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Project Title

BCA Assessment Report Report 2021/0268 R1.1

Prepared for Pymble Ladies' College
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Disclaimer:

This report is based on a desktop audit of preliminary documentation only. Details contained in the report address issues of significance to broad BCA compliance relevant to this stage of design resolution.

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

Executive Summary

An assessment of the design of the proposed Pymble Ladies' College Grey House Precinct located at the Pymble campus, Sydney NSW has been undertaken against the Deemed-to-Satisfy (DTS) provisions of the relevant sections of the Building Code of Australia and the applicable Building Regulations.

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

Summary of BCA Parameters:

Building Use:	School, Early Learning Centre (ELC) & Offices
Class of Occupancy	Class 5 & 9b
Type of Construction Required	Type A
Rise Storeys:	5
Number of Storeys:	5
Effective Height:	16.3m (Level 00 RL114.1 - Level 04 RL130.4)



The following are the main issues proposed to be addressed by the Fire Safety Engineer via a Performance Solution:

1. The subject openings identified in OSHC on Level 00 are within the 6m & exposed to the western external wall of the adjoining building to the east (Junior School)
2. The brick veneer construction of the western external wall of the adjoining building to the east (Junior School) does not achieve an FRL 60/60/60 in accordance with C3.3 & the roof extends over the outdoor covered area adjoining the switchboard cupboard to the Junior school and creates an opening that is not protected in accordance with C3.4.
3. To permit handrail extensions in the Eastern stair at the mid-landing locations which reduces the required egress width by 250mm.
4. To permit doorways from classrooms that open directly into stairways that are required to be fire isolated.
5. Interconnection of four consecutive floors via an open central stair void through the building
6. The location of the fire hydrant booster is not within site of the main entry to the building contrary to AS2419-2005
7. The FHR system is required to provide coverage to Class 9b part other than classrooms and associated corridors in a primary or secondary school. FHR's are not located in the ELC child care & Wellness Centre parts of the building which is non-compliant with this clause.
8. The building is required to comply with the requirements for Atrium Construction Part G3 as the central stair void through the building is connecting Level 1 to Level 4 which forms an atrium well ie connects 4 stories & this does not get the concession as noted in Clause G3.1. The building design has not incorporated the DTS provisions of the BCA for Atrium Construction.

The following are the main issue proposed to be addressed by the Access Consultant via a Performance Solution:

1. Although some level of disabled access is available to the main part of the building, there are some other accessible buildings on the school ground connected via pedestrian link to the proposed building which do not have a continuous accessible pathway compliant with AS1428.1-2009.

The following are the main issue proposed to be addressed by the Facade Engineer via a Performance Solution:

1. There are no DTS Provisions in respect of the prevention of the penetration of water through external walls, which must comply with FP1.4. Compliance can be demonstrated either via Verification Method FV1 Weatherproofing or engage a Facade engineer to address the performance requirements of FP1.4.

The following are the main issue proposed to be addressed by the suitably qualified person via a Performance Solution:

1. The kitchen does not have full view of the Nurseries (0-2) & so does not facilitate supervision of children from the facilities of the children younger than 2 years old.

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



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

Whilst not precluding the issue of a Construction Certificate, 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 14 of the report and should be resolved prior to construction.

Key issues which require additional details have been listed under Section 14 of this report and need to be clarified with SWP or the building certifier for the project prior to the issue of a construction certificate.



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1. Introduction

This report presents the findings of an assessment undertaken of the proposed design of the proposed Pymble Ladies' College Grey House Precinct located at the Pymble campus, Sydney NSW against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia BCA 2019 Amendment 1.

It has been prepared by Steve Watson and Partners for Pymble Ladies' College

2. Purpose

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

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

3. Scope and Limitations

3.1. Scope

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

3.2. Limitations

The following limitations apply to the assessment:

- The report considers matters of a significant nature only and should not be considered exhaustive.
- The plans are assessed to the extent necessary to issue a construction certificate under Part 6 of The Act. This means the design has been assessed to be capable of complying with the BCA without necessarily having all the detailed design completed at this stage.
- Details in regard to access for people with disabilities have been assessed to the extent of the deemed-to-satisfy provisions of the BCA/Premises Standard only. A detailed assessment against AS 1428 series, AS/NZS 2890.6 – 2009 and AS 4299 – 1995 is outside the scope of this report
- Generally, the assessment does not incorporate a detailed assessment of the requirements of the Australian Standards.
- Structural and services documentation have not been reviewed.
- Appraisals are limited to the provisions of the BCA 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

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



Australia Class 2 to Class 9 Buildings

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

5. Performance Solutions

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

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

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



6. Statutory Framework

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

Issue	Legislative reference	Comment
New Work	EPAR 145	All new works must comply
Access to premises	Disability (Access to Premises — Buildings) Standards 2010	Upgrade of the “Affected Part” to provide access for people with disabilities

6.1. New Work

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

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

6.2. Access to premises

The Disability (Access to Premises – Buildings) Standards came into force via BCA2011 throughout Australia on 01 May 2011, and with it introduced a higher standard of access to that required by previous versions of the BCA. In prescribed circumstances, the legislation requires upgrade of access and facilities for persons with disabilities when building work is proposed. In particular, unless works are undertaken by a lessee who does not lease the entire building, proposed building work anywhere in the building could trigger a need for enhanced access at the main building pedestrian entry and from that entry to all areas of the building that are subject to the building work.

7. Methodology

7.1. Process adopted

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

- 1) Determine the basic assessment data for the building.
- 2) Assess the design of the building against the current Deemed-to-Satisfy requirements of Sections B, C, D, E, F, G, H and J of the BCA. Establish the status of each clause into the following categories:
 1. Clause is administrative information only (**Noted**);
 2. Clause is or is not relevant to the proposed work (**Applicable or N/A**);
 3. The proposed work complies with the requirements of the clause (**Complies**);
 4. Compliance with the requirements of the clause is unable to be determined from the documentation provided (**Compliance Readily Achievable**). A recommendation in the “Comments” column will indicate what is required to achieve compliance. The design and construction teams are responsible to ensure compliance is achieved;
 5. Compliance with the requirements of the clause is unable to be determined from the documentation provided. Additional details or relevant information required to verify compliance (**Additional Details Required**);
 6. Proposed work does not comply with the requirements of the clause (**Does Not Comply**). An indication will be given in the Comments field as to the nature of the issue and whether an alternative solution has been proposed to address the issue;
 7. Proposed work is to be addressed on a performance basis via an Alternative Solution satisfying the relevant Performance Requirements. (**Performance Solution**);



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

8. Description of Proposed Development

The proposed development consists of a new Junior school for Years 5 and 6, Out of School Hours Care (OSHC), Dance, Health Service and an Early Learning Centre (ELC).

It is located on at the Pymble campus, Sydney NSW Assessment Data Summary

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

9.1. Assumptions

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

1. The use of the Level 4 Wellness Centre has been considered class 5 Consulting rooms & the spaces on the west side on Level 4 are considered sick bays associated with the school class 9b. It is assumed these sick rooms associated with the class 9b school are for use during the day only. Should these spaces be used for overnight stay then the classification would need to be re-considered and an assessment of BCA compliance for the relevant classification be required.
2. It is assumed the building is not an assembly building as each level contains only classrooms and there are no areas which have been identified for the purposes of assembly & as such a smoke exhaust required by NSW Table E2.2b & as modified by Part G3 (ie fire compartment more than 2,000 m²) is not required as classrooms are exempt from the above.
3. As the proposed building is associated with an all-female school, we have assumed provision of facilities for students to be only for one sex ie female, in lieu of separate male and female facilities. We have therefore assumed an ambulant facility is only required for the female students in each bank on each floor. An ambulant facility for staff for both male & female sex is required at each bank of staff toilets.
4. Some of the dance studios on Level 1 do not have access to natural light. However, we have assessed these spaces as not school classrooms & as such the requirements for Natural light to the dance studios as not applicable.
5. The void space between the retaining wall & the building on the west side of Level 00 & Level 1 is assumed not to be accessible and is a void for the purposes of weatherproofing the building.

9.2. Interpretations

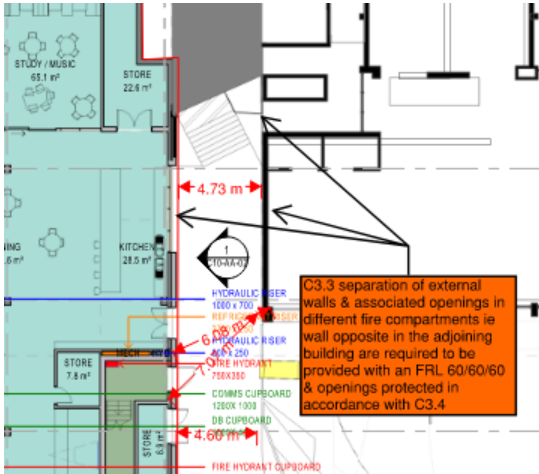
A number of issues within the BCA are recognised to be interpretive in nature. Where these issues are encountered, interpretations are made that are consistent with Standard Industry Practise and/or Steve Watson & Partners policy formulated in regard of each issue.

10. Issues Requiring Resolution

10.1. Performance solutions required

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

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	The subject openings identified in OSHC on Level 00 are within the 6m & exposed to the	C3.2	The western external wall of the adjoining building to the east (Junior School) is within 6m of the proposed OSHC on Level 00 and the following are not protected: a. Window openings east elevation kitchen exposed to the	CP2 & CP8

Item	Non-Compliance	DTS Clause	Description	Performance Requirement
	western external wall of the adjoining building to the east (Junior School)		<p>adjoining building.</p> <p>b. Double doors opening east elevation exposed to the adjoining building.</p> <p>The openings will need to be protected in accordance with C3.4 or the design modified. Note that most methods of protecting windows require either fixed or automatic closing windows.</p> <p>OR</p> <p>It is recommended to discuss with the fire engineer if they are able to support a performance solution for the subject openings being within the 3m separation</p>	
2.	The brick veneer construction of the western external wall of the adjoining building to the east (Junior School) does not achieve an FRL 60/60/60 in accordance with C3.3 & the roof extends over the outdoor covered area adjoining the switchboard cupboard to the Junior school and creates an opening that is not protected in accordance with C3.4.	C3.3	<p>Separation of external walls & associated openings in different fire compartments are required to be provided with an FRL 60/60/60 & openings protected in accordance with C3.4 or alternatively a fire wall of FRL 120/120/120 to separate the buildings will achieve compliance.</p> <p>The brick veneer construction of the western external wall of the adjoining building to the east (Junior School) does not achieve an FRL 60/60/60 in accordance with C3.3 & the roof extends over the outdoor covered area adjoining the switchboard cupboard to the Junior school and creates an opening that is not protected in accordance with C3.4.</p> <p>Reduced fire resistance levels are proposed to be addressed.</p> 	CP1 & CP2
3.	To permit handrail extensions in the Eastern stair at the mid-landing locations which reduces the required egress width by 250mm	D1.6	Unobstructed clear width - A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m or if the storey contains more than 200 persons 2m + 500mm for every 60 persons (or part) in excess of 200 persons. The required egress width to accommodate a population 305 occupants on Level 3 is to be 3m.	DP4
4.	To permit doorways from class rooms that open directly into stairways that are required to be fire-isolated	D1.7 (a)	<p>L1-L3 Junior school has doorways from class rooms that open directly into stairways that are required to be fire-isolated contrary to this clause which requires the fire stair door to open to:</p> <ul style="list-style-type: none"> a public corridor, public lobby or the like; or a sole-occupancy unit occupying all of a storey 	DP5 & EP2.2
5.	Interconnection of four	D1.12 (c)	A non-required non fire isolated stairway -	CP2 & DP4



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
	consecutive floors via an open central stair void through the building		<p>(b) May connect any number of storeys if it is –</p> <p>(iii) outside a building; or</p> <p>(c) except where permitted in (b) must not connect more than –</p> <p>(i) 3 storeys if each of those storeys is provided with a sprinkler system complying with Specification E1.5 throughout</p> <p>(ii) 2 storeys.</p> <p>It has been assumed that the central stair is not required as an egress stair & is reliant on compliant egress width to the Two 2 x fire isolated stairs (refer D1.6 non-compliance). In which case the central stairs are considered non-required stairways with the potential interconnection of four (4) consecutive floors via an open internal central stair. Levels 1 & 2 are not open to the sky & are partly enclosed and are not considered outside the building.</p> <p>Refer also D1.3 & D1.9 issues noted in the table above.</p>	
6.	The location of the fire hydrant booster is not within site of the main entry to the building contrary to AS 2419-2005	E1.3	<p>A hydrant system is to be provided to the building including hydrants in all fire stairs in accordance with AS 2419.1-2005.</p> <p>The location of the fire hydrant booster is not within site of the main entry to the building contrary to AS2419-2005.</p> <p>Relationship of boosters to main entry to be addressed.</p>	EP1.3
7.	The FHR system is required to provide coverage to Class 9b part other than classrooms and associated corridors in a primary or secondary school. FHR's are not located in the ELC child care & Wellness Centre parts of the building which is non-compliant with this clause	E1.4	<p>FHR's are not required in parts of the building containing learning spaces (classrooms) & associated corridors &/or office spaces. Other areas of the building including the ELC Childcare on L2 & Wellness Centre on Level 4 do not get the concession for class 9b classrooms & require FHR's.</p> <p>Performance solution required for fire extinguishers in lieu of FHR's in the identified parts.</p>	EP1.1
8.	The building is required to comply with the requirements for Atrium Construction Part G3 as the central stair void through the building is connecting Level 1 to Level 4 which forms an atrium well ie connects 4 stories & this does not get the concession as noted in Clause G3.1. The building design has not incorporated the DTS provisions of the BCA for Atrium Construction	G3.1 to G3.8	<p>Atrium Construction - The building is required to comply with the requirements for Atrium Construction part G3 as the central stair void through the building is connecting Level 1 to Level 4 which forms an atrium well ie connects 4 stories & this does not get the concession as noted in Clause G3.1. The building design has not incorporated the DTS provisions of the BCA for Atrium Construction</p>	CP2, EP1.4, EP2.2 EP4.3

