <ul style="list-style-type: none"> <li>In a Class 9c building, a ramp is provide with a maximum gradient of 1:8 for a maximum height of 25mm over the threshold</li> <li>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,</li> <li>Or in any other case a single 190mm step is permitted at doors leading to the exterior.</li> </ul>	<p>In resident use areas in a Class 9c building, ramps are permitted within the threshold of the doorway providing the ramp achieves a maximum gradient of 1:8 for a maximum height of 25 mm over the threshold.</p> <p>Where access for people with disabilities is required, it is not permitted to have a step at the threshold of a doorway.</p> <p>At this stage, no ramps have been detailed on the architectural drawings.</p>	Complies																											
D3D17	<p><b>Barriers to prevent falls</b></p>	Barriers are detailed in locations as prescribed by BCA Clause D3D17.	Complies																											
D3D18	<p><b>Height of barriers</b></p> <p><i>(NSW variation for Entertainment Venues)</i></p> <p>Barriers must generally not be less than 865mm for stairways and ramps and 1m in all other cases. A 700mm balustrade is permitted in front of fixed seating in an auditorium.</p>	Sufficient details have not been provided at this stage for assessment however, compliance is readily achievable subject to detailed design development at CC Stage.	Compliance Readily Achievable																											
D3D19	<p><b>Openings in barriers</b></p> <p>Openings in a required barrier must not allow a 125mm sphere to pass through, except for concessions applying to fire-isolated stairs or other emergency use areas excluding Class 9b early childhood centres.</p>	Sufficient details have not been provided at this stage for assessment however, compliance is readily achievable subject to detailed design development at CC Stage.	Compliance Readily Achievable																											



Clause	Description	Comment	Status
	Where a barrier is fixed to the face of a landing, balcony or the like, the opening between the barrier and the face must not permit a 40mm sphere to pass through.		
<b>D3D20</b>	<b>Barrier climbability</b> 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.	Sufficient details have not been provided at this stage for assessment however, compliance is readily achievable subject to detailed design development at CC Stage.	Compliance Readily Achievable
<b>D3D21</b>	<b>Wire barriers</b>	Sufficient details have not been provided at this stage for assessment however, compliance is readily achievable subject to detailed design development at CC Stage.	Compliance Readily Achievable
<b>D3D22</b>	<b>Handrails</b> 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: <ul style="list-style-type: none"> <li>Handrails not to obstruct circulation space</li> <li>30-50mm diameter</li> <li>865-1000mm above nosing line of stairs</li> <li>865-1000mm above ramps and landings</li> <li>Consistent height throughout</li> <li>50mm grip clearance and no obstructions to handhold</li> <li>Continuous at internal (return) landings</li> <li>Provided with handrail extensions and 180 degree curled ends</li> </ul>	Handrail compliance should be confirmed by the access consultant. Handrails are to be provided in compliance with Clause D4D4, which includes the following- <b>Corridors</b> in a Class 9c aged care building must be provided along both sides of every passageway or corridor used by residents, and must be— (iii) fixed not less than 50 mm clear of the wall; and (iv) (ii) where practicable, continuous for their full length. <b>Non-Fire Isolated Stairways and Ramps</b> 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 <b>Fire Isolated Stairways and Ramps</b> 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 <b>Consistent Handrail Heights for all stairways</b> 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 Handrails shall be provided along both sides of external walkways and ramps,	Compliance Readily Achievable

Clause	Description	Comment	Status
		unless	
	<p><b>Ramps</b></p> <p><b>Stairways</b></p> <p><b>Handrail Profile</b></p>		

Clause	Description	Comment	Status
			
D3D23	<p><b>Fixed platforms, walkways, stairways and ladders</b></p> <p>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.</p>	<p>Certification to AS1657 is to be provided.</p>	<p>Compliance Readily Achievable</p>
D3D24	<p><b>Doorways and doors</b></p> <p><i>(NSW variation for Entertainment Venues)</i></p> <p>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.</p>	<p>Auto sliding doors are proposed at the entry to the building.</p> <p>A power-operated door in a path of travel to a required exit must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source.</p> <p>A door specification is to be provided for further assessment.</p>	<p>Compliance Readily Achievable</p>
D3D25	<p><b>Swinging doors</b></p> <p>Defined exit doors that serve a part of a building with a floor area over 200m<sup>2</sup> must swing outward in the direction of exit travel.</p> <p>Exit doors must not encroach more than 500mm into the required width of the stair or 100mm when fully open and must swing in the direction of travel.</p>	<p>The door serving the café on Ground Floor serves an area less than 200m<sup>2</sup> and therefore is permitted to swing against the direction of travel.</p> <p>It is recommended that the path of travel adjoining Fire Stair 03 is made wider to accommodate a 1000m path of travel when the doors are in the open position.</p> 	<p>Additional Details Required</p>
D3D26	<p><b>Operation of latch</b></p> <p><i>(NSW variation for Entertainment Venues)</i></p> <p>Exit doors should be provided with “free handle” egress via a downward or pushing action and, if serving an area accessible to people with</p>	<p>All exit doors and doors in the path of travel must comply with the requirements of BCA Clause D3D26.</p> <p>Please submit a door hardware</p>	<p>Compliance Readily Achievable</p>

Clause	Description	Comment	Status
	<p>disabilities, must have non-slip “D” pull handles with 35-45mm hand clearances.</p>  <p>(a) Isometric view</p>  <p>(b) Plan view</p> <ul style="list-style-type: none"> <li>• Where the latch operation device is not located on the door leaf itself-</li> <li>• 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</li> <li>• for a hinged door, between 1 m and 2 m from the door leaf in any position;</li> <li>• and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position.</li> <li>• braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device.</li> </ul>	<p>schedule and typical detail for doors for further assessment at CC stage.</p>	
<p><b>D3D27</b></p>	<p><b>Re-Entry from Fire-Isolated Exits</b></p> <p>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 the exit stair serves a storey above 25m in effective height, a Class 9a building, a Class 9b early childhood centre or a Class 9c building</p>	<p>In a Class 9c building all doors to fire isolated stair ways must comply with BCA Clause D3D27. Doors of fire-isolated exits must not be locked from the inside of a fire-isolated exit, unless:</p> <p><u>Option 1</u></p> <ul style="list-style-type: none"> <li>• All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; AND</li> <li>• 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.</li> </ul> <p><u>Option 2</u></p> <ul style="list-style-type: none"> <li>• All doors are fitted with a fail-safe device that automatically unlocks the door upon activation of a fire alarm; AND</li> <li>• An intercommunication or audible/visual alarm system is provided within the stair to assist persons who may accidentally be locked within the stair.</li> </ul> <p>Please provide updated door schedule demonstrating compliance with the</p>	<p>Compliance Readily Achievable</p>



Clause	Description	Comment	Status
D3D28	<p><b>Signs on doors</b></p> <p>Signage in capital letters not less than 20mm high to be provided on doors as follows</p> <ol style="list-style-type: none"> <li>i. An automatic door held open by an automatic hold-open device: <b>FIRE SAFETY DOOR - DO NOT OBSTRUCT</b></li> <li>ii. for a self-closing door <b>FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPEN</b></li> <li>iii. for a door discharging from a fire-isolated exit <b>FIRE SAFETY DOOR - DO NOT OBSTRUCT</b></li> </ol>	<p>requirements of this Clause. At CC stage</p> <p>Under Section 108 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 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 “<b>OFFENCES RELATING TO FIRE EXITS</b>” are to be provided in letters at least 8mm high and the remaining words are to be at least 2.5mm high.</p> <p>The notice is to state the following:</p> <p style="text-align: center;"><b>OFFENCES RELATING TO FIRE EXITS</b></p> <p>It is an offence under the Environmental Planning and Assessment Act 1979</p> <ol style="list-style-type: none"> <li>(a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or</li> <li>(b) to interfere with or obstruct the operation of any fire doors, or</li> <li>(c) to remove, damage or otherwise interfere with this notice.</li> </ol>	Compliance Readily Achievable
D3D29	<p><b>Protection of openable windows</b></p> <p>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.</p> <p>Where the window sill is below 1.7m above the floor level, the openable portion of the window must be protected with</p> <ul style="list-style-type: none"> <li>• a device to restrict the window opening or</li> <li>• a screen with secure fittings</li> </ul> <p>A device or screen required must:</p> <ul style="list-style-type: none"> <li>• not permit a 125mm sphere to pass through the window opening or screen; and</li> <li>• 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.</li> </ul> <p>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.</p>	Compliance is readily achievable subject to detailed design development at CC stage.	Compliance Readily Achievable
D3D30	<b>Timber stairways: Concession</b>	N/A	N/A