Other Performance Solutions



Item	Non-Compliance	DTS Clause	Description	Performance Requirement
1.	Although some level of disabled access is available to the main part of the building, there are some other accessible buildings on the school ground connected via pedestrian link to the proposed building which do not have a continuous accessible pathway compliant with AS1428.1-2009.	D3.2	<p>An accessway (continuous accessible path as defined by AS1428.1-2009) must be provided to a building required to be accessible:</p> <ul style="list-style-type: none"> • from the main points of a pedestrian entry at the allotment boundary; and • from another accessible building connected by a pedestrian link; and • from the required accessible carparking spaces on the allotment. <p>There are other existing accessible buildings on the school ground connected via pedestrian link to the proposed building which do not have a continuous accessible pathway compliant with AS1428.1-2009.</p> <p>Engage an Access Consultant to justify the above non-compliance via a performance solution addressing performance requirements of DP1 & DP2.</p>	DP1 & DP2
2.	Weatherproofing - A roof & external wall (including openings around windows & doors) must prevent the penetration of water that could cause - (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements. Compliance can be demonstrated via performance requirements of FP1.4	FP1.4	<p>F1.0 Deemed-to-Satisfy Provisions</p> <p>(a) Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with.</p> <p>There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls.</p> <p>Compliance can be demonstrated via the following:</p> <ol style="list-style-type: none"> 1. FV1 Weatherproofing or 2. Engage a Facade engineer to address the performance requirements of FP1.4 	FP1.4
3.	The kitchen does not have full view of the Nurseries (0-2) & so does not facilitate supervision of children from the facilities of the children younger than 2 years old	F2.3(h)(i) (B)	<p>The guide to the BCA has a reference that in some circumstances this supervision of children younger than 2 from the kitchen is not fully achievable ie larger early childcare centres & in these situations a performance solution maybe required. The performance solution may consider that the kitchen facilities are provided with a dedicated cook & the kitchenettes are provided in the nursery for the purpose of heating of baby bottles.</p>	FP2.3

11. Relevant Authorities

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

- (a) a class 9a building that is proposed to have a total floor area of 2,000 square metres or more, or
- (b) a building (other than a class 9a building) that is proposed to have:
 - (i) a fire compartment with a total floor area of more than 2,000 square metres, or
 - (ii) a total floor area of more than 6,000 square metres,

12. Statutory Fire Safety Measures

All fire/essential safety measures installed within the building are required required to be certified upon



completion of the project and prior to occupation of the building by the owner of the building, by issuing a Final Fire Safety Certificate under the Act.

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

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

13. Conclusion

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

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



14. BCA 2019 Amendment 1 – Clause by Clause Assessment

Clause	Description	Comment	Status																											
BCA Version																														
BCA 2019 Amendment 1	BCA version The BCA is generally updated every 3 years with amendments influencing health, safety and amenity features required within the building. Legislation typically allows future BCA changes to be ignored provided substantial progress on the design of the development has previously occurred.	This report assumes that the applicable BCA version is BCA 2019 Amendment 1. In addition, requirements of the Premises Standards (PS) are covered as relevant.	Noted																											
Section A: General Provisions																														
A5.2	Suitability of materials Every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended.	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.	Noted																											
Part A6	Classification and usage Usage on each level of the building is as follows: <table><tr><th>LEVEL</th><th>USE</th><th>CLASS</th></tr><tr><td>Level 00</td><td>OSHC</td><td>9b</td></tr><tr><td>Level 1</td><td>Junior School</td><td>9b</td></tr><tr><td></td><td>Dance</td><td>9b</td></tr><tr><td>Level 2</td><td>Early Learning</td><td>9b</td></tr><tr><td></td><td>Junior School</td><td>9b</td></tr><tr><td>Level 3</td><td>Junior School</td><td>9b</td></tr><tr><td>Level 4</td><td>Consulting rooms</td><td>5</td></tr><tr><td></td><td>sick bays & plant associated with school</td><td>9b</td></tr></table>	LEVEL	USE	CLASS	Level 00	OSHC	9b	Level 1	Junior School	9b		Dance	9b	Level 2	Early Learning	9b		Junior School	9b	Level 3	Junior School	9b	Level 4	Consulting rooms	5		sick bays & plant associated with school	9b		Noted
LEVEL	USE	CLASS																												
Level 00	OSHC	9b																												
Level 1	Junior School	9b																												
	Dance	9b																												
Level 2	Early Learning	9b																												
	Junior School	9b																												
Level 3	Junior School	9b																												
Level 4	Consulting rooms	5																												
	sick bays & plant associated with school	9b																												
Part A7	United buildings Buildings are deemed united when two or more buildings adjoining each other are connected and used as one building.		Noted																											
Section B: Structure																														
B1.1	Resistance to actions The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable																											
B1.2	Determination of individual actions The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable																											



Clause	Description	Comment	Status
B1.3	-	No provisions	-
B1.4	Determination of structural resistance of materials and forms of construction The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1.4 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.5	Structural software Structural software used in computer aided design of a building or structure that uses design criteria based on DTS provisions of the BCA must comply with the ABCB Protocol for Structural Software.	-	Compliance Readily Achievable
B1.6	Construction of buildings in flood hazard areas	Applies to Class 2, 4, 9a and 9c buildings	N/A
Part B	Structure and importance level Assessment of the building structure will be required for dead, live, wind, earthquake, fire and other loads required by current day AS Codes. The design of the structure must be based on the appropriate 'Importance Level' under BCA Table B1.2a.	The building has an importance level 3 in accordance with Table B1.2a.	Compliance Readily Achievable

Section C: Fire Resistance

Part C1 – Fire Resistance and Stability

C1.1	Type of construction required Type A Construction BCA Type A fire resisting construction is required. The following fire ratings apply: Building Element Required FRL		Details of the proposed construction and how it will achieve the required FRL is to be provided. Certification from a structural engineer will be required for FRL's of all structural elements including existing structure at Construction Certificate stage. For Class 9b school & class 5 office is generally required to achieve 2hr FRL's. Refer to Appendix A for fire rating requirements.	Compliance Readily Achievable
	Loadbearing external walls, columns, beams	Generally 2 hr FRL (non-combustible)	Spec C1.1 External load bearing walls located within 6m to a fire source feature are required to be provided with an FRL 120/60/30. The fire source feature being the western external wall to the adjoining building to the east (Junior School). Spec C1.1 roofs are required to be provided with an FRL 120/60/30. The structural engineer is to verify the structural elements to the proposed north eastern external wall of the new building that is within 6m of the adjoining Junior school to demonstrate the structural elements achieve an FRL 120/60/30.	Compliance Readily Achievable
	Non-loadbearing external walls, etc. less than 3m from a fire source or boundary or less than 6m from another building on the site	Generally -/90/90 FRL (non-combustible)		
	Non-loadbearing external walls etc. greater than 3m from a fire source or boundary or more than 6m from other buildings on the site.	Nil (Non-combustible)		



Clause	Description		Comment	Status
	Internal load-bearing walls/columns etc.;	To be concrete or masonry	Also, the structural engineer is to verify the roof slab will achieve FRL 120/60/30. Certification from a qualified structural engineer will need to be provided at Construction Certificate stage. Provide detail of the fire/smoke stop between the slab edge & external wall & specify what this material is & provide evidence that it is non-combustible when tested to AS1530.1-1994. Details to be provided at Construction Certificate stage.	
	Supporting a floor over	Generally 2 hr FRL (concrete/ masonry)		
	Supporting a roof over	1 hr FRL		
	Roofs	120/60/30		
	Non-loadbearing Services Shafts	-/90/90 FRL (non-combustible)		
Spec C1.1	Fire resisting construction <u>Support of another part</u> Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part must have an FRL not less than that required for the part if supports and be non-combustible. <u>Clause 2.4 of Spec C1.1 Attachments</u> The method of attaching or installing a finish, lining, ancillary element or service to a building element must not reduce the fire resistance of that element. <u>Clause 2.7 of Spec C1.1 Enclosure of shafts</u> Shafts required to have an FRL must be enclosed at the top and bottom by construction have an FRL not less than that required for the walls of the shaft. Shafts, other than one enclosing a fire isolated stairway or ramp, do not require an FRL at the top if the shaft extends beyond the roof covering. <u>Clause 3.6 of Spec C1.1 Roof Lights</u> If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like in that roof must: (a) Have an aggregate area of not more than 20% of the roof surface; and (b) Be not less than 3m from- (i) Any boundary of the allotment other than the boundary with a road or public place; and (ii) Any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6m vertically above the roof light or the like are protected in accordance with C3.4 (iii) Any roof light or the like in an adjoining SOU if the walls bounding the unit are required to have an FRL		When determining FRL’s applicable to a particular building element, the requirements of this clause are required to be complied with. Clause 3.6 of Spec C1.1 - There are roof lights in the roof which are located more than 3m from any boundary and as such complies with the requirements of this clause.	Compliance Readily Achievable
C1.2	Calculation of rise in storeys Effective Height / Calculation of rise in storeys.		The following parameters apply: Rise in storeys: 5 storeys Effective Height: 16.3m	Noted

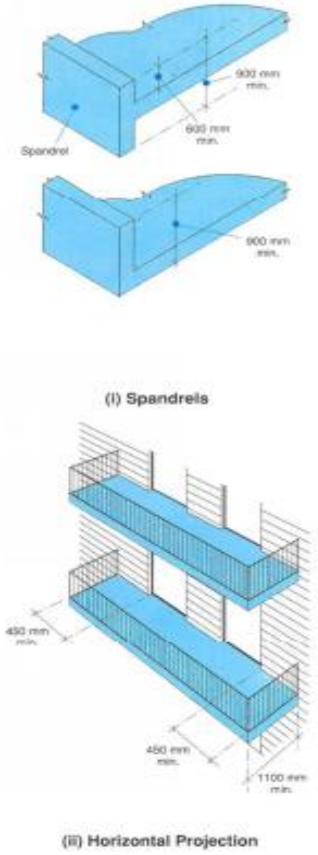


Clause	Description	Comment	Status
	<p>Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements.</p> <p>Effective height is defined under the BCA as vertical distance between the floor of the lowest storey included in the calculation of rise in storeys and 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>		
C1.3	Buildings of multiple classification	The building is required to be constructed of Type A fire resisting construction as the classification of the top storey is a Class 9b	Noted
C1.4	Mixed types of construction	If a fire wall divides the building in accordance with Clause C2.7, the building portions are able to be constructed in differing levels of fire-resistance determined in accordance with Clause C1.1 and C1.3.	Noted
C1.5	Two storey Class 2, 3 or 9c buildings		N/A
C1.6	Class 4 parts of buildings		N/A
C1.7	Open spectator stands and indoor sports stadiums		N/A
C1.8	Lightweight construction Lightweight construction used in a wall system must comply with Specification C1.8. Lightweight construction used as a fire-resisting covering of a steel column or the like, and where the covering is not in continuous contact with the column must have the voids filled to a height 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.	Details of the proposed systems to be installed must be in accordance with a tested prototype.	Compliance Readily Achievable
C1.9	Non-combustible building elements In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: <ul style="list-style-type: none">i. External walls and common walls, including all components incorporated within them including façade covering, framing and insulation;ii. The flooring and floor framing of lift pits;iii. Non-loadbearing internal walls where they are required to be fire-resisting;iv. Non-loadbearing shaft being a lift, ventilating, garbage or similar shaft. <p>The following materials may be used where non-combustible materials are required:-</p> <ul style="list-style-type: none">• Plasterboard.• Perforated gypsum.• Fibrous-plaster sheeting to AS 2185.• Fibre-reinforced cement sheeting.	<p>Architect and Structural engineer to make provisions for this requirement in the design.</p> <p>A detailed review of the external cladding must be undertaken to ensure that there are no combustible materials and non-complaint claddings have not been nominated that could increase the risk of fire spread via the external façade.</p> <p>Also provide detail of the fire/smoke stop between the slab edge & curtain wall & specify what this material is & provide evidence that it is non-combustible.</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>The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
	<ul style="list-style-type: none"> Pre-finished metal sheeting having a combustible surface finish not exceeding 1mm thickness and where the spread-of-flame index of the product is not greater than 0. Sarking-type materials that do not exceed 1mm thickness and have a flammability index not greater than 5. Bonded laminated materials where each lamina, including any core, is not combustible and each adhesive layer does not exceed 1mm thickness and the total thickness of the adhesive layers does not exceed 2mm and the spread of flame index and smoke development index of the bonded laminated material as a whole do not exceed 0 and 3 respectively. Any product as determined by testing to AS 1530.1 An appropriately BCA accredited product or system 	to additional details being provided prior to construction.	
C1.10	Fire hazard properties <i>(NSW variation for Entertainment Venues)</i> Floor materials, floor coverings and wall and ceiling lining materials need to comply with prescribed fire hazard properties. Refer to Appendix C1.10 & compliance with AS5637.1-2015	Compliance assumed and will require verification test data for all timber and other combustible linings and materials, including: <ul style="list-style-type: none"> Carpets Vinyls (walling and flooring) Timber flooring and wall linings Veneered wall panelling Spray-on insulation material Other combustible finishes Carpark soffit insulation fire test reports, based on 'room fire testing' will be required to meet fire brigade consent conditions if applicable. 	Compliance Readily Achievable
C1.11	Performance of external walls in fire		N/A
C1.12		This Clause has deliberately been left blank	N/A
C1.13	Fire-protected timber: Concession		N/A
C1.14	Ancillary elements An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is non-combustible or as specified under this clause.	The building is of Type A Construction & ancillary elements are to comply with this clause. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
Part C2 – Compartmentation and Separation			
C2.1	Application of Part		Noted

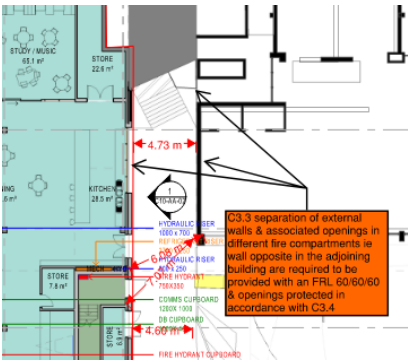


Clause	Description	Comment	Status
C2.2	General floor area and volume limitations (Type A construction) The floor area and volume limitations are: Class 5 & 9b: 8,000m ² and 48,000m ³ Note: <ul style="list-style-type: none"> The BCA does not require Class 2 and 3 parts of the building to be considered The basement carpark levels are not required to be considered as they're provided with a sprinkler system throughout 	The floor area and volume are within the maximum limitations outlined by Table C2.2. Level 0: Approximately 1010m ² Level 1: Approximately 2407m ² Level 2: Approximately 1397m ² Level 3: Approximately 1516m ² Level 4: Approximately 1245m ² Total Floor Area = approximately 7574m ²	Complies
C2.3	Large isolated buildings	The requirements of this clause do not apply.	N/A
C2.4	Requirements for open space and vehicular access	The requirements of this clause do not apply.	N/A
C2.5	Class 9a and 9c building		N/A
C2.6	Vertical separation of openings in external walls Only applicable to a building of Type A Construction, which is not sprinkler protected. 	In a building of Type A construction that is not sprinkler protects, a spandrel must be provided. The spandrel must be not less than 900mm in height, extended not less than 600mm above the upper surface of the intervening floor and be of non-combustible material having an FRL of not less than 60/60/60. Spandrels - The Architect is to demonstrate compliance with vertical separation of openings in external walls in accordance with this clause. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction.	Compliance Readily Achievable
C2.7	Separation by fire walls A fire wall must extend to the underside of a floor having an FRL required for a fire wall or the roof covering.		N/A



Clause	Description	Comment	Status
C2.8	Separation of classifications in the same storey As the building has parts of different classifications located alongside one another in the same storey each building element must have the higher FRL prescribed in Specification C1.1 of the BCA or the parts must be separated by a fire wall.	The BCA requires that classifications on the same storey be separated by a fire wall or each element in that storey should achieve the higher FRL as described in Specification C1.1. The Class 5 wellness Centre on the 4 th floor is adjacent the Class 9b sick bays & plant room associated with the school. However, as the class 5 & class 9b both require an FRL of 2hrs & the FRL's of each building element in that storey can achieve the 2hr FRL then there is no requirement for a fire wall between the classifications on the 4 th storey. Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
C2.9	Separation of classifications in different storeys As different classifications are situated one above the other in adjoining storeys they must be separated in accordance with the DTS provisions of the BCA.	The floors between parts of different classifications must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey	Noted
C2.10	Separation of lift shafts Openings for lift landing doors and services must be protected in accordance with the DTS provisions of Part C3 of the BCA	The lift shafts are required to be fire separated from the rest of the building in accordance with this clause. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
C2.11	Stairways and lifts in one shaft	The lift is within its own shaft	Complies
C2.12	Separation of equipment Two-hour fire enclosure is required for: <ul style="list-style-type: none">• lift motor rooms• emergency generators sustaining emergency equipment operating in emergency mode• central mechanical smoke control plant• boilers• a battery system installed in the building that has a total voltage of 12 volts or more and a storage capacity of 200 kWh or more. Separation of on-site fire pumps are to comply with AS2419.1-2015.	There is no equipment in the proposed building that requires separation	N/A
C2.13	Electricity supply system A substation located within a building or main switchboard, which sustains emergency equipment, must be separated from the remainder of the building by 2hr fire rated construction. Switchboards sustaining emergency equipment must be constructed so that emergency equipment switchgear is separated from non-emergency equipment switchgear by metal partitions designed to minimise the spread of faults.	The switchroom is to be separated by construction with an FRL 120/120/120 & self-closing fire door with -/120/30. Details to be provided at Construction Certificate stage	Compliance Readily Achievable
C2.14	Public corridors in Class 2 & 3 buildings		N/A



Clause	Description	Comment	Status														
Part C3 – Protection of Openings																	
C3.1	Application of Part		Noted														
C3.2	<p>Protection of openings in external walls</p> <p>Openings in the external walls of the building are to be protected in accordance with C3.4, being fire rated windows, external sprinklers or the like, if:</p> <ul style="list-style-type: none">• less than 3m to side or rear boundary,• less than 6m from the far boundary of a road or lane,• Less than 6m from another building on the same allotment. <p>Openings that require protection should not occupy more than 1/3 of the storey in which they occur.</p>	<p>The western external wall of the adjoining building to the east (Junior School) is within 6m of the proposed OSHC on Level 00 and the following are not protected:</p> <p>a. Window openings east elevation kitchen exposed to the adjoining building.</p> <p>b. Double doors opening east elevation exposed to the adjoining building.</p> <p>The openings were not protected in accordance with C3.4. Note that most methods of protecting windows require either fixed or automatic closing windows.</p> <p>The subject openings being within the 3m separation are proposed to be addressed as a performance solution by the projects fire engineer.</p>	Performance Solution														
C3.3	<p>Separation of external walls and associated openings in different fire compartments</p> <p>External walls within the distances specified in Table C3.3 of the BCA are to be protected by construction with an FRL not less than 60/60/60 and the associated openings protected in accordance with Clause C3.4 of the BCA.</p> <table><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>Separation of external walls & associated openings in different fire compartments are required to be provided with an FRL 60/60/60 & openings protected in accordance with C3.4 or alternatively a fire wall of FRL 120/120/120 to separate the buildings will achieve compliance.</p> <p>The brick veneer construction of the western external wall of the adjoining building to the east (Junior School) does not achieve an FRL 60/60/60 in accordance with C3.3 & the roof extends over the outdoor covered area adjoining the switchboard cupboard to the Junior school and creates an opening that is not protected in accordance with C3.4.</p> <p>The fire resistance levels & exposed openings identified are proposed to be addressed as a performance solution by the projects fire engineer.</p> 	Performance Solution
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																
C3.4	<p>Acceptable method of protection</p> <p>Window openings that are required to be protected are to be protected by external wall wetting sprinklers with windows that are automatic closing</p>		Noted														



Clause	Description	Comment	Status
	<p>or permanently fixed in the closed position, -/60/- fire windows that are automatic closing or permanently fixed closed or -/60/60 automatic closing fire shutters.</p> <p>Doorways are to be protected by 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, to be protected with internal or external wall wetting sprinklers or construction having an FRL not less than -/60/-</p>		
C3.5	Doorways in fire walls		N/A
C3.6	Sliding fire doors		N/A
C3.7	Protection of doorways in horizontal exits Doorways in horizontal exits are to be protected by a fire door, which has an FRL of not less than that required for the firewall except that the insulation rating must be at least 30.		Noted
C3.8	Openings in fire-isolated exits -/60/30 self-closing fire doors are required to doorways providing access to fire isolated stairways. A window or other opening in the external wall of the fire isolated exit is to be protected in accordance with Clause C3.4 if it is within 6m of, and exposed to, a window or other opening in the wall of the same building.	The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
C3.9	Service penetrations in fire-isolated exits Service penetrations other than electrical wiring for essential service installations, pressurisation ducts with an FRL of -/120/60, or water pipes for fire services are not permissible.	The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
C3.10	Openings in fire-isolated lift shafts Openings in lift shafts are to be protected by - /60/- fire doors complying with AS1735.11. Lift indicator panels are to be backed by construction having an FRL of not less than - /60/60 if it exceeds 35,000mm ² (175 X 200 mm).	Certification from the lift supplier is required for the installation of the new lift	Compliance Readily Achievable
C3.11	Bounding construction: Class 2, 3, 4 and 9 buildings		N/A
C3.12	Openings in floors and ceilings for services Services passing through floors are to be placed within fire resisting shafts or in accordance with Clause C3.15.	Services penetrations of fire rated structure generally need to be fire-stopped and/or located in fire rated riser shafts. Openings in fire rated elements need to be fire resisting to maintain the function of the elements.	Compliance Readily Achievable
C3.13	Openings in shafts In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, garbage, or other service shaft must be protected by: <ul style="list-style-type: none">• 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 -	The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable



Clause	Description	Comment	Status
	/30/30, or <ul style="list-style-type: none"> A self-closing -/60/30 fire door or hopper, or An access panel with an FRL of not less than -/60/30, or If the shaft is a garbage shaft - a door or hopper of non-combustible construction. 		
C3.14	-	This clause has deliberately been left blank	-
C3.15	Openings for service installations Services penetrations through a building elements (other than an external wall or roof) that are required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, must comply with a tested system or with Specification C3.15 Methods and materials used are to be identical to tested prototypes and in accordance with AS4072.1 and AS1530.4, and having achieved the required FRL or resistance to the incipient spread of fire or other specified method. , or differ from a prototype assembly of the service, building element and protection method in accordance with Section 4 of AS 4072.1 Ventilation and air-conditioning systems are to be installed in accordance with AS/NZS 1668.1.	Any system used must be a certified system and installed in accordance with the tested method. Specifications of the methods of fire sealing need to be provided.	Compliance Readily Achievable
C3.16	Construction Joints Construction joints in elements required to have a fire resistance with respect to integrity and insulation must be protected.	Construction joints are to be installed in accordance with a tested prototype in accordance with AS1530.4.	Compliance Readily Achievable
C3.17	Columns protected with lightweight construction to achieve an FRL	Columns must be protected in accordance with the identical tested prototype.	Compliance Readily Achievable
Section D: Access and Egress			
Part D1 - Provision for Escape			
D1.1	Application of Part		Noted
D1.2	Number of exits required <i>(NSW variation for Entertainment Venues)</i> At least two exits need to serve all areas of every storey as follows: <ul style="list-style-type: none"> Each basement level Early Childhood Centres Class 9 buildings of more than 6 storeys Primary/Secondary Schools of 2 or more storeys Class 9 storeys accommodating more than 50 persons Any storey or mezzanine within an auditorium in an Entertainment Venue Access to an exit must be provided without passing through another SOU.	Note that all levels have access to a second exit which is compliant with this clause	Complies
D1.3	When fire-isolated stairways and ramps are	The following stairs are required to be fire	Complies



Clause	Description	Comment	Status
	required Every stair in a Class 5 to 9 building must be fire isolated unless it does not connect or pass through more than 3 consecutive floors in a sprinkler protected building, or 2 storeys in a non-sprinkler protected building.	isolated stairs: 1. Fire stairs to the east serving all levels discharging at Level 00 2. Fire stairs to the west serving Levels 1-4 discharging at Level 2. The central stair is not relied upon as a required exit (refer Clause D1.6 in this report) and is not required to be fire isolated.	
D1.4	Exit travel distances No point on the floor must be more than 20m to an exit or a point in which travel in different directions to 2 exits is available, in which case, the maximum distance to 1 exit cannot exceed 40m.	Area within the current design on Level 00 is not clear in order to assess the travel distance to an exit. The exit to the south adjacent to the lift to Level 00 ELC has not been identified on the plan. Architect to amend plans to indicate required exits & compliant egress from the pump room on Level 00. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
D1.5	Distance between alternative exits The following travel distance limits apply: <ul style="list-style-type: none">• ≤ 20m to a single exit or to a point of choice to alternative egress paths, and• ≤ 40m to the closest alternative exit;• ≤ 60m travel distance between alternative exits and not less than 9m between alternative exits;• Exit paths to alternative exits should not converge at any point to be less than 6m apart.	Travel distances between alternative exits throughout the building complies with this clause.	Complies
D1.6	Dimensions of exits and paths of travel to exits (NSW variation for Entertainment Venues) Unobstructed clear width - A required exit or path of travel to an exit are required to be a minimum unobstructed height of not less than 2m and minimum width of 1m or if the storey contains more than 200 persons 2m + 500mm for every 60 persons (or part) in excess of 200 persons	The required egress width to accommodate a population 305 occupants on Level 3 is to be 3m. The current egress width provided by the 2 x fire stairs on Level 3 measures 3.0m clear of handrails, except there is an encroachment at the mid-landings to east fire stair by the handrail extensions. The handrail extensions in the eastern stair at the mid-landing locations reduces the required egress width by 250mm. The above non-compliance is proposed to be addressed as a performance solution by the projects fire engineer.	Performance Solution
D1.7	Travel via fire-isolated exits D1.7 (a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from: <ul style="list-style-type: none">• a public corridor, public lobby or the like; or• a sole-occupancy unit occupying all of a storey; or• a sanitary compartment, airlock or the like. Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own	D1.7 (a) – L1-L3 Junior school has doorways from class rooms that open directly into a stairways that are required to be fire-isolated (east & west) contrary to this clause which requires the fire stair door to open to: <ul style="list-style-type: none">• a public corridor, public lobby or the like; or• a sole-occupancy unit occupying all of a storey The above non-compliance is proposed to be addressed as a performance solution by	Performance Solution



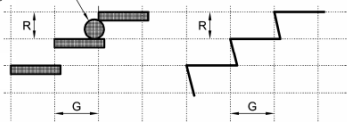
Clause	Description	Comment	Status
	fire-isolated passageway to a road or open space; D1.7 (b)(iii) Discharge of fire stairs where into a covered area is to be 1/3 open & an unobstructed clear height throughout of not less than 3m. D1.7 (c) Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building, measured horizontally at right angles to the path of travel, that part of the wall must have an FRL of not less than 60/60/60 and any openings protected internally in accordance with C3.4, for a distance of 3 m above or below, as appropriate, the level of the path of travel, or for the height of the wall, whichever is the lesser	the projects fire engineer.	
D1.8	External stairways or ramps in lieu of fire-isolated exits External stairs or ramps may be used instead of fire-isolated stairs to a building under 25m in effective height, subject to: <ul style="list-style-type: none">• Stair to be non-combustible construction.• Exit doors onto the stair to be 1-hour fire rated.• Exit paths via the stair must be shielded if within 6m of openings in external wall of building.	The central stair is not relied upon as a required exit (refer Clause D1.6 in this report) and as such the requirements of this clause are not applicable.	N/A
D1.9	Travel by non-fire-isolated stairways or ramps A non-fire-isolated stair serving as a required exit must provide a continuous means of travel by its own flights and landings to a level at which egress to a road or open space is available	The central stair is not relied upon as a required exit (refer Clause D1.6 in this report) and as such the requirements of this clause are not applicable.	N/A
D1.10	Discharge from exits (NSW variation for Entertainment Venues) An exit must have a direct connection from open space to the street. The discharge point of fire isolated exits are required to be connected to the road by a path that is not less than the exit width to which the external path serves. An exit must not be blocked nor be capable of being blocked at its point of discharge.	An exit must have a direct connection from open space to the street. The discharge point of the fire isolated exits (east & west) are to be connected to the road by a minimum path width of the required exits ie 1.5m & travel is via compliant stairs or ramps ie 1:8 grade. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
D1.11	Horizontal exits		N/A
D1.12	Non-required stairways, ramps or escalators A non-required non fire isolated stairway - (b) May connect any number of storeys if it is – (iii) outside a building; or (c) except where permitted in (b) must not connect more than – (i) 3 storeys if each of those storeys is provided with a sprinkler system complying with Specification E1.5 throughout (ii) 2 storeys	It has been assumed that the central stair is not required as an egress stair & is reliant on compliant egress width to the Two 2 x fire isolated stairs (refer Clause D1.6 in this report). In which case the central stairs are considered non-required stairways with the potential interconnection of four (4) consecutive floors via an open internal central stair. Levels 1 & 2 are not open to the sky & are partly enclosed and are not considered outside the building. The above non-compliance is proposed to be addressed as a performance solution by the projects fire engineer.	Performance Solution