Clause	Description	Comment	Status
NSW D3D31	Doors in the path of travel in an Entertainment Venue	N/A	N/A
<b>Part D4 - Access for People with Disabilities</b>			
D4D2	<p><b>General building access requirements</b></p> <p>Access is generally required for persons with a disability throughout all areas unless specifically exempted.</p>	Please refer to 3 <sup>rd</sup> Party Access Consultant report	Noted
<b>Section E: Services and Equipment</b>			
<b>Part E1 - Fire Fighting Equipment</b>			
E1D2	<p><b>Fire hydrants</b></p> <p>The building requires a fire hydrant system in accordance with AS2419.1-2021.</p> <p>Where a sprinkler system is installed in the building in accordance with AS 2118.1, AS 2118.4 or AS 2118.6, the fire hydrant booster protection requirements of clauses 7.6.2 and 7.6.3 of AS2419.1 do not apply.</p> <p><i>Note: Varied booster protection requirements for sprinklered and non-sprinklered buildings.</i></p> <p><i>Note: Ring main requirements for large-isolated buildings and buildings exceeding 25m in effective height.</i></p>	<p>Full compliance with AS2419.1 will be required unless varied via fire brigade approval.</p> <p>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 E1D2 of the BCA and AS2419.1-2021 (noting any non-compliances, which are to be addressed as a Performance Solution).</p> <p>Further detailed design is required to achieve compliance with AS2419.1-2021.</p>	Compliance Readily Achievable
E1D3	<b>Fire hose reels</b>	N/A- Fire hose reel coverage is not required to class 9c buildings.	N/A
E1D4	<p><b>Sprinklers</b></p> <p>Fire sprinkler protection to AS2118.1-2017, as relevant is a mandatory requirement for the project if:-</p> <ul style="list-style-type: none"> <li>Class 9c aged care building</li> <li>An enclosed carpark with more than 40 cars occurs.</li> </ul> <p>Sprinkler pumps and valves must be accessible from the street.</p> <p>Sprinkler system activation must be linked to an audible occupant warning system.</p> <p>Sprinkler hazard Class under AS2118 needs to be agreed where uncertainty of usage under Appendix 1 of the Code occurs.</p>	<p>The building will be provided with a sprinkler system in accordance with AS2118.1-2017</p> <p>The Hydraulic Engineer must ensure that must provide design certification to accompany the drawings certifying the design complies with Clause E1D4 of the BCA and AS2118.1-2017 (noting any non-compliances, which are to be addressed as an Alternative Solution) at CC stage.</p>	Compliance Readily Achievable
E1D5	<b>Where sprinklers are required: all classifications</b>	<p>The building will be provided with a sprinkler system in accordance with AS2118.1-2017</p> <p>The Hydraulic Engineer must ensure</p>	Compliance Readily Achievable





Clause	Description	Comment	Status
		that must provide design certification to accompany the drawings certifying the design complies with Clause E1D4 of the BCA and AS2118.1-2017 (noting any non-compliances, which are to be addressed as an Alternative Solution) at CC stage.	
E1D6	<b>Where sprinklers are required: Class 2 and 3 buildings other than residential care buildings</b>	N/A	N/A
E1D7	<b>Where sprinklers are required: Class 3 building used as a residential care building</b>	N/A	N/A
E1D8	<b>Where sprinklers are required: Class 6 building</b>	N/A	N/A
E1D9	<b>Where sprinklers are required: Class 7a building, other than an open-deck carpark</b>	The Hydraulic Engineer must ensure that must provide design certification to accompany the drawings certifying the design complies with Clause E1D4 of the BCA and AS2118.1-2012 (noting any non-compliances, which are to be addressed as an Alternative Solution) at CC stage.	Compliance Readily Achievable
E1D10	<b>Where sprinklers are required: Class 9a health-care building used as a residential care building, Class 9c buildings</b> Aged care buildings The following conditions apply with respect to the sprinkler system: <ul style="list-style-type: none"> <li>• Sprinklers are to be to AS2118.4-2012.</li> <li>• Sprinklers must be connected to the fire brigade monitoring system.</li> <li>• Fire orders notices should occur at each exit showing fire alarm operation method, fire equipment and exit locations and evacuation procedures.</li> <li>• The sprinkler system should be linked to an audible occupant warning system to sound an alarm through all occupied areas at prescribed sound levels.</li> </ul> Monitored stop valves are required to AS2118.1 in a location accessible to a road or open space.	The building will be provided with a sprinkler system in accordance with AS2118.1-2017  The Hydraulic Engineer must ensure that must provide design certification to accompany the drawings certifying the design complies with Clause E1D4 of the BCA and AS2118.1-2017 (noting any non-compliances, which are to be addressed as an Alternative Solution) at CC stage.	Compliance Readily Achievable
E1D11	<b>Where sprinklers are required: Class 9b buildings</b>	N/A	N/A
E1D12	<b>Where sprinklers are required: additional requirements</b>	N/A	N/A
E1D13	<b>Where sprinklers are required: occupancies of excessive hazard</b>	N/A	N/A
E1D14	<b>Portable fire extinguishers</b> Portable Fire Extinguishers are required be installed to sections (3) and (4) in Clause E1D14 and AS 2444 requirements, at: <ul style="list-style-type: none"> <li>• emergency services switchboards</li> <li>• kitchens</li> <li>• where fire hose reels are not installed</li> </ul>	Sufficient details have not been provided at this stage for assessment.  The architectural drawings are to be updated to denote the location of portable fire extinguishers in accordance with this Clause at CC stage.	Compliance Readily Achievable



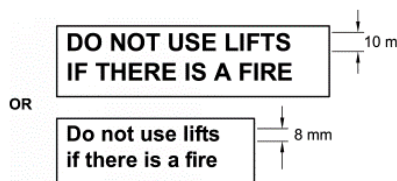
Clause	Description	Comment	Status
E1D15	<b>Fire control centre</b>	N/A	N/A
E1D16	<p><b>Fire precautions during construction</b></p> <p>Fire services are required during construction, including fire hydrants and hose reels which must be active and operational after the building reaches a construction stage effective height of 12m.</p> <p>When the building reaches 12m effective height:</p> <ul style="list-style-type: none"> <li>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.</li> <li>Any required booster connections must be installed.</li> </ul>	<p>Further discussion is required with builder to determine whether this is included in their program.</p> <p>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.</p>	Noted
E1D17	<b>Provisions for special hazards</b>	<p>EV charging stations are proposed to be installed within the carparking area.</p> <p>PV Panels are proposed to be installed to the roof.</p> <p>The installation of EV charging stations &amp; PV Panels will be addressed as a Special Hazard via BCA Clause E1D17.</p>	Performance Solution
<b>Part E2 - Smoke Hazard Management</b>			
E2D2	<b>Applicable of requirements</b>	<p>Part is not applicable to</p> <ul style="list-style-type: none"> <li>open deck car parks</li> <li>open spectator stands</li> <li>a Class 8 electricity network substation with a floor area not more than 200m<sup>2</sup></li> <li>storerooms, etc. less than 30m<sup>2</sup></li> <li>sanitary compartments</li> <li>plant rooms or the like</li> </ul>	Noted
E2D3	<b>General requirements</b>	<p>An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed—</p> <ol style="list-style-type: none"> <li>to operate as a smoke control system in accordance with AS 1668.1; or</li> <li>such that it— <ol style="list-style-type: none"> <li>incorporates smoke</li> </ol> </li> </ol>	Compliance Readily Achievable



Clause	Description	Comment	Status
		<p>dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and</p> <p>ii. is arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1.</p> <p>Compliance is readily achievable subject to detailed design development at CC stage.</p>	
E2D4	Fire-isolated exits	<p>The building is a 9c building with a rise in storeys of more than two (2), therefore, all stairs are required to be provided with a stair pressurisation system.</p> <p>The client has advised that the Project Engineer will prepare a Fire Engineering Performance Solution to rationalise the omission of automatic air pressurisation to the stairs throughout the building.</p>	Performance Solution
E2D5	Buildings more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	N/A	N/A
E2D6	Buildings more than 25 m in effective height: Class 5, 6, 7b, 8 or 9b buildings	N/A	N/A
E2D7	Buildings more than 25 m in effective height: Class 9a buildings	N/A	N/A
E2D8	Buildings not more than 25 m in effective height: Class 2 and 3 buildings and Class 4 part of a building	N/A	N/A
E2D9	Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings	N/A	N/A
E2D10	Buildings not more than 25 m in effective height: large isolated buildings subject to C3D4 (NSW variation for Entertainment Venues)	N/A	N/A
E2D11	Buildings not more than 25 m in effective height: Class 9a and 9c buildings	<p>An automatic smoke detection and alarm system complying with Specification 20 is required to be provided throughout the building.</p> <p>A smoke detection system will be installed in accordance with Specification 20 Clause S20C4.</p> <p><b>Class 9c</b></p> <p>The Class 9c parts of the development is required to be provided with the following;</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
		<ul style="list-style-type: none"> <li>Smoke detection and alarm system in accordance with Specification 20 throughout</li> <li>Building Occupant warning system</li> <li>Automatic shutdown of any air-handling system which does not form part of a zone pressurisation system (other than individual room units with a capacity not more than 1000 L/s, systems serving critical treatment areas and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) on the activation of—               <ul style="list-style-type: none"> <li>(i) smoke detectors</li> <li>(ii) any other installed fire detection and alarm system including a sprinkler system complying with Specification 17; and</li> </ul> </li> </ul> <p>a sprinkler system complying with Specification 17 throughout with residential sprinkler heads in patient care areas</p>	
E2D12	Class 7a buildings	<p>The Class 7a building parts of the building including a basement, are to be provided with a mechanical ventilation system in accordance with AS 1668.2 and comply with clause 5.5 of AS 1668.1.</p> <p>Mechanical Engineer to provide design certification to accompany services drawings at CC stage.</p>	Compliance Readily Achievable
E2D13	Basements (other than Class 7a buildings)	N/A	N/A
E2D14	Class 6 buildings - in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (not containing an enclosed common walkway or mall serving more than one Class 6 sole-occupancy unit)	N/A	N/A
E2D15	Class 6 buildings - in fire compartments more than 2000 m <sup>2</sup> : Class 6 building (containing an enclosed common walkway or mall)	N/A	N/A
NSW E2D16	Class 9b – assembly buildings: all	N/A	N/A
NSW E2D17	Class 9b – assembly buildings: night clubs, discotheques and the like	N/A	N/A
NSW E2D18	Class 9b – assembly buildings: exhibition halls, museums and art galleries	N/A	N/A
NSW E2D19	Class 9b – assembly buildings: other assembly buildings (not listed in NSW E2D16 to E2D18)	N/A	N/A

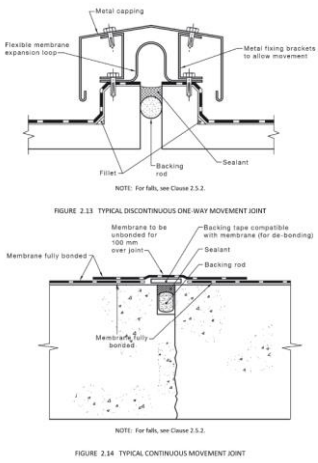
Clause	Description	Comment	Status
<b>NSW E2D20</b>	<i>(NSW variation - This clause has deliberately been left blank.)</i>	-	-
<b>E2D21</b>	<b>Provisions of special hazards</b>	<p>EV charging stations are proposed to be installed within the carparking area.</p> <p>PV Panels are proposed to be installed to the roof.</p> <p>The installation of EV charging stations &amp; PV Panels will be addressed as a Special Hazard via BCA Clause E2D212.</p>	Performance Solution
<b>Part E3 - Lift Installations</b>			
<b>E3D2</b>	<b>Lift installations</b> Electric and electrohydraulic lifts must comply with the design requirements of BCA Specification 24.	Certification of lift design to be provided at CC stage.	Compliance Readily Achievable
<b>E3D3</b>	<b>Stretcher facility in lifts</b> 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.	The spatial requirements of the lift demonstrate compliance with the requirements of E3D3.	Complies
<b>E3D4</b>	<b>Warning against use of lift in fire</b> Warning signage is required at lift doors advising that lifts should not be used in the event of a fire.	<p>Signage to be installed stating.</p> 	Compliance Readily Achievable
<b>E3D5</b>	<b>Emergency lifts</b>	N/A	N/A
<b>E3D6</b>	<b>Landings</b>	The architectural drawings detail compliant landings in accordance with BCA Clause E3D6.	Complies
<b>E3D7</b>	<b>Passenger lift types and their limitations</b> Every passenger lift must be one of the types identified in Sections (1) of Clause E3D7 of the BCA and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	<p>No specific details provided at this stage regarding accessible features incorporated within the lift.</p> <p>Lift floor dimension of not less than 1100 mm wide x 1600 mm deep have been detailed within the architectural drawings.</p> <p>Detailed architectural drawings and specification to be provided for assessment at CC stage.</p>	Compliance Readily Achievable
<b>E3D8</b>	<b>Accessible features required for passenger lifts</b> Every passenger lift must have accessible features where applicable as identified in Clause E3D8 of the BCA.	Please refer to 3rd party Access Report.	Noted
<b>E3D9</b>	<b>Fire service control</b> Where lifts serve a storey above 12m in effective height: <ul style="list-style-type: none"> <li>A fire service control switch is required for each lift or lift group.</li> <li>A lift car fire service drive control is required for each lift.</li> </ul>	Certification of lift design to be provided at CC stage.	Compliance Readily Achievable



Clause	Description	Comment	Status
E3D10	<b>Residential care buildings</b>	The lifts within the building have been designed to accommodate a stretcher lift.	Complies
E3D11	<b>Fire service recall control switch</b> 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 at CC stage.	Compliance Readily Achievable
E3D12	<b>Lift car fire service drive control switch</b> 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 at CC stage.	Compliance Readily Achievable
<b>Part E4 - Emergency Lighting, Exit and Warning Systems</b>			
E4D2	<b>Emergency lighting requirements</b> Emergency lighting is to be provided throughout the building.	Emergency lighting is to be provided in: <ul style="list-style-type: none"> <li>every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway.</li> <li>Every passageway, hallway, corridor or the like, that is part of the path of travel to an exit.</li> <li>In every room having a floor area more than 100m<sup>2</sup> that does not open to a corridor or space that has emergency lighting or to a road or open space.</li> <li>In any room having a floor area more than 300m<sup>2</sup>.</li> <li>In every required non-fire isolated stairway</li> <li>Electrical engineer to provide design certification in accordance with BCA Clause E4D2 and AS2293.1-2018 to accompany the service drawings at CC stage.</li> </ul>	Compliance Readily Achievable
E4D3	<b>Measurement of distances</b>	Noted	Noted
E4D4	<b>Design and operation of emergency lighting</b> Emergency lighting must comply with to AS2293.1	Emergency lighting details have been provided at this stage. However, it is assumed the building can readily comply. Electrical engineer to provide design certification in accordance with BCA Clause E4D4 and AS2293.1-2018 to accompany the service drawings at CC stage.	Compliance Readily Achievable
E4D5	<b>Exit signs</b> Exit signs are to be provided in accordance with Clause E4D5 of the BCA.	Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to;	Compliance Readily Achievable