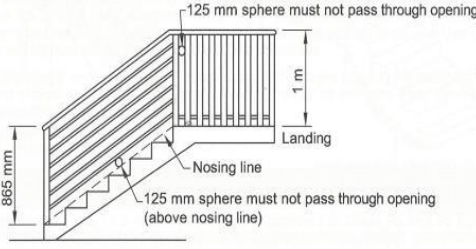
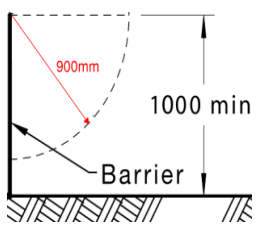


Clause	Description		Comment		Status
D1.13	Number of persons accommodated		Throughout the building based on the total number of occupants (refer email from Nicholas Souksamrane of BVN 14/04/21 & email from Andrew Lee SWP 07/05/21)		Noted
	Level	Use			
			Students / children	Staff	
	Level 00	OSHC	150	6	
	Level 1	Dance & Junior School	240	12	
	Level 2	ELC	90	15	
	Level 2	Junior School	96	4	
	Level 3	Junior School/Stem	288	17	
	Level 4	Wellness Centre	30	11	
D1.14	Measurement of distances				Noted
D1.15	Method of measurement				Noted
D1.16	Plant rooms, lift machine rooms and electricity network substations: Concession A ladder may be used in lieu of a stairway as an exit from: a) a plant room with a floor area not more than 100m ² , or b) all but one point of egress from a plant room with a floor area not more than 200m ² .		The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction		Compliance Readily Achievable
D1.17	Access to lift pits Access requirements apply to lift pits over 3m in depth.		Lift consultant to confirm.		Compliance Readily Achievable
D1.18	Egress from early childhood centres Every part of a class 9b early childhood centre must be wholly within a storey that provides direct egress to a road or open space These requirements do not apply in a building with a rise in storeys of not more than 2, where the class 9b early childhood centre is the only use in that building.		The egress from the Level 2 ELC is direct to open space & complies with this Clause		Complies
Part D2 – Construction of Exits					
D2.1	Application of Part (NSW variation for Entertainment Venues)				Noted
D2.2	Fire-isolated stairways and ramps Fire resisting shafts must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage or impair the fire resistance of the shaft				Compliance Readily Achievable
D2.3	Non-fire-isolated stairways and ramps Required stairs in a building having a rise in storeys of not more than 2 must be constructed only of reinforced or prestressed concrete, or steel not less than 6mm thick or timber that has a finished thickness of not less than 44mm and an average density of not less than 800 kg/m ³ at a moisture content of 12%.		The non-fire isolated stairs are required to be designed in accordance with the requirements of this provision. Details to be provided with the Construction Certificate documentation		Compliance Readily Achievable
D2.4	Separation of rising and descending stair flights		There are no rising & descending stair issues		N/A
D2.5	Open access ramps and balconies				N/A

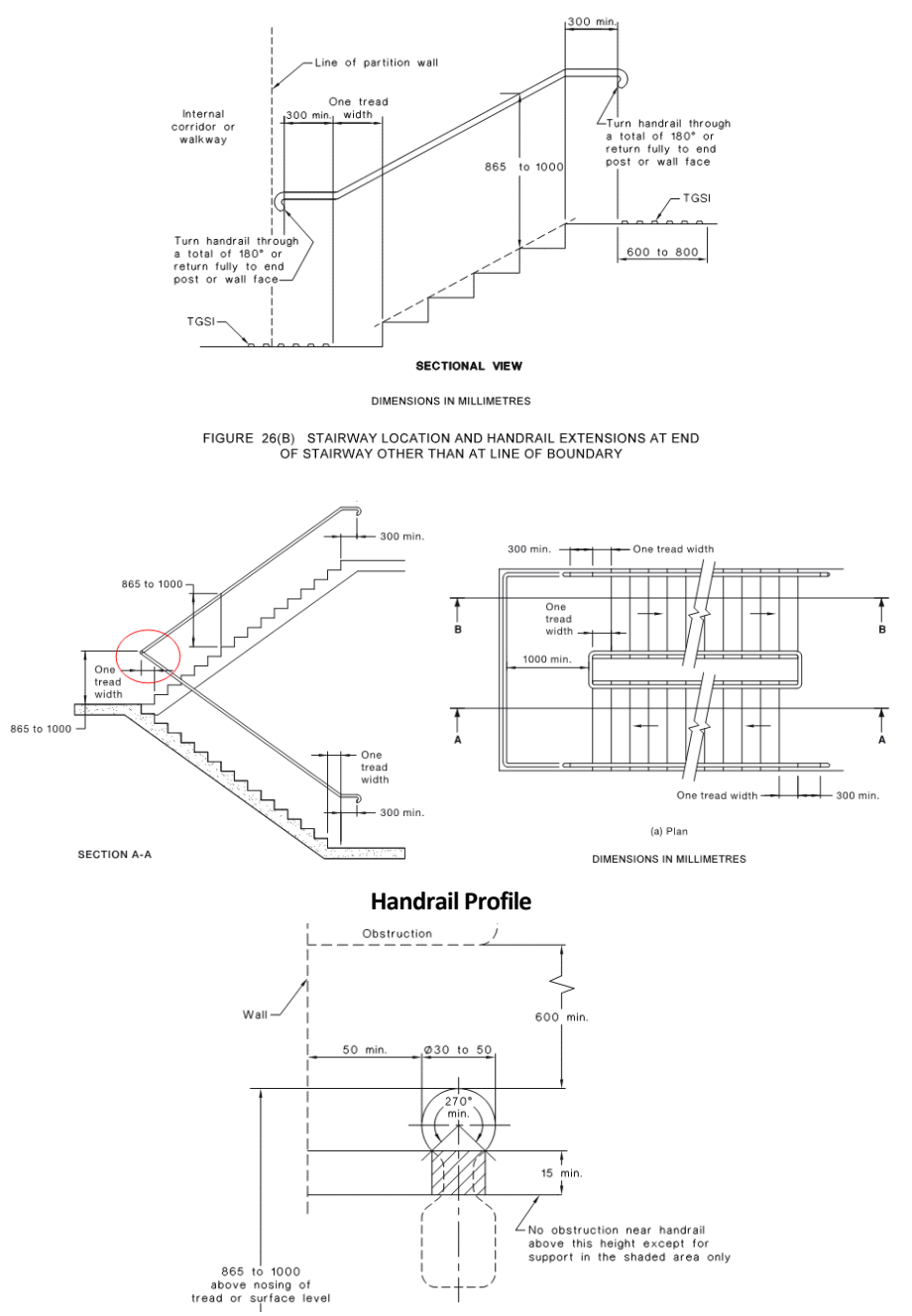


Clause	Description	Comment	Status
D2.6	Smoke lobbies		N/A
D2.7	Installations in exits and paths of travel Electrical meters and motors, distribution boards and telecommunication boards must not be accessed from fire isolated exits and, if located in corridors leading to exits, should occur in non-combustible or fire protective smoke sealed enclosures. No openings to ducts conveying hot products of combustion permitted in required exits. Gas or fuel services not permitted in required exits. Electric or services equipment in paths of travel to exits must be within a non-combustible and smoke sealed enclosure.	The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
D2.8	Enclosure of space beneath stairs and ramps If the space below a fire-isolated stairway is within the fire isolated shaft it must not be enclosed to form a cupboard or similar enclosed space. The space below non fire-isolated stairs must not be enclosed to form a cupboard or similar enclosed space unless the enclosing walls have an FRL of not less than 60/60/60 and any doorway to the enclosed space is fitted with a self-closing -/60/30 fire door.	Enclosure of space under stairs - The proposed new communications cupboard within the Level 1 floor space beneath the central stair flight must be enclosed in 1-hour fire rated construction (including fire rated door set) in accordance with D2.8(b). We have not assessed the central stairs as a required exit & as such they are not required to be fire isolated & therefore the communications rooms located under the central stairs can be considered compliant with this Clause subject to consideration by the fire engineer (refer BCA Clauses G3 in this report).	Compliance Readily Achievable
D2.9	Width of required stairways and ramps A stairway or ramp more than 2m in width is only counted as having a width of 2m unless it is divided by a continuous handrail or balustrade between landings and each division is less than 2m wide.		N/A
D2.10	Pedestrian ramps Ramps serving as required exit must have a gradient not less steep than 1:8. If the ramp is required for disabled access under Part D3 it must comply with AS1428.1. The surface of the ramp must have a non-slip finish.	The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
D2.11	Fire-isolated passageways Fire isolated passageways are to have an FRL equivalent to the fire resisting stair shaft as specified in Specification C1.1 when tested from the outside	The fire isolated passage connected to the fire stair to the west is to comply with the requirements of this Clause. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
D2.12	Roof as open space		N/A
D2.13	Going and risers (NSW variation for Entertainment Venues) To provide safe passage, stairways must comply with the following: <ul style="list-style-type: none">• minimum 2 risers / maximum 18 in each flight	Detail of the stairs will need to be provided to confirm compliance at Construction Certificate stage. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to	Compliance Readily Achievable

Clause	Description	Comment	Status																											
	<ul style="list-style-type: none">risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max.Adjacent risers, or between adjacent goings a variation no greater than 5mm is permitted and the largest and smallest riser within the flight or the largest and smallest going within a flight is not to exceed a variation of 10mm.Under the requirements of AS1428.1-2009 open riser are not permitted.All treads to be fitted with non-slip finish or non-skid strips.Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D2.14 when tested in accordance with AS 4586 <table><tr><th rowspan="2"></th><th colspan="2">Riser (R)</th><th colspan="2">Going (G) ⁽²⁾</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><tr><td>Public stairways</td><td>190</td><td>115</td><td>355</td><td>250</td><td>700</td><td>550</td></tr><tr><td>Private stairways⁽¹⁾</td><td>190</td><td>115</td><td>355</td><td>240</td><td>700</td><td>550</td></tr></table> <p>125 mm sphere must not pass through treads</p> 		Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)		Max	Min	Max	Min	Max	Min	Public stairways	190	115	355	250	700	550	Private stairways ⁽¹⁾	190	115	355	240	700	550	additional details being provided prior to construction	
	Riser (R)		Going (G) ⁽²⁾		Quantity (2R+G)																									
	Max	Min	Max	Min	Max	Min																								
Public stairways	190	115	355	250	700	550																								
Private stairways ⁽¹⁾	190	115	355	240	700	550																								
D2.14	<p>Landings</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><tr><th><u>Application</u></th><th><u>Dry Surface Conditions</u></th><th><u>Wet Surface Condition</u></th></tr><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></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	Certification / test reports on the slip resistance of the surfaces will need to be provided on constructed elements.	Compliance Readily Achievable												
<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																												
D2.15	<p>Thresholds</p> <p>(NSW variation for Entertainment Venues)</p> <p>Steps should not occur at doorways without a threshold landing except as follows:</p> <ul style="list-style-type: none">In patient care areas in a Class 9a, the door sill is not more than 25mm above the finished floor level to which the door way opens,In a Class 9c building, a ramp is provide with a maximum gradient of 1:8 for a maximum height of 25mm over the thresholdIn a building required to be accessible and the doorway opens to a road or open space and is provided with a threshold ramp or step ramp in accordance with AS1428.1,Or in any other case a single 190mm step is	<p>Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway</p> <p>The plans generally comply, however details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable																											

Clause	Description	Comment	Status
	permitted at doors leading to the exterior.		
D2.16	<p>Barriers to prevent falls (NSW variation for Entertainment Venues)</p> <p>Requirements apply to the provision and design of barriers at locations where a person could fall 1m or more. Generally, 125mm maximum gap size limits apply between balusters or rails and a 1m minimum height applies, with alternate dimensions permitted in fire isolated stairs and industrial areas.</p>  <p>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.</p> <p>Climbable elements cannot be located within 900mm of the top rail of each balustrade where the fall is greater than 4m. This measurement is taken in an arc as seen in the extract below</p> 	The plans generally comply, however details to be provided with the Construction Certificate documentation.	Compliance Readily Achievable
D2.17	<p>Handrails</p> <p>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:</p> <ul style="list-style-type: none"> • Handrails not to obstruct circulation space • 30-50mm diameter • 865-1000mm above nosing line of stairs • 865-1000mm above ramps and landings • Consistent height throughout • 50mm grip clearance and no obstructions to handhold • Continuous at internal (return) landings • Provided with handrail extensions and 180 degree curled ends 	<p>Fire Isolated Stairways and Ramps</p> <p>In Fire Isolated Stairways & Ramps (used as an emergency exit) 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.</p> <p>All stairs including fire stairs are required to be designed to comply with Clause 12 of AS1428.1 – 2009.</p> <p>The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction</p> <p>Consistent Handrail Heights for all stairways</p> <p>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.</p> <p>Non-Fire Isolated Stairways and Ramps</p>	Additional Details Required