Clause	Description	Comment	Status
		<ol style="list-style-type: none"> <li>1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit.</li> <li>2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space.</li> <li>3. A horizontal exit</li> <li>4. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting.</li> </ol> <p>Electrical engineer to provide design certification in accordance with BCA Clause E4D5 and AS2293.1-2018 to accompany the service drawings at CC stage.</p>	
E4D6	<p><b>Direction signs</b> <i>(NSW variation for Entertainment Venues)</i></p> <p>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</p>	<p>Directional signage details have not been provided at this stage however compliance is readily achievable.</p> <p>Electrical engineer to provide design certification in accordance with BCA Clause E4D6 and AS2293.1-2018 to accompany the service drawings at CC stage.</p>	Compliance Readily Achievable
E4D7	<b>Class 2 and 3 buildings and Class 4 parts: Exemptions</b>	N/A	N/A
E4D8	<p><b>Design and operation of exit signs</b></p> <ol style="list-style-type: none"> <li>1. Exit signs are to operate in accordance with AS 2293.1.</li> <li>2. Photo luminescent exit sign are to comply with Specification 25.</li> </ol>	Electrical engineer to provide design certification in accordance with BCA Clause E4D6 and AS2293.1-2018 to accompany the service drawings at CC stage.	Compliance Readily Achievable
E4D9	<b>Emergency warning and intercom systems</b>	N/A	N/A
<b>Section F: Health and Amenity</b>			
<b>Part F1 - External waterproofing, rainwater management and rising damp</b>			
F1D1	<p><b>Deemed-to-Satisfy Provisions</b></p> <p>(1) Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F1P1 to F1P4 are satisfied by complying with F1D2 to F1D8.</p> <p>(2) Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.</p>	<p>A test report on the proposed wall system is to be provided. The test report must include the following information:</p> <ol style="list-style-type: none"> <li>(i) Name and address of the person supervising the test.</li> <li>(ii) Test report number.</li> <li>(iii) Date of the test.</li> <li>(iv) Cladding manufacturer's name and address.</li> <li>(v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any.</li> <li>(vi) Test sequence with the pressures used in all tests.</li> <li>(vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing.</li> </ol> <p>It is recommended that a Façade</p>	Compliance Readily Achievable

Clause	Description	Comment	Status
		Engineer review the build-up of external wall details at CC stage.	
<b>F1D3</b>	<b>Stormwater drainage</b> Stormwater drainage must comply with AS/NZS 3500.3.	Hydraulic drawings and design certification to be provided at CC stage.	Compliance Readily Achievable
<b>F1D4</b>	<b>Exposed joints</b> Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must be protected in accordance with Section 2.9 of AS 4654.2; and not be located beneath or run through a planter box, water feature or similar part of the building.   <p>FIGURE 2.13 TYPICAL DISCONTINUOUS ONE-WAY MOVEMENT JOINT NOTE: For Mem, see Clause 2.5.2</p> <p>FIGURE 2.14 TYPICAL CONTINUOUS MOVEMENT JOINT NOTE: For Mem, see Clause 2.5.2</p>	Structural Engineer/Architect to confirm compliance at CC stage.	Compliance Readily Achievable
<b>F1D5</b>	<b>External waterproofing membranes</b> Trafficable roofs, balconies, podiums or similar parts of a building require a waterproofing membrane complying with AS4654.1 and AS4654.2, which must be installed directly on the structural substrate.	No details provided at this stage. It is recommended that a suitably qualified waterproofing consultant is engaged to review all external waterproofing details.  This matter to be addressed via detailed architectural drawings & BCA specification at CC stage.	Compliance Readily Achievable
<b>F1D6</b>	<b>Damp-proofing</b> 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 termite shield in accordance with AS 3660.1.	No details provided at this stage. This matter to be addressed via detailed architectural drawings & BCA specification at CC stage.	Compliance Readily Achievable
<b>F1D7</b>	<b>Damp-proofing of floors on the ground</b> A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab.	No details provided at this stage. This matter to be addressed via detailed architectural drawings & BCA specification	Compliance Readily Achievable
<b>F1D8</b>	<b>Subfloor ventilation</b>	N/A	N/A

**Part F2 - Wet areas and overflow protection**





Clause	Description	Comment	Status
<b>F2D1</b>	<p><b>Deemed-to-Satisfy Provisions</b></p> <p>Where a Deemed-to-Satisfy Solution is proposed, Performance Requirements F2P1 and F2P2 are satisfied by complying with F2D2 to F2D4.</p> <p>Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.</p>	<p>No details provided at this stage.</p> <p>It is recommended that a suitably qualified waterproofing consultant is engaged to review all external waterproofing details.</p> <p>This matter to be addressed via detailed architectural drawings &amp; BCA specification at CC stage.</p>	Compliance Readily Achievable
<b>F2D2</b>	<p><b>Wet area construction</b></p> <p>Water proofing of wet areas within a building to comply with AS 3740.</p> <p>Showers in Class 2 and 3 buildings or a Class 4 part must have a concrete or FC sheet structural substrate for floors and concrete, masonry, or FC sheeted walls. Concrete structural substrates for shower floors must be graded to a 1:80 fall, and the membrane directly applied to the structural substrate.</p> <p>The waterproofing requirements for multi-residential buildings also apply to commercial buildings.</p>	<p>No details provided at this stage.</p> <p>It is recommended that a suitably qualified waterproofing consultant is engaged to review all external waterproofing details.</p> <p>This matter to be addressed via detailed architectural drawings &amp; BCA specification at CC stage.</p>	Compliance Readily Achievable
<b>F2D3</b>	<p><b>Rooms containing urinals</b></p> <p>Additional requirements apply including falls to floor wastes and impervious materials surrounding urinals.</p>	<p>No details provided at this stage.</p> <p>It is recommended that a suitably qualified waterproofing consultant is engaged to review all external waterproofing details.</p> <p>This matter to be addressed via detailed architectural drawings &amp; BCA specification at CC stage.</p>	Compliance Readily Achievable
<b>F2D4</b>	<p><b>Floor wastes</b></p> <p>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 floors graded to the floor waste at 1:50.</p>	<p>No details provided at this stage.</p> <p>It is recommended that a suitably qualified waterproofing consultant is engaged to review all external waterproofing details.</p> <p>This matter is to be addressed via detailed architectural drawings &amp; BCA specification at CC stage.</p>	Compliance Readily Achievable
<b>Part F3 - Roof and wall cladding</b>			
<b>F3D1</b>	<p><b>Deemed-to-Satisfy Provisions</b></p> <p>Where a Deemed-to-Satisfy Solution is proposed, Performance Requirement F3P1 is satisfied by complying with F3D2 to F3D5.</p> <p>Where a Performance Solution is proposed, the relevant Performance Requirements must be determined in accordance with A2G2(3) and A2G4(3) as applicable.</p>	Noted	Noted
<b>F3D2</b>	<p><b>Roof coverings</b></p>	<p>No details provided at this stage. This matter to be addressed via detailed architectural drawings &amp; BCA specification at CC stage</p>	Compliance Readily Achievable
<b>F3D3</b>	<p><b>Sarking</b></p> <p>Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200</p>	<p>No details provided at this stage. This matter to be addressed via detailed architectural drawings &amp; BCA</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
	Parts 1 and 2.	specification at CC stage.	
<b>F3D4</b>	<b>Glazed assemblies</b> 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.	No details provided at this stage. This matter to be addressed via detailed architectural drawings & BCA specification at CC stage.	Compliance Readily Achievable
<b>F3D5</b>	<b>Wall cladding</b> External wall cladding must comply with one or a combination of the following: <ul style="list-style-type: none"> <li>Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700</li> <li>Autoclaved aerated concrete: AS 5146.3.</li> <li>Metal wall cladding: AS 1562.1.</li> </ul>	External wall claddings which are not captured under Clause F3D5 will require a performance solution to be documented by an appropriately qualified practitioner in accordance with <i>Clause A2G2 - Performance Solution</i> at CC stage.	Compliance Readily Achievable
<b>Part F4 - Sanitary and other facilities</b>			
<b>F4D2</b>	<b>Facilities in residential buildings</b>	Private facilities have been provided for each resident including wash basin, closet pan and shower facilities.	Complies
		It is proposed not to provide a bath, fixed or mobile for the residents of the facility.  A Performance Solution will be prepared to omit the requirements for a bath.	Performance Solution
<b>F4D3</b>	<b>Calculation of number of occupants and fixtures</b>	Staff sanitary facilities will be provided on the basis of equal number of staff.	Noted
<b>F4D4</b>	<b>Facilities in Class 3 to 9 buildings</b> Toilet facilities are required in appropriate numbers based on the number of persons accommodated.	Separate sanitary facilities have been provided for male and female staff. The number of facilities provided is capable of accommodating up to 100 staff.( noted that there will not be more than 50 staff).  Furthermore, it has been identified that a unisex shower facility has been provided. However, shower facilities are not <b>required</b> for staff in a Class 9c building. Therefore, SWP view this shower facility above and beyond the requirements of the BCA and therefore, do not determine separate shower facilities need to be provided for male and female staff.	Noted
<b>F4D5</b>	<b>Accessible sanitary facilities</b>	Please refer to 3 <sup>rd</sup> Party Access report.	Noted
<b>F4D6</b>	<b>Accessible unisex sanitary compartments</b>	Please refer to 3 <sup>rd</sup> Party Access report.	Noted
<b>F4D7</b>	<b>Accessible unisex showers</b>	Please refer to 3 <sup>rd</sup> Party Access report.	Noted
<b>F4D8</b>	<b>Construction of sanitary compartments</b> Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from	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.	Compliance Readily Achievable