Clause	Description	Comment	Status
		<p>All stairs and ramps not used as an emergency exit are to have handrails installed on both sides that comply with Clauses 10, 11 & 12 of AS1428.1-2009.</p> <p>The Architect has confirmed the fire-isolated egress stairs east will also be used for communication stair purposes between levels and as such they should be designed to meet Clauses 11 & 12 AS1428.1:2009 ie handrail extensions, 2 handrails & TGS's (refer also Clause D1.6 non-compliance re egress width). The design is capable of complying subject to resolution of the identified area of non-compliance noting this issue should be resolved prior to construction</p> <p>Handrails are not fully detailed to the central stairs & the stairs in the fire isolated corridor which is connected to fire stair west side Level 1 & details to be submitted demonstrating compliance with the above requirements.</p> <p>Handrail details of the central, external common stairs & ramps are to be confirmed by the access consultant.</p>	
	<p style="text-align: center;">Ramps</p> <p style="text-align: center;">(b) Elevation</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 14 RAMP HANDRAILS</p> <p style="text-align: center;">Stairways</p>		

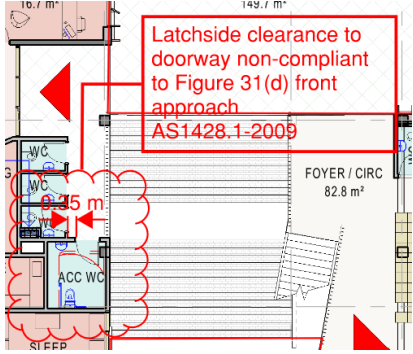
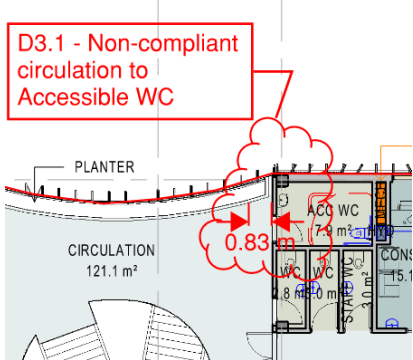
Clause	Description	Comment	Status
	 <p>SECTIONAL VIEW</p> <p>DIMENSIONS IN MILLIMETRES</p> <p>FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY</p> <p>SECTION A-A</p> <p>(a) Plan</p> <p>DIMENSIONS IN MILLIMETRES</p> <p>Handrail Profile</p> <p>Obstruction</p> <p>Wall</p> <p>50 min.</p> <p>600 min.</p> <p>15 min.</p> <p>270° min.</p> <p>865 to 1000 above nosing of tread or surface level</p> <p>No obstruction near handrail above this height except for support in the shaded area only</p>		
D2.18	<p>Fixed platforms, walkways, stairways and ladders</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>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable
D2.19	<p>Doorways and doors</p> <p>(NSW variation for Entertainment Venues)</p> <p>D2.19 (a) A doorway serving as a required exit or forming part of a required exit must not be fitted with a revolving door, roller shutter or tilt-up door unless:</p> <p>(A) it serves a Class 6, 7 or 9 building or part with a</p>	<p>Auto sliding doors at the entries into the building must comply with these requirements.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
	<p>floor area not more than 200m² ; and</p> <p>(B) the doorway is the only required exit from the building or part; and</p> <p>(C) it is held in the open position while the building or part is lawfully occupied.</p> <p>D2.19 (b) (iii) Sliding doors must also not be fitted unless it leads directly to a road or open space and the door provided that it is capable of being opened manually under a force of not more than 110 N.</p> <p>D2.19 (b) (iv) A doorway serving as a required exit or forming part of a required exit is fitted with a door which is power-operated -</p> <p>(a) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and</p> <p>(b) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.</p>		
D2.20	<p>Swinging doors</p> <p>Defined exit doors that serve a part of a building with a floor area over 200m² must swing outward in the direction of exit travel.</p> <p>Must not encroach more than 500mm into the required width of the stair or 100mm when fully open and swing in the direction of travel.</p>	<p>Final exit doors from OHSC Level 00, Dance School & Junior School Level 1, ELC & Junior School Level 2 & Junior school Level 3 to swing in the direction of egress (outwards).</p> <p>The design is capable of complying subject to resolution of the identified areas of non-compliance noting these issues should be resolved prior to construction.</p>	Additional Details Required
D2.21	<p>Operation of latch</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 disabilities, must have non-slip “D” pull handles with 35-45mm hand clearances.</p> <div data-bbox="458 1397 652 1505" data-label="Image"> <p>(a) Isometric view</p> </div> <div data-bbox="379 1543 730 1727" data-label="Image"> <p>(b) Plan view</p> </div> <p>Where the latch operation device is not located on the door leaf itself-</p> <ul style="list-style-type: none"> • manual controls to power-operated doors must be at least 25 mm wide, proud of the surrounding surface and located not less than 500 mm from an internal corner; and • for a hinged door, between 1 m and 2 m from the door leaf in any position; 	<p>All exit doors and doors in the path of travel must comply.</p> <p>The hardware to doors in required exits & path of travel to required exits are to be specified on the door schedule. In relation to the sliding & swing doors to ELC, the BCA D2.21 (B) & (D) provides a concession for the latchset required by BCA D2.21 (a) for childcare centres provided these doors be subject to control by staff nominated by the owner. Confirmation of the above is required.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable







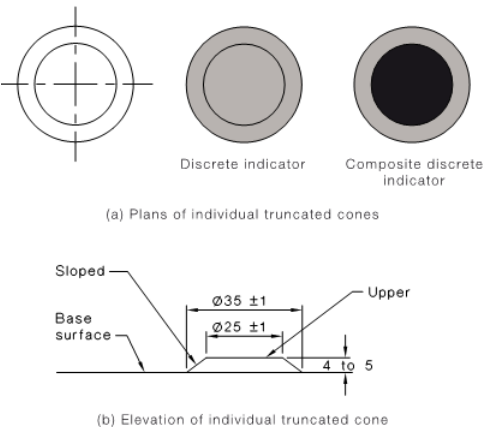
Clause	Description	Comment	Status
	<ul style="list-style-type: none">and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position.braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. <p>Doors in a Class 9b building (other than schools or early childhood centres) serving a storey or room accommodating more than 100 people must be provided with a panic bar.</p>		
D2.22	Re-Entry from Fire-Isolated Exits		N/A
D2.23	Signs on doors Signage in capital letters not less than 20mm high to be provided on doors as follows <ul style="list-style-type: none">i. An automatic door held open by an automatic hold-open device: FIRE SAFETY DOOR - DO NOT OBSTRUCTii. for a self-closing door FIRE SAFETY DOOR DO NOT OBSTRUCT DO NOT KEEP OPENiii. for a door discharging from a fire-isolated exit FIRE SAFETY DOOR - DO NOT OBSTRUCT	<p>Under Clause 183 of the Environmental Planning and Assessment Regulation 2000 a notice is to be displayed in a conspicuous location adjacent to a doorway providing access to but not within a fire isolated stairway, passageway or ramp. The words “OFFENCES RELATING TO FIRE EXITS” are to be provided in letters at least 8mm high and the remaining words are to be at least 2.5mm high.</p> <p>The notice is to state the following:</p> <p>OFFENCES RELATING TO FIRE EXITS</p> <p>It is an offence under the Environmental Planning and Assessment Act 1979</p> <ul style="list-style-type: none">(a) to place anything in or near this fire exit that may obstruct persons moving to or from this exit, or(b) to interfere with or obstruct the operation of any fire doors, or(c) to remove, damage or otherwise interfere with this notice.	Compliance Readily Achievable
D2.24	Protection of openable windows Windows serving a residential bedroom or serving an early childhood centre must be protected where the floor is 2m or more above the external surface below. Window openings must be provided with protection if the floor below the window is 2m or more above the surface beneath in the bedrooms of Class 2 or 3 buildings or Class 9b early childhood centre. Where the window sill is below 1.7m above the floor level, the openable portion of the window must be protected with <ul style="list-style-type: none">a device to restrict the window opening ora screen with secure fittings A device or screen required must: <ul style="list-style-type: none">not permit a 125mm sphere to pass through the window opening or screen; andresist 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,	<p>The windows serving the ELC are on a floor which is less than 2m to the external surface below & as such the requirements of this Clause does not apply.</p>	N/A

Clause	Description	Comment	Status
	<p>unlocked or overridden.</p> <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>		
D2.25	Timber stairways: Concession		N/A
NSW D2.101	Doors in the path of travel in an Entertainment Venue		N/A
Part D3 – Access for People with Disabilities			
D3.1	<p>General building access requirements</p> <p>Access is generally required for persons with a disability throughout all areas unless specifically exempted.</p>	<p>Access is required throughout. Consultation with the access consultant is required.</p> <p>Steve Watson & Partners have not completed a full review as a separate report has been provided by the Access Consultant. Access Consultant to assess & verify compliance with the following:</p> <ul style="list-style-type: none"> • Accessible facility on Level 2 - Latchside clearance to doorway non-compliant to Figure 31(d) front approach AS1428.1-2009 • Accessible facility on Level 4 off central courtyard - Circulation to the doorway non-compliant ie L dimension shown in Figure 31(d) front approach AS1428.1-2009 should be 1450mm. <p>Accessible facility on Level 2</p>  <p>Accessible facility on Level 4</p>  <p>The design is capable of complying subject to resolution of the identified areas of non-compliance noting these issues should be</p>	Additional Details Required



Clause	Description	Comment	Status
		resolved prior to construction.	
D3.2	<p>Access to buildings</p> <p>External access to the building for people with a disability must be provided:</p> <ul style="list-style-type: none"> • From main pedestrian entry points at the allotment boundary. • Through the principle pedestrian entrance. • Through at least 50% of all pedestrian entries. • From accessible car parking spaces. • For buildings over 500m², so that an accessible entry occurs within 50m of any non-accessible entry. • From any another accessible building on the site. 	<p>Refer to access consultant's report.</p> <p>Steve Watson & Partners have not completed a full review as a separate report has been provided by the Access Consultant. Access Consult to assess & verify compliance with the following:</p> <p>From the main points of pedestrian entry at the allotment boundary:</p> <p>An accessway between the main points of pedestrian entry to the allotment boundary compliant with AS1428.1-2009 is required. Advise if there is an intention to justify any non-compliances with this provision.</p> <p>From another accessible building connected by a pedestrian link:</p> <p>There are other existing accessible buildings on the school ground and an accessway compliant with AS1428.1-2009 is required between these buildings in order to comply with this clause.</p> <p>Advise if there is an intention to justify any non-compliances with this provision.</p> <p>From required accessible car parking spaces on the allotment:</p> <p>Parking is provided on the school grounds. An accessible pathway from the required accessible car spaces on the school grounds to the buildings principal pedestrian entry compliant with AS1428.1-2009 is required.</p> <p>The following D3.2 non-compliance has been identified:</p> <ul style="list-style-type: none"> • Although some level of disabled access is available to the main part of the building, there are some other accessible buildings on the school ground connected via pedestrian link to the proposed building which do not have a continuous accessible pathway compliant with AS1428.1-2009. <p>It is understood this non-compliance is to be addressed via a performance solution by the Access Consultant.</p>	Performance Solution
D3.3	<p>Parts of the building to be accessible</p> <p>All parts of the building must be accessible to people with a disability except for areas where access would be inappropriate due to the particular use or areas that would pose a health or safety risk to people with a disability.</p> <p>Every ramp, except a fire isolated ramp, must comply with Clause 10 of AS 1428.1.</p> <p>Every stairway, except a fire isolated stairway, must comply with Clause 11 of AS 1428.1.</p> <p>A fire isolated stairway must comply with Clause 11(f) and (g) of AS 1428.1.</p> <p>Every passenger lift must comply with Clause E3.6.</p>	<p>Refer to access consultant's report.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable

Clause	Description	Comment	Status
	<p>Every doorway required to be provided with an exit sign under Clause E4.5 is to be provided with braille and tactile signage that states “EXIT” and identify the floor level “LEVEL #”.</p>  <p>Signage must be provided within a room containing hearing augmentation identifying the type of hearing augmentation, the area covered in the room and if receivers are being used and where the receivers can be obtained.</p> <p>Signage identifying ambulant accessible sanitary facilities in accordance with AS 1428.1 must be located on the door of the facility.</p>    <p>Where the pedestrian entrance is not accessible, directional signage in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest accessible pedestrian entrance.</p> <p>Where a bank of sanitary facilities is not provided with an accessible unisex sanitary facility, directional signage must be placed at the location of the sanitary facilities that are not accessible, to direct a person to the location of the nearest accessible unisex sanitary facility.</p>		
D3.7	<p>Hearing augmentation</p> <p>A hearing augmentation system must be provided where an inbuilt amplification system, other than one used only for emergency warning, is installed—</p> <ul style="list-style-type: none"> i) in a room in a Class 9b building; or ii) in an auditorium, conference room, meeting room or room for judicatory purposes; or iii) at any ticket office, teller's booth, reception area or the like, where the public is screened from the service provider <p>An induction loop must be provided to not less than 80% of the floor area of the room or space served by the inbuilt amplification system; or</p> <p>A system requiring the use of receivers or the like, it must be available to not less than 95% of the floor area of the room or space served by the inbuilt amplification system, and the number of receivers provided must not be less than—</p>	<p>Refer to access consultant's report.</p> <p>If there is an in-built amplification system or electronic whiteboard or screen capable of displaying public announcements (other than used for emergency warning purposes only) then a hearing augmentation system is required to be installed in accordance with D3.7 of the BCA.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable

Clause	Description	Comment	Status
	<p>A) if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and</p> <p>B) if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and</p> <p>C) if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 persons or part thereof in excess of 1000 persons; and</p> <p>D) if the room or space accommodates more than 2000 persons, 55 receivers plus 1 receiver for every 100 persons or part thereof in excess of 2000 persons.</p>		
D3.8	<p>Tactile indicators (TGSIs)</p> <p>Tactile indicators are to be provided to all stairways, ramps and escalators must be provided to warn people who are blind or have a vision impairment that they are approaching:</p> <ul style="list-style-type: none"> • a stairway, other than a fire-isolated stairway, • an escalator, passenger conveyor or moving walk, • a ramp other than a fire-isolated ramp, step ramp, kerb ramp or swimming pool ramp, or • in the absence of a suitable barrier an overhead: <ul style="list-style-type: none"> ○ obstruction less than 2 m above floor level, other than a doorway ○ an access way meeting a vehicular way adjacent to any pedestrian entrance to a building, excluding a pedestrian entrance serving an area referred to in D3.4, if there is no kerb or kerb ramp at that point <p>Tactile ground surface indicators must comply with sections 1 and 2 of AS/NZS 1428.4.1</p>  <p>(a) Plans of individual truncated cones</p> <p>(b) Elevation of individual truncated cone</p> <p>Must be shown on plans</p>	<p>Refer to access consultant's report.</p> <p>Note the central stairs & external communal stairs do not indicate the TGSIs.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable
D3.9	<p>Wheelchair seating spaces in Class 9b assembly buildings</p> <p>Where fixed seating is provided in a Class 9b assembly building, wheelchair seating spaces</p>	<p>Refer to access consultant's report.</p> <p>Details to be provided with the Construction Certificate documentation.</p>	Compliance Readily Achievable

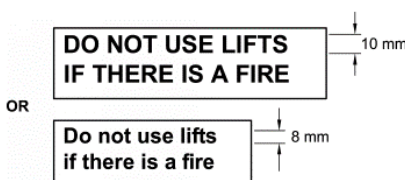


Clause	Description	Comment	Status
	comply with AS 1428.1 must be provided in accordance with Table D3.9.		
D3.10	Swimming pools		N/A
D3.11	Ramps On an access way a series of connected ramps must not have a combined vertical rise of more than 3.6m. A landing for a step ramp must not overlap a landing of another step ramp or ramp.	Refer to access consultant's report. Details to be provided with the Construction Certificate documentation.	Compliance Readily Achievable
D3.12	Glazing on an accessway On an accessway, where there is no chair rail, handrail or transom, all frameless or fully glazed doors, sidelights and any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	Glazed doorways will need to have solid and non-transparent decals installed in accordance with AS 1428.1. Details to be provided with the Construction Certificate documentation.	Compliance Readily Achievable
Section E: Services and Equipment			
Part E1 – Fire Fighting Equipment			
E1.1	-	This Clause has deliberately been left blank	-
E1.2	-	This Clause has deliberately been left blank	-
E1.3	Fire hydrants The building requires a fire hydrant system in accordance with AS 2419.1 – 2005. The fire brigade booster assembly is required to be installed in accordance with AS2419.1 – 2005 except that it may be located between 3.5m and 10m of the building where the assembly is protected by an adjacent fire-rated freestanding wall that— <ul style="list-style-type: none"> • achieves an FRL of not less than 90/90/90; and • extends not less than 1 m each side of the outermost fire hydrant booster risers within the assembly and is not less than 3 m wide; and • extends to a height of not less than 2 m above finished ground level. 	Full compliance with AS2419.1 will be required unless varied via fire brigade approval. The hydraulic engineer must ensure that compliant coverage is provided to all areas of the building from the internal hydrants and must provide design certification to accompany the drawings certifying the design complies with Clause E1.3 of the BCA and AS2419.1 – 2005 (noting any non-compliances, which are to be addressed as an Alternative Solution). <i>Note 1: The hydrant hose must extend at least 1m into rooms to be counted for coverage.</i> <i>Note 2: If full coverage is not provided from hydrants located within the stairs alone. Intermittent hydrant outlets can be installed to achieve a compliant coverage. The hydrants are to be located not more than 25m from another hydrant to allow for progressive attack.</i> Hydraulic Consultant to assess & verify: <ul style="list-style-type: none"> • If the existing Fire hydrant system is to be upgraded to comply with the current BCA • particular attention is required to clarify if any component of the system is not intended to comply • Location of pump room to be identified The location of the existing fire hydrant booster is not within site of the main	Performance Solution



Clause	Description	Comment	Status
		entry to the building contrary to AS2419-2005. Relationship of boosters to main entry non-compliance is proposed to be addressed as a performance solution by the projects fire engineer.	
E1.4	Fire hose reels Fire hose reel coverage to AS2441-2005 is required throughout with hose reels located adjacent to stairs and exits. Where coverage is not achieved with hose reels located Additional hose reels are permitted to be located along the paths of travel to achieve coverage where Hoses are not permitted to pass through fire or smoke doors to achieve hose reel cover. Note: Fire hose reels not required to: - <ul style="list-style-type: none"> • Class 2, 3, 4, 5 and 9c buildings; • Class 8 electricity network substations; • Classrooms and associated corridors in primary and secondary schools 	FHR's are not required in parts of the building containing learning spaces (classrooms) & associated corridors &/or office spaces. Other areas of the building including the ELC Childcare on L2 & Wellness Centre on Level 4 do not get the concession for class 9b classrooms & require FHR's. Performance solution required for fire extinguishers in lieu of FHR's in the identified parts. The above non-compliance is proposed to be addressed as a performance solution by the projects fire engineer.	Performance Solution
E1.5	Sprinklers	A sprinkler system is not required	N/A
E1.6	Portable fire extinguishers Portable Fire Extinguishers are required be installed to Table E1.6 and AS 2444 requirements, at: <ul style="list-style-type: none"> • Throughout Class 5 buildings • emergency services switchboards • kitchens • flammable liquid stores • special risk areas • where fire hose reels are not installed 	Details to be provided at construction certificate stage	Compliance Readily Achievable
E1.7	-	This Clause has deliberately been left blank	-
E1.8	Fire control centre		N/A
E1.9	Fire precautions during construction Fire services are required during construction, including fire hydrants and hose reels which must be active and operational after the building reaches a construction stage effective height of 12m. When the building reaches 12m effective height: <ul style="list-style-type: none"> • All required hydrants and hose reels must be operational on every storey covered by a roof or floor slab over, except for the two uppermost storeys. • Any required booster connections must be installed. 	Further discussion required with builder to determine that this is included in their program. BCA compliance with respect to fire services during construction can be problematic as hydrants with required pressures and flows and booster connections often cannot be achieved at the required time. A temporary fire protection system, possibly with temporary boosters and no fire pumps, may need to be agreed with the fire brigade. This needs to be put in place early in the construction programme and may require liaison with the builder and his fire services contractor.	Compliance Readily Achievable
E1.10	Provisions for special hazards		N/A
Part E2 – Smoke Hazard Management			
E2.1	Applicable of Part	Part is not applicable to	Noted



Clause	Description	Comment	Status
		<ul style="list-style-type: none"> open deck car parks open spectator stands a Class 8 electricity network substation with a floor area not more than 200m² storerooms, etc. less than 30m² sanitary compartments plant rooms or the like 	
E2.2	Smoke hazard management - General requirements <i>(NSW variation for Entertainment Venues)</i> Public assembly buildings The following smoke hazard management systems are required:- <ul style="list-style-type: none"> Automatic smoke detection system: BCA 2019 Amdt 1 E2.2, Spec E2.2a (Clause 4) & AS 1670.1-2018. Building occupant warning system: BCA 2019 Amdt 1 Spec E2.2a (Clause 7), AS 1670.1-2018 (Clause 3.22). Smoke detection system (Smoke Detection System to Automatically Shutdown Air-Handling System) required by BCA 2019 Amdt 1 NSW Table E2.2b Spec E2.2a (clause 6). A smoke hazard management system is to be provided in accordance with NSW Table E2.2b & as modified by Part G3 <ul style="list-style-type: none"> Automatic shutdown to school & childcare class 9b 	Electrical Consultant to assess & verify: <ul style="list-style-type: none"> That smoke detection is in accordance with Clauses 4 & 6 of Spec E2.2a, NSW Table E2.2b & AS1670.1-2018 particular attention is required to clarify if any component of the system is not intended to comply Mechanical Consultant to assess & verify: <ul style="list-style-type: none"> Mechanical Air Handling System (Automatic Shut Down of Air-Handling System) BCA2019 Amendment 1 NSW Table E2.2b Spec E2.2a (clause 6) and AS 1668.1 – 2015. particular attention is required to clarify if any component of the system is not intended to comply Details demonstrating compliance and design certification will be required from services consultants at Construction Certificate stage.	Compliance Readily Achievable
E2.3	Provisions of special hazards		N/A
Part E3 – Lift Installations			
E3.1	Lift installations Electric and electrohydraulic lifts must comply with the design requirements of BCA Specification E3.1.	Certification of lift design to be provided at Construction Certificate stage.	Compliance Readily Achievable
E3.2	Stretcher facility in lifts Buildings greater than 12m in effective height require a lift sized to accommodate a stretcher of 2m x 0.6m x 1.4m high. The lift must serve every level to which lift access is provided.	Ensure a suitably sized lift serves each level. The plans generally comply, however details to be provided with the Construction Certificate documentation.	Compliance Readily Achievable
E3.3	Warning against use of lift in fire Warning signage is required at lift doors advising that lifts should not be used in the event of a fire.	Signage to be installed stating. 	Compliance Readily Achievable
E3.4	Emergency lifts		N/A
E3.5	Landings	Every passenger lift must comply with the requirements of this provision. Certification of lift design to be provided at Construction Certificate stage.	Compliance Readily Achievable
E3.6	Passenger lifts	The access consultant should comment on the compliance of the lifts required for	Compliance Readily



Clause	Description	Comment	Status
	Every passenger lift must be one of the types identified in Table E3.6a, have accessible features in accordance with Table E3.6b and not rely on a constant pressure device for its operation if the lift car is fully enclosed.	Accessibility. Refer to access consultant's report.	Achievable
E3.7	Fire service control Where lifts serve a storey above 12m in effective height: <ul style="list-style-type: none"> • A fire service control switch is required for each lift or lift group. • A lift car fire service drive control is required for each lift. 	Certification of lift design to be provided at Construction Certificate stage.	Compliance Readily Achievable
E3.8	Residential care buildings		N/A
E3.9	Fire service recall control switch The fire service control switch must be located at the landing nominated by the appropriate authority and, when activated, must return all lifts to the nominated floor. If a lift car drive control has been activated, it shall override the landing fire service control switch.	Certification of lift design to be provided at Construction Certificate stage.	Compliance Readily Achievable
E3.10	Lift car fire service drive control switch The lift car service drive control must be activated from within the lift car. The switch is to be located between 600mm and 1500mm above the lift car floor and be labelled 'FIRE SERVICE' in indelible white lettering on red background. The "OFF" and "ON" positions are to be identified.	Certification of lift design to be provided at Construction Certificate stage.	Compliance Readily Achievable
Part E4 – Emergency Lighting, Exit and Warning Systems			
E4.1	-	This clause has been intentional left blank	-
E4.2	Emergency lighting requirements Emergency lighting is to be provided throughout the building.	Emergency lighting is to be provided in: <ul style="list-style-type: none"> • every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway. • Every passageway, hallway, corridor or the like, that is part of the path of travel to an exit. • In every room having a floor area more than 100m² that does not open to a corridor or space that has emergency lighting or to a road or open space. • In any room having a floor area more than 300m². • In every required non-fire isolated stairway • To every room or space that has public access in a Class 6 or 9b building if: <ul style="list-style-type: none"> • the floor area is more than 300m²; • or if any point on the floor is more than 20m from the nearest doorway 	Compliance Readily Achievable



Clause	Description	Comment	Status
		<p>opening directly to the road or open space; or</p> <ul style="list-style-type: none"> • if the egress involves a vertical rise within the building of more than 1.5m. 	
E4.3	Measurement of distances		Noted
E4.4	Design and operation of emergency lighting Emergency lighting must comply with to AS2293.1	Details to be provided at construction certificate stage	Compliance Readily Achievable
E4.5	Exit signs Exit signs are to be provided in accordance with Clause E4.5 of the BCA.	<p>Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to;</p> <ol style="list-style-type: none"> 1. A door providing direct egress from a storey to a stairway, passageway or ramp serving as a required exit. 2. A door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space. 3. A horizontal exit 4. A door serving as or forming part of a required exit in a storey required to be provided with emergency lighting. <p>Details to be provided at construction certificate stage</p>	Compliance Readily Achievable
E4.6	Direction signs <i>(NSW variation for Entertainment Venues)</i> 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	Details to be provided at construction certificate stage	Compliance Readily Achievable
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions		N/A
E4.8	Design and operation of exit signs <ol style="list-style-type: none"> 1. Exit signs are to operate in accordance with AS 2293.1. 2. Photo luminescent exit sign are to comply with Specification E4.8 		Compliance Readily Achievable
E4.9	Emergency warning and intercom systems An emergency warning and intercom system complying with AS 1670.4 must be installed throughout the building.	<p>Electrical Consultant to assess & verify:</p> <ul style="list-style-type: none"> • that the EWIS is to go through the whole school & other buildings • particular attention is required to clarify if any component of the system is not intended to comply <p>Details demonstrating compliance and design certification will be required from services consultants at Construction Certificate stage.</p>	Compliance Readily Achievable
Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0	Water proofing of external walls Weatherproofing of external wall systems must be	F1.0 Deemed-to-Satisfy Provisions	Performance Solution