Clause	Description	Comment	Status
	outside.		
F4D9	<b>Interpretation: Urinals and washbasins</b>	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
F4D10	<i>(NSW variation - This clause has deliberately been left blank.)</i>		-
F4D11	<b>Waste management</b>	<p>In a Class 9c building, the following facilities must be provided for every 60 beds or part thereof on each storey containing resident use areas:</p> <ol style="list-style-type: none"> <li>One slop-hopper or other device other than a water closet pan or urinal for the safe handling and disposal of liquid and solid wastes with a flushing apparatus, tap and grating.</li> <li>An appliance for the disinfection of pans or an adequate means to dispose of receptacles.</li> </ol> <p>Updated architectural drawing are to be provided demonstrating compliance at CC stage.</p>	Compliance Readily Achievable
F4D12	<b>Accessible adult change facilities</b>	N/A	N/A
<b>Part F5 - Room heights</b>			
F5D2	<b>Height of rooms and other spaces</b> Generally, a minimum ceiling height of 2.4m is required throughout.	The sections and elevations generally demonstrate compliance with the provisions of F5D2, a minimum of 2.4m nominated within internal areas.	Compliance Readily Achievable
<b>Part F6 - Light and ventilation</b>			
F6D2	<b>Provision of natural light</b> Natural lighting aggregating 10% of room floor area is required as follows: <ul style="list-style-type: none"> <li>To all habitable rooms in residential buildings.</li> <li>In bedrooms and dormitories of hotels, motels and the like.</li> <li>To rooms used for sleeping in health care and aged care buildings.</li> <li>To school classrooms and early childhood centres.</li> </ul>	Based on an assessment of the architectural drawings including the elevations window dimensions will allow for 10% opening to that of the floor area of each room.	Complies
F6D3	<b>Methods and extent of natural lighting</b>	N/A – Borrowed light is not required.	N/A
F6D4	<b>Natural light borrowed from adjoining room</b>	Design details and certification from an	Compliance



Clause	Description	Comment	Status
		Electrical Engineer is required at CC stage.	Readily Achievable
F6D5	<b>Artificial lighting</b> The artificial lighting system must comply with AS/NZS 1680.0.	Design details and certification from a Mechanical Engineer is required at CC stage.	Compliance Readily Achievable
F6D6	<b>Ventilation of rooms</b> <i>(NSW variation for Public Health Regulation)</i> Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F6D7 or mechanical ventilation complying with the requirements of AS1668.2 as required by Clause F6D6 of the BCA.	The architectural drawings submitted demonstrate suitable openings to provide natural ventilation in accordance with F4.6.  No details of mechanical ventilation to rooms provided at this stage.  Mechanical consultant to provide drawings and design certification for further assessment at CC stage.	Compliance Readily Achievable
F6D7	<b>Natural ventilation</b>	Based on a preliminary assessment of the architectural drawings including the elevations window dimensions will allow for 10% opening to that of the floor area of each room.	Complies
F6D8	<b>Ventilation borrowed from adjoining room</b>	N/A – Borrowed ventilation is not required	N/A
F6D9	<b>Restriction on location of sanitary compartments</b>	Sanitary facilities have been detailed in locations compliance with BCA Clause F6D9.	Complies
F6D10	<b>Airlocks</b>	N/A	N/A
F6D11	<b>Carparks</b> Basement carparks must be provided with a system of mechanical ventilation complying with AS 1668.2	Sufficient details have not been provided at this stage.  The Mechanical Engineer is to provided service drawings and design certification at CC stage.	Compliance Readily Achievable
F6D12	<b>Kitchen local exhaust ventilation</b> A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2, where: <ul style="list-style-type: none"> <li>any cooking apparatus has a total maximum electrical power input exceeding 8kW, or</li> <li>a total gas power input exceeding 29 MJ/h, or</li> <li>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.</li> </ul>	Sufficient details have not been provided at this stage.  The mechanical Engineer is to provided service drawings and design certification at CC stage.	Compliance Readily Achievable
<b>Part F7 - Sound transmission and insulation</b>			
F7D2	<b>Application of Part</b> Applicable to Class 2, 3 and 9c buildings.	Details in relation to acoustic treatment have not been provided at this stage.  Appropriate plans and specification are to be provided.  A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify	Compliance Readily Achievable