Clause	Description	Comment	Status
	in accordance with BCA Verification Method FV1. Weatherproofing - A roof & external wall (including openings around windows & doors) must prevent the penetration of water that could cause - (a) unhealthy or dangerous conditions, or loss of amenity for occupants; and (b) undue dampness or deterioration of building elements. Compliance can be demonstrated via performance requirements of FP1.4	(a) Performance Requirement FP1.4, for the prevention of the penetration of water through external walls, must be complied with. There are no Deemed-to-Satisfy Provisions for this Performance Requirement in respect of external walls. Compliance can be demonstrated via the following: 1. Verification Method FV1 Weatherproofing or 2. Engage a Facade engineer to address the performance requirements of FP1.4	
F1.1	Stormwater drainage Stormwater drainage must comply with AS/NZS 3500.3.	Hydraulic drawings and design certification to be provided at Construction Certificate stage. The Central courtyards x2 east & west side on Level 4 are open to the sky over. It is noted that there are sliding doors to the courtyard which requires a level threshold and a stepdown hob. Details of the stormwater drainage & hobs to the open courtyards to demonstrate compliance with AS3500.3 & AS4654 (refer Clause F1.4) is to be provided. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction.	Compliance Readily Achievable
F1.2	-	This clause has deliberately been left blank	-
F1.3	-	This clause has deliberately been left blank	-
F1.4	External above ground membranes External waterproofing membrane systems for roofs, decks, balconies and the like must comply with AS4654 Parts 1 and 2.	The standard membrane detailing for waterproofing including minimum upturn termination lengths, requirements for stepped balcony details at doorways and windows and provision of continuous grates where stepping does not occur. The Central courtyards x2 east & west side on Level 4 are open to the sky over. It is noted that there are sliding doors to the courtyard which requires a level threshold and a stepdown hob. Details of the waterproofing & hob to the open courtyard to demonstrate compliance with AS4654 (refer Clause F1.1) is to be provided. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction.	Compliance Readily Achievable
F1.5	Roof coverings Metal sheet roofing complying with AS 1562.1	Details to be provided at construction certificate stage	N/A
F1.6	Sarking Sarking type materials used for weatherproofing of	Details to be provided at construction certificate stage	Compliance Readily



Clause	Description	Comment	Status
	roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.		Achievable
F1.7	Water proofing of wet areas in buildings Water proofing of wet areas within a building to comply with AS 3740.	Details to be provided at construction certificate stage	Compliance Readily Achievable
F1.8	-	This clause has deliberately been left blank	-
F1.9	Damp-proofing		N/A
F1.10	Damp-proofing of floors on the ground A vapour barrier in accordance with AS2870 is to be provided beneath the basement floor slab.	Details to be provided at construction certificate stage	Compliance Readily Achievable
F1.11	Provision of floor wastes		N/A
F1.12	Subfloor ventilation		N/A
F1.13	Glazed assemblies Windows, sliding doors with a frame, adjustable louvres, shopfronts and window walls with one piece framing in an external wall must comply with AS 2047 requirements for resistance to water penetration.	Details to be provided at construction certificate stage	Compliance Readily Achievable
Part F2 – Sanitary and Other Facilities			
F2.1	Facilities in residential buildings		N/A
F2.2	Calculation of number of occupants and fixtures		Noted
F2.3	Facilities in Class 3 to 9 buildings Toilet facilities are required in appropriate numbers based on the number of persons accommodated. F2.3 – facilities for children in early childhood centre requires facilities to be accessible from indoor & outdoor play areas. F2.3 (h) A Class 9b early childhood centre must be provided with— (i) a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with— (A) the facilities protected by a door or gate with child proof latches to prevent unsupervised access to the facilities by children younger than 5 years old; and (B) the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old; and (iii) (A) A facility is required to carry out washing of nappies and other clothing, therefore requires the installation of laundry facilities (but not drying facilities) in these buildings comprising: • a washtub; and • space in the same room for a washing machine. (iii) (C) specifies the requirements for a nappy changing bench. The requirements in sub-clauses (aa) to (dd) require the nappy	Refer to appendix F2.3 of this report. The number of facilities are considered compliant with this clause other than minor issue in the ELC on Level 2 (refer below). F2.3 – facilities for children in early childhood ELC Level 2 - The following is noted in the current design The number of basins is non-compliant ie 5 basins provided & 6 are required. The design is capable of complying subject to resolution of the identified area of non-compliance noting this issue should be resolved prior to construction. F2.3 – facilities for children in early childhood centre requires facilities to be accessible from indoor & outdoor play areas. The facility serving the (3, 4-5 year olds) to the south west corner does not have direct access to the outdoor play area. F2.3(h)(i)(B) The kitchen in the current design does not have full view of the Nurseries (0-2) & so does not facilitate supervision of children from the facilities of the children younger than 2 years old. The guide to the BCA has a reference that in some circumstances this is not fully achievable ie larger early childcare centres & in these situations a performance solution maybe required. The performance solution may consider that the kitchen facilities are provided	Additional Details Required

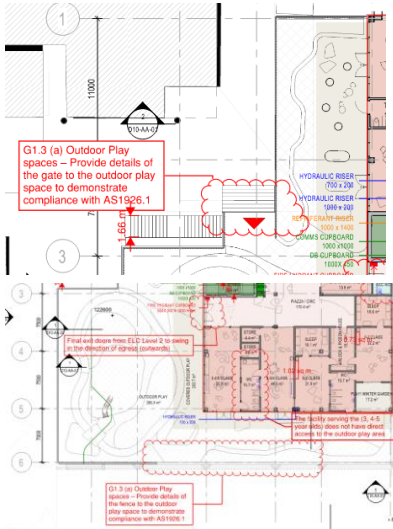
Clause	Description	Comment	Status
	<p>changing bench to be:</p> <ul style="list-style-type: none"> • within 1m of a separate adult hand washing facility; • not less than 0.9m² in surface area for the top of the bench; • not less than 850mm and not more than 900mm from the finished floor level to the top of the bench. This height range is specified for ergonomic and safety reasons; • provided with a space not less than 800mm high x 800mm deep x 500mm wide for the storage of steps; and • provided in a location so that the play area is visible at all times, to allow adequate supervision of other children whilst changing a child. 	<p>with a dedicated cook & the kitchenettes are provided in the Nursery for the purpose of heating of baby bottles.</p> <p>F2.3(h)(iii)(C) - The nappy change to serve the Nursery (0-2) in the current design does not have must have full visibility of the play area & 1 of the nappy change tables is not the required size. The design is capable of complying subject to resolution of the identified area of non-compliance noting this issue should be resolved prior to construction</p>	
F2.4	<p>Accessible sanitary facilities</p> <p>Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey.</p> <p>Facilities should be constructed to AS1428.1 – 2009.</p> <p>Note: At each bank of toilets where there is one (1) or more toilets in addition to an accessible unisex sanitary compartment a sanitary compartment suitable for a person with an ambulant disability is to be provided for use by male and females.</p>	<p>Refer to access consultant's report.</p> <p>Steve Watson & Partners have not completed a full review as a separate report has been provided by the Access Consultant. Access Consultant to assess & verify compliance with the following:</p> <ul style="list-style-type: none"> • Accessible facilities on the Levels 0-4 are to be verified to comply with this clause in particular the ambulant facilities on each level are provided for students & staff compliant with this clause. As the proposed building is associated with an all-female school, we have assumed provision of facilities for students to be only for one sex ie female, in lieu of separate male and female facilities. We have therefore assumed an ambulant facility is only required for the female students in each bank on each floor. An ambulant facility for staff for both male & female is required at each bank of staff toilets. • Ambulant Facilities do not have the circulation in front of the pan or outside the compartment in accordance figure 53B (a) & (b) of AS1428.1-2009. Check ambulant facilities on all levels for compliance with the above. <div style="text-align: center;"> <p>(a)</p> <p>(b)</p> </div> <ul style="list-style-type: none"> • Accessible facility Level 0 - circulation to 	Additional Details Required

Clause	Description	Comment	Status
		<p>wc pan is obstructed by column. Check accessible WC's all levels for WC pan clearance for compliance with Figure 43 of AS1428.1-2009</p> <ul style="list-style-type: none"> Accessible facility Level 0 - Wash basin is not the required 300mm from the doorway in accordance with Figure 51A of AS1428.1-2009. <p>The design is capable of complying subject to resolution of the identified areas of non-compliance noting these issues should be resolved prior to construction</p>	
F2.5	<p>Construction of sanitary compartments</p> <p>Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from outside.</p>	<p>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</p> <p>Details demonstrating compliance will be required at Construction Certificate stage.</p>	Compliance Readily Achievable
F2.6	Interpretation: Urinals and washbasins	Each 600mm length of a continuous urinal trough is counted as 1 urinal.	Noted
F2.7	<i>(NSW variation – Deleted)</i>	-	-
F2.8	Waste management		N/A
F2.9	Accessible adult change facilities		N/A
Part F3 – Room Heights			
F3.1	<p>Height of rooms and other spaces</p> <p>Generally, a minimum ceiling height of 2.4m is required throughout.</p> <p>In a Class 9b building in a school classroom or other assembly building with more than 100 persons — 2.4 m;</p> <p>A theatre, public hall or other assembly building with more than 100 persons — 2.7 m</p> <p>Generally, a minimum ceiling height of 2.4m is required throughout. Corridors, toilets and storage areas are permitted to have reduced ceiling heights of 2.1m.</p>	<p>The minimum ceiling height requirements are to comply with the requirements of this provision. Generally, the plans appear to comply, however full construction details to be provided at Construction Certificate stage.</p>	Compliance Readily Achievable



Clause	Description	Comment	Status
Part F4 – Light and Ventilation			
F4.1	Provision of natural light Natural lighting aggregating 10% of room floor area is required as follows: <ul style="list-style-type: none"> To school classrooms and early childhood centres. 	Details to be provided at Construction Certificate stage. Some of the dance studios on Level 1 do not have access to natural light. However, we have assessed these spaces as not school classrooms & as such the requirements for Natural light to the dance studios as not applicable.	Compliance Readily Achievable
F4.2	Methods and extent of natural lighting F4.2 (d) In a Class 9b early childhood centre, the sills of 50% of windows in children's rooms must be located not more than 500mm above the floor level	The plans indicate that the design is capable of achieving 50% windows in children's rooms located not more than 500mm above the floor level. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction.	Compliance Readily Achievable
F4.3	Natural light borrowed from adjoining room		Compliance Readily Achievable
F4.4	Artificial lighting The artificial lighting system must comply with AS/NZS 1680.0.	Design details and certification from an electrical engineer is required at Construction Certificate stage.	Compliance Readily Achievable
F4.5	Ventilation of rooms <i>(NSW variation for Public Health Regulation)</i> Ventilation shall be provided throughout the building in by means of natural ventilation complying with Clause F4.6 or mechanical ventilation complying with the requirements of AS1668.2 as required by Clause F4.5 of the BCA.	Design details and certification from an mechanical engineer is required at Construction Certificate stage.	Compliance Readily Achievable
F4.6	Natural ventilation	Design details is required at Construction Certificate stage.	Compliance Readily Achievable
F4.7	Ventilation borrowed from adjoining room		N/A
F4.8	Restriction on location of sanitary compartments A room containing a closet pan or urinal must not open directly into a room used for public assembly or a workplace normally occupied by more than one person	The location of doors to the accessible wc & 1 x wc toilet on Level 4 are to open to a corridor or alternatively be screened from view. Currently the plans show these doors opening to the main central thoroughfare. Details demonstrating compliance will be required at Construction Certificate stage.	Additional Details Required
F4.9	Airlocks If the room containing a closet pan or urinal opens directly into rooms identified in F4.8 above then an airlock of not less than 1.1 m ² and fitted with self-closing doors at all access doorways or the room containing the closet pan or toilet facility must be provided with mechanical ventilation and the doorway to the room adequately screened from view.	Details demonstrating compliance will be required at Construction Certificate stage.	Compliance Readily Achievable
F4.10	-	This clause has intentionally been left blank	-



Clause	Description	Comment	Status
F4.11	Carparks		N/A
F4.12	Kitchen local exhaust ventilation A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2, where: <ul style="list-style-type: none">any cooking apparatus has a total maximum electrical power input exceeding 8kW, ora total gas power input exceeding 29 MJ/h, or the total maximum power input to more than one apparatus exceeds 0.5kW electrical power or 1.8 MJ gas per metre square of the room or enclosure.	Details demonstrating compliance will be required at Construction Certificate stage.	Compliance Readily Achievable
Part F5 – Sound Transmission and Insulation			
F5.1 – F5.7	Application of Part Applicable to Class 3, 3 and 9c buildings		N/A
Part F6 – Condensation management			
F6.1 – F6.4	Application of part This part applies to a sole-occupancy unit of a Class 2 building or Class 4 part of a building.		N/A
Section G: Ancillary Provisions			
Part G1- Minor Structures and components			
G1.1	Swimming pools (NSW variation for swimming pools)		N/A
G1.2	Refrigerated chambers, strong rooms and vaults		N/A
G1.3	Outdoor play spaces (a) Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which complies with AS 1926.1. (b) For the purposes of (a), AS 1926.1 is applied as if there is a swimming pool located outside the outdoor play space, so that the barrier restricts children from exiting the premises without the knowledge of staff in the centre. (c) The requirements of (a) do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre.	<p>Architect to include details on plans to indicate the fence & gate to the outdoor play space to demonstrate compliance with AS1926.1.</p>  <p>The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to resolution of the identified areas of non-compliance noting these issues should be resolved prior to construction</p>	Additional Details Required



Clause	Description	Comment	Status
NSW G1.101	Provision for cleaning windows A safe manner of cleaning windows is to be provided as windows are located 3 or more storeys above ground level.	The windows must either be able to be cleaned wholly from within the building, or a method complying with the Construction Safety Act 1912 and Regulations is required. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
Part G2 - Boilers, pressure vessels, heating appliances, fire places, chimneys and flues			
G2.1 - G2.4	Boilers, pressure vessels, heating appliances, fire places, chimneys and flues	This clause has intentionally been left blank	-
Part G3 - Atrium Construction			
G3.1	Application of Part	Atrium Construction - The building is required to comply with the requirements for Atrium Construction part G3 as the central stair void through the building is connecting Level 1 to Level 4 which forms an atrium well ie connects 4 stories & this does not get the concession as noted in Clause G3.1. The building design has not incorporated the DTS provisions of the BCA for Atrium Construction. The above non-compliance is proposed to be addressed as a performance solution by the projects fire engineer.	Performance Solution
G3.2	Dimensions of atrium well Minimum 6m diameter atrium well is required.	Refer Clause G3.1 in this report	Performance Solution
G3.3	Separation of atrium by bounding walls An atrium well is required to be separated from the remainder of the building by bounding walls not more than 3.5m from the perimeter of the atrium well, except in the case of 3 consecutive storeys.	Refer Clause G3.1 in this report	Performance Solution
G3.4	Construction of bounding walls 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 G3.8.	Refer Clause G3.1 in this report	Performance Solution
G3.5	Construction of balconies If a bounding wall separating an <i>atrium</i> from the remainder of the building is set back from the <i>atrium well</i> , an imperforate and non-combustible barrier not less than 1 m high must be provided.	Refer Clause G3.1 in this report	Performance Solution
G3.6	Separation at roof The atrium roof must have an FRL not less than that prescribed in Table 3 of Specification C1.1 or the roof structure and membrane are to be protected by a sprinkler system complying with Specification E1.5 and G3.8	Refer Clause G3.1 in this report	Performance Solution
G3.7	Means of egress All areas within the atrium must have at least 2 means of egress.	Refer Clause G3.1 in this report	Performance Solution