Clause	Description	Comment	Status
		compliance.	
<b>F7D3</b>	<p><b>Determination of airborne sound insulation ratings</b></p> <p>Construction required to have an airborne sound insulation rating must have the value for weighted sound reduction index (<math>R_w</math>) or weighted sound reduction index with spectrum adaptation term (<math>R_w + C_{tr}</math>) determined in accordance with AS/NZS1276.1 or ISO717.1 using result from laboratory measurements or comply with Specification 28 of the BCA.</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable
<b>F7D4</b>	<p><b>Determination of impact sound insulation ratings</b></p> <p>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 (<math>L_{n,w} + C_i</math>) determined in accordance with AS/ISO 717.2 using results from laboratory measurements or comply with Specification 28 of the BCA.</p> <p>Walls that are required to have an impact sound insulation rating must be of discontinuous construction.</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable
<b>F7D5</b>	<p><b>Sound insulation rating of floors</b></p> <p>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 <math>R_w + C_{tr}</math> of not less than 50 and an <math>L_{n,w} + C_i</math> of not more than 62.</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable
<b>F7D6</b>	<p><b>Sound insulation rating of walls</b></p> <p>Walls must have an <math>R + C_t</math> of not less than 50 if it separates sole occupancy units and an <math>R_w</math> 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.</p> <p>Compliance with F7D4(2) 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.</p> <p>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 <math>R_w</math> not less than 30.</p> <p>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.</p> <p>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.</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
<b>F7D7</b>	<p><b>Sound insulation rating of internal services</b></p> <p>Services passing through more than one sole-occupancy unit must be separated from the rooms by construction with an <math>R_w + C_{tr}</math> (airborne) not less than:</p> <ul style="list-style-type: none"> <li>a) 40 if the adjacent room is a habitable room (other than a kitchen); or</li> <li>b) 25 if the adjacent room is a kitchen or non-habitable room.</li> </ul> <p>Note if a stormwater pipe passes through a sole - occupancy unit it must be separated in accordance with (a) and (b).</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable
<b>F7D8</b>	<p><b>Sound isolation pumps</b></p> <p>A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.</p>	<p>Details in relation to acoustic treatment have not been provided at this stage.</p> <p>Appropriate plans and specification are to be provided.</p> <p>A detailed assessment will need to be undertaken by a qualified acoustic consultant at the CC stage to verify compliance.</p>	Compliance Readily Achievable
<b>Part F8 - Condensation management</b>			
<b>F8D2</b>	<p><b>Application of part</b></p> <p>This part applies to a sole-occupancy unit of a Class 2 building or Class 4 part of a building.</p>	N/A	N/A
<b>F8D3</b>	<b>External wall construction</b>	N/A	N/A
<b>F8D4</b>	<b>Exhaust systems</b>	N/A	N/A
<b>F8D5</b>	<b>Ventilation of roof spaces</b>	N/A	N/A
<b>Section G: Ancillary Provisions</b>			
<b>Part G1- Minor Structures and components</b>			
<b>G1P1</b>	<b>Swimming pool drainage</b>	N/A	N/A
<b>G1D2</b>	<p><b>Swimming pools</b></p> <p><i>(NSW variation for swimming pools)</i></p>	N/A	N/A
<b>G1D3</b>	<b>Refrigerated chambers, strong rooms and vaults</b>	<p>Where provided a cool room must have—</p> <ul style="list-style-type: none"> <li>a. a door which is capable of being opened by hand from inside without a key; and</li> <li>b. internal lighting controlled only by a switch which is located adjacent to the entrance doorway inside the chamber, strongroom or vault; and</li> <li>c. an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights required by (b) are switched on; and</li> <li>d. an alarm that is— <ul style="list-style-type: none"> <li>i) located outside but controllable only from</li> </ul> </li> </ul>	Compliance Readily Achievable



Clause	Description	Comment	Status
		<p>within the chamber, strongroom or vault; and</p> <p>ii) able to achieve a sound pressure level outside the chamber, strongroom or vault of 90 dB(A) when measured 3 m from the sounding device. (2)</p> <p>A door required by (1)(a) in a refrigerated or a cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m.</p> <p>Please provide additional details if a cool room is to be provided at CC stage.</p>	
<b>G1D4</b>	<b>Outdoor play spaces</b>	N/A	N/A
<b>NSW G1D5</b>	<p><b>Provision for cleaning windows</b></p> <p>A safe manner of cleaning windows is to be provided as windows are located 3 or more storeys above ground level.</p>	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.	Compliance Readily Achievable
<b>Part G2 - Boilers, pressure vessels, heating appliances, fire places, chimneys and flues</b>			
<b>G2D2</b>	<b>Installation of appliances</b>	N/A	N/A
<b>G2D3</b>	<b>Open fireplaces</b>	N/A	N/A
<b>G2D4</b>	<b>Incinerator rooms</b>	N/A	N/A
<b>Part G3 - Atrium Construction</b>			
<b>G3D1</b>	<b>Application of Part</b>	<p>SWP have identified that the sunken courtyard connects four (4) storeys. The occupiable outdoor space has been determined as a storey based on part G6 of the BCA.</p> <p>It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.</p>	Noted
<b>G3D2</b>	<p><b>Dimensions of atrium well</b></p> <p>Minimum 6m diameter atrium well is required.</p>	<p>SWP have identified that the sunken courtyard connects four (4) storeys.</p> <p>It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.</p>	Performance Solution
<b>G3D3</b>	<p><b>Separation of atrium by bounding walls</b></p> <p>An atrium well is required to be separated from the remainder of the building by bounding walls</p>	SWP have identified that the sunken courtyard connects four (4) storeys.	Performance Solution





Clause	Description	Comment	Status
	not more than 3.5m from the perimeter of the atrium well, except in the case of 3 consecutive storeys.	It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	
<b>G3D4</b>	<b>Construction of bounding walls</b> Bounding walls must have an FRL not less than 60/60/60 or constructed of fixed toughened safety glass or wired safety glass in non-combustible frames protected with wall wetting sprinklers in accordance with Specification 31.	SWP have identified that the sunken courtyard connects four (4) storeys.  It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	Performance Solution
<b>G3D5</b>	<b>Construction of balconies</b> If a bounding wall separating an atrium from the remainder of the building is set back from the atrium well, an imperforate and non-combustible barrier not less than 1 m high must be provided.	SWP have identified that the sunken courtyard connects four (4) storeys.  It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	Performance Solution
<b>G3D6</b>	<b>Separation at roof</b> The atrium roof must have an FRL not less than that prescribed in Tables S5C11a to S5C11g of Specification 5, or the roof structure and membrane are to be protected by a sprinkler system complying with Specification 17 and G3D8.	SWP have identified that the sunken courtyard connects four (4) storeys.  It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	Performance Solution
<b>G3D7</b>	<b>Means of egress</b> All areas within the atrium must have at least 2 means of egress.	SWP have identified that the sunken courtyard connects four (4) storeys.  It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	Performance Solution
<b>G3D8</b>	<b>Fire and smoke control systems</b> Sprinklers are to be provided throughout in accordance with Specification 17 and 31.  A smoke control system complying with AS/NZS1668.1 and Specification 31 is required throughout.  An automatic fire detection and alarm system must comply with AS1670.1 and Specification 31.  A sound system and intercom system for emergency purposes must be provided in accordance with AS1670.4 and must incorporate visual warning devices that operate on alarm and display the words <b>“EVACUATE”</b> in red letters.  A suitable alternative power supply (emergency generator) must be provided to operate “required” safety systems in the building in accordance with Specification 31.	SWP have identified that the sunken courtyard connects four (4) storeys.  It is recommended that the project Fire Engineer assess the feasibility of a Performance Solution to address the variations to the DtS requirements relating to Part G3 of the BCA.	Performance Solution





Clause	Description	Comment	Status
	Fire isolated stairways are required to be provided automatic air pressurisation in accordance with AS/NZS1668.1.		
<b>Part G4 - Construction in Alpine Areas</b>			
G4D2	Application of Part	N/A	N/A
G4D3	External doorways	N/A	N/A
G4D4	Emergency lighting	N/A	N/A
G4D5	External trafficable structures	N/A	N/A
G4D6	Clear space around buildings	N/A	N/A
G4D7	Fire-fighting services and equipment	N/A	N/A
G4D8	Fire orders	N/A	N/A
<b>Part G5 - Construction in Bushfire Prone Areas</b>			
NSW G5D2	Application of Part	<p>It has been determined that the proposed building is located on BAL 19 land.</p> <p>The DtS requirements for Part G5 in NSW are only applicable for BAL 12.5. Therefore, the project Fire Engineer and Bush fire consultant are to prepare a Performance Solution to address Performance requirements NSW G5P1 &amp; NSW G5P2.</p> <p>For a Class 9 building that is special fire protection purpose, <b>Specification 43</b> except as amended by Planning for Bush Fire Protection</p>	Performance Solution
NSW G5D3	Protection - residential buildings <i>(NSW variation for bushfire prone area)</i>	N/A	N/A
NSW G5D4	<p>Protection - certain Class 9 buildings <i>(NSW variation for bushfire prone area)</i></p> <p>In a designated bushfire prone area, the following must comply with Specification 43:</p> <ul style="list-style-type: none"> <li>A Class 9c residential care building.</li> <li>A Class 10a building or deck immediately adjacent or connected to a building of a type listed above.</li> </ul>	<p>It has been determined that the proposed building is located on BAL 19 land.</p> <p>The DtS requirements for Part G5 in NSW are only applicable for BAL 12.5. Therefore, the project Fire Engineer and Bush fire consultant are to prepare a Performance Solution to address Performance requirements NSW G5P1 &amp; NSW G5P2.</p> <p>For a Class 9 building that is special fire protection purpose, <b>Specification 43</b> except as amended by Planning for Bush Fire Protection</p>	Performance Solution
<b>Part G6 - Occupiable outdoor areas</b>			
G6D1	Application of Part Applies to occupiable outdoor areas in addition to	Noted	Noted



Clause	Description	Comment	Status
	<p>other deemed-to-satisfy provisions of the BCA.</p> <p>Part G6 takes precedent where there is a difference to the deemed-to-satisfy provisions of Sections C, D, E, F &amp; G.</p> <p>Except for clause G6D2, Part G6 does not apply to occupiable outdoor areas of individual resident rooms or outdoor occupiable areas less than 10m<sup>2</sup>.</p>		
<b>G6D2</b>	<p><b>Fire hazard properties</b></p> <p>A lining, material or assembly in an occupiable outdoor area must comply with C2D11 as for an internal element.</p> <p>The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C2D11:</p> <p>(i) Average specific extinction area.</p> <p>(ii) Smoke-Developed Index.</p> <p>(iii) Smoke development rate.</p> <p>(iv) Smoke growth rate index (SMOGR<sub>RC</sub>)</p>	Proposed materials used in outdoor occupiable areas are subject to C2D11 requirements as this clause.	Compliance Readily Achievable
<b>G6D3</b>	<b>Fire separation</b>	N/A	N/A
<b>G6D4</b>	<p><b>Provision for escape</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.</p>	Egress requirements under Part D2 apply to occupiable outdoor areas. Please refer to assessment within Part D2 of this report	Noted
<b>G6D5</b>	<p><b>Construction of exits</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part D3, a reference to a storey or room includes an occupiable outdoor area.</p>	Construction of exits requirements under Part D3 apply to occupiable outdoor areas. Please refer to assessment within Part D3 of this report	Noted
<b>G6D6</b>	<p><b>Fire fighting equipment</b></p> <p>Except for Clause S17C7(2)(a), for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.</p>	Fire fighting equipment required under Part E1 to be designed to include occupiable outdoor areas. Please refer to assessment within Part E1 of this report	Noted
<b>G6D7</b>	<p><b>Lift installations</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.</p>	Lift designs required under Part E3 to be designed to include occupiable outdoor areas. Please refer to assessment within Part E3 of this report	Noted
<b>G6D8</b>	<p><b>Visibility in an emergency, exit signs and warning systems</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.</p>	Emergency lighting exits signs and emergency warning and intercom systems to be designed to include occupiable outdoor areas. Please refer to assessment within Part E4 of this report	Noted
<b>G6D9</b>	<p><b>Light and ventilation</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of F6D5, F6D9 and F6D10, a reference to a room includes an occupiable outdoor area.</p>	N/A	N/A
<b>G6D10</b>	<p><b>Fire orders</b></p> <p>For the purposes of the Deemed-to-Satisfy Provisions of G4D8, a reference to a storey</p>	N/A	N/A



Clause	Description	Comment	Status
	includes an occupiable outdoor area.		
<b>Part G7 - Livable housing design</b>			
NSW G7D2	Livable housing design	N/A	N/A
<b>Part G7 - Livable housing design</b>			
G7D2	Livable housing design	N/A	N/A
<b>Section I: Special use buildings</b>			
<b>Part 11 - Class 9b buildings</b>			N/A
<b>Part 12 - Public Transport Buildings</b>			N/A
<b>Part 13 - Farm buildings and farm sheds</b>			N/A
<b>NSW Part 14 - Entertainment venues other than temporary structures and drive-in theatres</b>			N/A
<b>NSW Part 15 Temporary structures</b>			N/A
<b>NSW Part 16 Drive-in theatres</b>			N/A
<b>NSW Section J: Energy Efficiency</b>			
<p>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.</p> <p><b>A third party ESD consultant is required to assess the requirements of Section J via separate assessment at CC stage.</b></p>			



## 14. Appendix A - Referenced Documentation

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

Drawing No.	Title	Issue	Date	Drawn By
DA050	Site Plan	W	3291-	Morrison Design Partners Architects
DA101	Lower Ground Floor Plan	I	3291-	Morrison Design Partners Architects
DA102	Ground Floor Plan	R	3291-	Morrison Design Partners Architects
DA103	First Floor Plan	R	3291-	Morrison Design Partners Architects
DA104-	Second Floor Plan	Q	3291-	Morrison Design Partners Architects
DA105	Roof Plan	G	3291-	Morrison Design Partners Architects
DA200	Elevations & Colour and Finishes Board - Sheet 1	H	3291-	Morrison Design Partners Architects
DA201	Elevations & Colour and Finishes Board - Sheet 2	H	3291-	Morrison Design Partners Architects
DA300	Sections	I	3291-	Morrison Design Partners Architects
DA500	Area Calculations	I	3291-	Morrison Design Partners Architects



## 15. Appendix B - Statutory Fire Safety Measures

### Schedule of Statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors and Hoppers to Fire Resisting Shafts	BCA 2022 Clause C4D14 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 2022 Clause D3D26.
Automatic Fire Detection and Alarm System ( <i>Smoke Detection System</i> )	BCA 2022 S20C4 and AS 1670.1 - 2018
Automatic Fire Detection and Alarm System ( <i>Smoke Detection System to Automatically Shutdown Air-Handling System</i> )	BCA 2022 S20C6 and AS 1670.1 - 2018
Automatic Fire Suppression Systems ( <i>Sprinklers</i> )	BCA 2022 Specification 17 and AS 2118.1 - 2017
Building Occupant Warning System	BCA 2022 S20C7 and AS 1670.1 - 2018
Emergency Lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Exit Signs	BCA 2022 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire Alarm Monitoring System	BCA 2022 S20C8 and AS 1670.3 - 2018
Fire Engineering Performance Solution	Fire Engineering Performance Solution..... Prepared by E-Lab.... Revisions... Date.....
Fire Dampers	BCA 2022 Clause C4D15 and AS 1668.1 - 2015 (AS 1682.1 - 2015 and AS 1682.2 - 2015)
Fire Doors	BCA 2022 Specification 12 and AS/NZS 1905.1 - 2015
Fire Hydrants Systems	BCA 2022 Clause E1D2 and AS2419.1-2021
Fire Seals Protecting Opening in Fire Resisting Components of The Building	BCA 2022 Clause C4D15, Specification 13, AS 1530.4 - 2014, AS 4072.1 - 2005 and installed in accordance with the tested prototype.
Fire Shutters	BCA 2022 Specification 12 and AS 1530.4 - 2014
Lightweight Construction	BCA 2022 Specification 6, Clause A2G3 and AS 1530.4 - 2014
Mechanical Air Handling System ( <i>Automatic Shut Down of Air-Handling System</i> )	BCA 2022 Clause E2D3 and AS 1668.1 - 2015
Mechanical Air Handling System ( <i>Carpark Mechanical Ventilation System</i> )	BCA 2022 Clause E2D12, Clause 5.5 of AS/NZ 1668.1 - 2015 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated
Portable Fire Extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001
Smoke Dampers	BCA 2022 S11C3 and AS 1682.1 - 2015 and AS 1682.2 - 2015
Smoke Doors	BCA 2022 Specification 12
Wall Wetting Sprinkler and Drencher Systems	BCA 2022 Clause C4D5, Specification 31
Warning And Operational Signs	BCA 2022 Clauses C4D7, D2D22, NSW D3D24, D3D28, D4D7 E3D4, E3D11 and E3D12

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



## 16. Appendix C2D2 - Fire Rating Requirements

### 16.1. Type A Construction

**Table 1 S5C11a: Type A construction: FRL of loadbearing parts of external walls**

Distance from a <i>fire-source feature</i>	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Less than 1.5 m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 to less than 3 m	90/60/60	120/90/90	180/180/120	240/240/180
3 m or more	90/60/30	120/60/30	180/120/90	240/180/90

**Table 2 S5C11b: Type A construction: FRL of non-loadbearing parts of external walls**

Distance from a <i>fire-source feature</i>	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
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	–/–/–	–/–/–	–/–/–	–/–/–

**Table 3 S5C11c: Type A construction: FRL of external columns not incorporated in an external wall**

Column type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing	90/–/–	120/–/–	180/–/–	240/–/–
Non-loadbearing	–/–/–	–/–/–	–/–/–	–/–/–

**Table 4 S5C11d: Type A construction: FRL of common walls and fire walls**

Wall type	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Loadbearing or non-loadbearing	90/90/90	120/120/120	180/180/180	240/240/240



**Table 5 S5C11e: Type A construction: FRL of loadbearing internal walls**

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	90/90/90	120/120/120	180/120/120	240/120/120
Bounding public corridors, public lobbies and the like	90/90/90	120/-/-	180/-/-	240/-/-
Between or bounding sole-occupancy units	90/90/90	120/-/-	180/-/-	240/-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	90/90/90	120/90/90	180/120/120	240/120/120

**Table 6 S5C11f: Type A construction: FRL of non-loadbearing internal walls**

Location	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
Fire-resisting lift and stair shafts	- /90/90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like	- /60/60	- /-/-	- /-/-	- /-/-
Between or bounding sole-occupancy units	- /60/60	- /-/-	- /-/-	- /-/-
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion	- /90/90	- /90/90	- /120/120	- /120/120

**Table 7 S5C11g: Type A construction: FRL of other building elements not covered by Tables S5C11a to S5C11f**

Building element	FRL (in minutes): <i>Structural adequacy / Integrity / Insulation</i>			
	Class 2, 3 or 4 part	Class 5, 7a or 9	Class 6	Class 7b or 8
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



## 17. Appendix C2D10 - Non-combustible building elements

- (1) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:
- (a) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.
  - (b) The flooring and floor framing of lift pits.
  - (c) Non-loadbearing internal walls where they are required to be fire-resisting.
- (2) A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in—
- (a) a building required to be of Type A construction; and
  - (b) a building required to be of Type B construction, subject to C3D11, in—
    - (i) a Class 2, 3 or 9 building; and
    - (ii) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys.
- (3) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification 5.
- (4) The requirements of (1) and (2) do not apply to the following:
- (a) Gaskets.
  - (b) Caulking.
  - (c) Sealants.
  - (d) Termite management systems.
  - (e) Glass, including laminated glass, and associated adhesives, including tapes.
  - (f) Thermal breaks associated with—
    - (i) glazing systems; or
    - (ii) external wall systems, where the thermal breaks—
      - (A) are no larger than necessary to achieve thermal objectives; and
      - (B) do not extend beyond one storey; and
      - (C) do not extend beyond one fire compartment.
  - (g) Damp-proof courses.
  - (h) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm.
  - (i) Isolated—
    - (i) construction packers and shims; or
    - (ii) blocking for fixing fixtures; or
    - (iii) fixings, including fixing accessories; or
  - (iv) acoustic mounts.
  - (j) Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level.
  - (k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm.
  - (l) Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements.





- (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as appropriate and associated with masonry wall construction.
  - (n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout.
  - (o) A paint, lacquer or a similar finish or coating.
  - (p) Adhesives, including tapes, associated with stiffeners for cladding systems.
  - (q) Fire-protective materials and components required for the protection of penetrations.
- (5) The following materials, when entirely composed of itself, are non-combustible and may be used wherever a non-combustible material is required:
- (a) Concrete.
  - (b) Steel, including metallic coated steel.
  - (c) Masonry, including mortar.
  - (d) Aluminium, including aluminium alloy.
  - (e) Autoclaved aerated concrete, including mortar.
  - (f) Iron.
  - (g) Terracotta.
  - (h) Porcelain.
  - (i) Ceramic.
  - (j) Natural stone.
  - (k) Copper.
  - (l) Zinc.
  - (m) Lead.
  - (n) Bronze.
  - (o) Brass.



## 18. Appendix C2D11 - 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	
<b>General Non Sprinklered Areas</b>	Minimum 2.2 (or 4.5 for Class 3 areas and 9a patient care areas) kw/m <sup>2</sup> critical radiant heat flux and, a maximum smoke development rate of 750 percent minutes.
<b>General Sprinklered Areas</b>	Minimum 1.2 (or 2.2 for Class 3, 9a patient care, and 9c residential use areas) kw/m <sup>2</sup> critical radiant heat flux
<b>Fire Isolated Exits and Fire Control Rooms</b>	Minimum 2.2 / (or 4.5 for Class 3, 9a and 9c areas) kw/m <sup>2</sup> critical radiant heat flux
<b>Lift Cars</b>	Minimum 2.2 kw/m <sup>2</sup> critical radiant heat flux

Wall Linings and Ceiling Linings	
<b>Generally</b>	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
<b>Fire Isolated Exits</b>	Group 1 material when tested as above
<b>Lift Cars</b>	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<sup>2</sup>/g.

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



## 19. Appendix D3D29 - Protection of Openable Windows

Building Use	Openable Windows		
	<2m above surface beneath	>2m above surface beneath	>4m above surface beneath
<b>Bedrooms</b>	No restrictions	<p>Window located below 1.7m above bedroom floor:-</p> <ul style="list-style-type: none"> <li>• Must be protected by device to restrict window opening <b>OR</b> screen with secure fittings; AND</li> <li>• No opening greater than 125mm; AND</li> <li>• Device and screen must resist outward horizontal action of 250N; AND</li> <li>• Have child resistant release if device or screen is able to be removed, unlocked or overridden; AND</li> <li>• If device or screen is able to be removed, unlocked or overridden minimum 865mm barrier required to protect window.</li> </ul> <p><b>Note: No 865mm barrier required if device or screen is permanent and <u>cannot</u> be removed, unlocked or overridden</b></p> <p>Window located min. 1.7m above bedroom floor</p> <ul style="list-style-type: none"> <li>• No restrictions</li> </ul>	Comments as per >2m above surface beneath
<b>Other rooms (i.e. lounge, dining room etc)</b>	No restrictions	No restrictions	<p>Barrier required</p> <ul style="list-style-type: none"> <li>• Min. 865mm above floor</li> <li>• No openings exceeding 125mm</li> <li>• No climbable elements between 150-760mm above floor</li> </ul>
<b>All other buildings</b>	No restrictions	No restrictions	<p>Barrier required</p> <ul style="list-style-type: none"> <li>• Min. 865mm above floor</li> <li>• No openings exceeding 125mm</li> <li>• No climbable elements between 150-760mm above floor</li> </ul>