Clause	Description	Comment	Status
G3.8	Fire and smoke control systems Sprinklers are to be provided throughout in accordance with Specification E1.5 and G3.8. A smoke control system complying with AS/NZS1668.1 and Specification G3.8 is required throughout. An automatic fire detection and alarm system must comply with AS1670.1 and Specification G3.8. 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 "EVACUATE" 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 G3.8. Fire isolated stairways are required to be provided automatic air pressurisation in accordance with AS/NZS1668.1.	Refer Clause G3.1 in this report	Performance Solution
Part G4 - Construction in Alpine Areas			
G4.1 – G4.9	Application of Part		N/A
Part G5 - Construction in Bushfire Prone Areas			
G5.1 – G5.2	Application of Part		N/A
Part G6 – Occupiable outdoor areas			
G6.1	Application of Part Applies to occupiable outdoor areas in addition to other deemed-to-satisfy provisions of the BCA. Part G6 takes precedent where there is a difference to the deemed-to-satisfy provisions of Sections C, D, E, F & G. Except for clause G6.2, Part G6 does not apply to occupiable outdoor areas of individual resident rooms or outdoor occupiable areas less than 10m ² .	The roof terrace on Level 4 exceeds 10m ² and the requirements of this part apply to this roof terrace.	Noted
G6.2	Fire hazard properties A lining, material or assembly in an occupiable outdoor area must comply with C1.10 as for an internal element. The following fire hazard properties of a lining, material or assembly in an occupiable outdoor area are not required to comply with C1.10: (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index (SMOGR _{RC})	Proposed materials used in outdoor occupiable areas are subject to C1.10 requirements as this clause. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.3	Fire separation For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area,		Noted



Clause	Description	Comment	Status
	however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments.		
G6.4	Provision for escape For the purposes of the Deemed-to-Satisfy Provisions of Part D1, a reference to a storey or room includes an occupiable outdoor area.	Egress requirements under Part D1 apply to occupiable outdoor areas. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.5	Construction of exits For the purposes of the Deemed-to-Satisfy Provisions of Part D2, a reference to a storey or room includes an occupiable outdoor area.	Construction of exits requirements under Part D2 apply to occupiable outdoor areas. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.6	Fire fighting equipment Except for Clause 7(b)(i) of Specification E1.5, for the purposes of the Deemed-to-Satisfy Provisions of Part E1, a reference to a storey includes an occupiable outdoor area.	Fire fighting equipment required under Part E1 to be designed to include occupiable outdoor areas. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.7	Lift installations For the purposes of the Deemed-to-Satisfy Provisions of Part E3, a reference to a storey includes an occupiable outdoor area.	Lift designs required under Part E3 to be designed to include occupiable outdoor areas. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.8	Visibility in an emergency, exit signs and warning systems For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.	Emergency lighting, exits signs and emergency warning and intercom systems to be designed to include occupiable outdoor areas. Details to be provided at Construction Certificate stage.	Compliance Readily Achievable
G6.9	Light and ventilation For the purposes of the Deemed-to-Satisfy Provisions of F4.4, F4.8 and F4.9, a reference to a room includes an occupiable outdoor area.		N/A
G6.10	Fire orders For the purposes of the Deemed-to-Satisfy Provisions of G4.9, a reference to a storey includes an occupiable outdoor area.		N/A
Section H: Special Use Buildings – Auditoriums, Public Halls, Public Transport Buildings			
Part H1 - Class 9b Buildings			
H1.1 – H1.7	Application of Part <i>(NSW variation for Entertainment Venues)</i> For a Class 9b building that is an entertainment venue refer to NSW Part H101. Applies every enclosed Class 9b building, which is not an entertainment venue which— I. is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300m ² ; or II. otherwise, has a stage and any backstage area with a total floor area of more than 200m ² ; or has a stage with an associated rigging III. loft.	There is no stage and any backstage area with a total floor area of more than 300m ² and as such the requirements of this part do not apply.	N/A



Clause	Description	Comment	Status
	Notwithstanding the above- I. H1.4 applies to every open or enclosed Class 9b building; and II. H1.7 applies to every enclosed Class 9b building.		
NSW Section J: Energy Efficiency Energy Efficiency for buildings requires buildings to reduce greenhouse gas emissions by efficiently using energy. A building's services must have features that facilitate the efficient use of energy. The discipline of Energy Efficiency with the BCA has become a specialised field where compliance with BCA Section J is to be certified with the issue of a Certificate of Compliance – Design from the relevant Services Engineer/Consultant. The purpose of this section is to provide a brief explanation of which areas are to achieve compliance with BCA Section J – Energy Efficiency during design and construction. The BCA should be referenced for exact requirements, clarification and further explanation.			
Section J	Energy efficiency measures Energy efficiency measures are prescribed for the following building elements to limit energy consumption:- <ul style="list-style-type: none"> • Building fabric • External glazing • Building sealing • Air movement. • Air-conditioning and ventilation systems. • Artificial lighting and power • Hot water supply • Access for maintenance 	Compliance assumed, although further information is required to confirm compliance. A performance based BCA JV3 assessment may be adopted for the project if compliance with BCA deemed to satisfy provisions are problematic.	Compliance Readily Achievable
NSW Subsection J(B) Energy Efficiency - Class 3 and Class 5 to 9 Buildings			
NSW J(B)1 - Compliance with BCA Provisions. Class 3 and Class 5 to 9 buildings must comply with all of the provisions of the national Section J that are applicable to the relevant classifications, except as varied by NSW J3.1 Application of Part.			
Part J0 - Energy Efficiency			
J0.1	Application of Part		Noted
J0.2	Heating and cooling loads of sole-occupancy units of a Class 2 building or a Class 4 part		N/A
J0.3	Ceiling fans	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report required.	Compliance Readily Achievable
J0.4	Roof thermal breaks	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report required.	Compliance Readily Achievable
J0.5	Wall thermal breaks	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report required.	Compliance Readily Achievable
Part J1 - Building Fabric			
J1.1	Application of Part	Applies to building elements forming the envelope. The building is located within Climate Zone 5. The Central courtyards x2 east & west side on Level 4 is not a conditioned space & is not separated from the adjacent Class 5	Compliance Readily Achievable



Clause	Description	Comment	Status
		<p>wellbeing centre conditioned spaces due to the void openings in the roof connecting these spaces and as such must comply with section J of the BCA. The Architect is to discuss with the energy consultant to determine compliance with the dts provisions or performance requirements of this part.</p> <p>The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction</p>	
J1.2	Thermal construction – general Insulation must comply with AS/NZS 4859.1 and be installed in accordance with Clause J1.2.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J1.3	Roof and ceiling construction A roof or ceiling must achieve a Total R-Value greater than or equal to R3.7 for an upward direction of heat flow. The solar absorptance of the upper surface of a roof must not be more than 0.45.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J1.4	Roof lights	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J1.5	Walls and glazing The Total System U-Value of wall-glazing construction must not be greater than U1.1. The Total System U-Value of wall-glazing construction must be calculated in accordance with Specification J1.5a and the requirements of this clause. The solar admittance of externally facing wall-glazing construction must be greater than the values specified in Table J1.5c and are to be calculated in accordance with Specification J1.5a.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J1.6	Floors The floor must achieve a Total R-Value of 2.0 for downwards heat flow.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
Part J2 - Glazing			-
Part J3 - Building Sealing			
J3.1	Application of Part	Applies to elements forming the envelope.	Noted
J3.2	Chimneys and flues		N/A
J3.3	Roof lights	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J3.4	Windows and doors A seal to restrict air infiltration must be fitted to each edge of an external door, openable external window or the like when serving a conditioned space.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable



Clause	Description	Comment	Status
J3.5	Exhaust fans A miscellaneous exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J3.6	Construction of roofs, walls and floors Roofs, walls, floors and any opening must be constructed to minimise air leakage in accordance with Clause J3.6(b) when forming part of the external fabric of a conditioned space. These requirements do not apply to openings, grilles and the like required for smoke hazard management.	Assessment by an Energy Efficiency consultant is to be carried out and Section J Compliance Report provided.	Compliance Readily Achievable
J3.7	Evaporative coolers		N/A
Part J4 - This Part has deliberately been left blank			
Part J5 - Air-conditioning and Ventilation Systems			
J5.1	Application of Part	Applies to building. The Central courtyards x2 east & west side on Level 4 is not a conditioned space & is not separated from the adjacent Class 5 wellbeing centre conditioned spaces due to the void openings in the roof connecting these spaces and as such must comply with section J of the BCA, in particular part J5 Air-conditioning. The Architect is to discuss with the energy consultant to determine compliance with the dts provisions or performance requirements of this part. The detailed design is not indicated on the drawings, however it is noted that compliance is readily achievable subject to additional details being provided prior to construction	Compliance Readily Achievable
J5.2	Air-conditioning system control An air-conditioning system must be capable of being deactivated when the building or part of a building served by that system is not occupied. An air-conditioning system must comply with requirements specified under this clause.	The mechanical engineer is to design and certify the A/C system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.3	Mechanical ventilation system control The mechanical ventilation system must comply with the requirements specified under this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.4	Fan systems Fans, ductwork and duct components that form part of an air-conditioning system or mechanical ventilation system must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.5	Ductwork insulation Ductwork and fittings in an air-conditioning system must be provided with insulation complying with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable



Clause	Description	Comment	Status
J5.6	Ductwork sealing Ductwork in an air-conditioning system with a capacity of 3000 L/s or greater, not located within the only or last room served by the system, must be sealed against air loss in accordance with the duct sealing requirements of AS 4254.1 and AS 4254.2 for the static pressure in the system.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.7	Pump systems Pumps and pipework that form part of an air-conditioning system must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.8	Pipework insulation Piping, vessels, heat exchangers and tanks containing heating or cooling fluid, where the fluid is held at a heated or cooled temperature, that are part of an air-conditioning system, other than in appliances covered by MEPS, must be provided with insulation complying with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.9	Space heating A heater used for air-conditioning or as part of an air-conditioning system must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.10	Refrigerant chillers An air-conditioning system refrigerant chiller must comply with MEPS and the full load operation energy efficiency ratio and integrated part load energy efficiency ratio in Table J5.10a or Table J5.10b when determined in accordance with AHRI 551/591.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.11	Unitary air-conditioning equipment Unitary air-conditioning equipment including packaged air-conditioners, split systems, and variable refrigerant flow systems must comply with the requirements of this clause.	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J5.12	Heat rejection equipment The motor rated power of a fan in a cooling tower, closed circuit cooler or evaporative condenser must not exceed the allowances in Table J5.12. The fan in an air-cooled condenser must have a motor rated power in accordance with the requirements of this clause	The mechanical engineer is to design and certify the mechanical ventilation system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
Part J5 - Artificial Lighting and Power			
J6.1	Application of Part	Applies to the building.	Noted
J6.2	Artificial lighting For artificial lighting, the aggregate design illumination power load must not exceed the sum of the allowances obtained by multiplying the area of each space by the maximum illumination power density in Table J6.2a. Aggregate design illumination power is to be calculated in accordance with requirements of this clause.	The electrical engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable



Clause	Description	Comment	Status
J6.3	Interior artificial lighting and power control The power control for artificial interior lighting must comply with the requirements of Clause J6.3. Artificial lighting of a room or space must be individually operated by a switch or other control device in accordance with Specification J6.	The electrical engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J6.4	Interior decorative and display lighting Interior decorative and display lighting, such as for foyer mural or art displays, must be controlled separately from other artificial lighting as specified in Clause J6.4. Window display lighting must be controlled separately from other display lighting.	The electrical engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J6.5	Artificial lighting around the perimeter of a building Artificial lighting around the perimeter of a building must be controlled by a daylight sensor or time switch as specified in Clause J6.5.	The electrical engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J6.6	Boiling water and chilled water storage units Power supply to a boiling water or chilled water storage unit must be controlled by a time switch in accordance with Specification J6.	The electrical engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J6.7	Lifts Lifts must be configured to:- <ul style="list-style-type: none"> ensure artificial lighting and ventilation in the car are turned off when it is unused for 15 minutes; achieve the idle and standby energy performance level in Table 6.7a; achieve the energy efficiency class in Table 6.7b; or if a dedicated goods lift energy efficiency class D in accordance with ISO 25745-2. 	The electrical/lift engineer is to design and certify the artificial lighting system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J6.8	Escalators and moving walkways		N/A
Part J7 - Heated Water Supply and Swimming Pool and Spa Pool Plant			
J7.1	-	This Clause has deliberately been left blank	-
J7.2	Heated water supply A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B2 of NCC Volume Three – Plumbing Code of Australia	The hydraulic engineer is to design and certify the heated water supply system to comply with the requirements under this Clause at Construction Certificate stage.	Compliance Readily Achievable
J7.3	Swimming pool heating and pumping		N/A
J7.4	Spa pool heating and pumping		N/A
Part J8 - Facilities for Energy Monitoring			
J8.1	Application of Part	Applies to the building.	Noted
J8.2	-	This Clause has deliberately been left blank	-
J8.3	Facilities for energy monitoring	An energy monitoring facility is required for the building.	Compliance Readily



Clause	Description	Comment	Status
	<p>A building with a floor area of more than 2,500m² must have the facility to record individually the energy consumption of:</p> <ul style="list-style-type: none">I. air-conditioning plant including, where appropriate, heating plant, cooling plant and air handling fans; andII. artificial lighting; andIII. appliance power; andIV. central hot water supply; andV. internal transport devices including lifts, escalators and travelators where there is more than one serving the building; andVI. other ancillary plant. <p>Energy meters required by (b) must be interlinked by a communication system that collates the time-of-use energy consumption data to a single interface monitoring where it can be stored, analysed and reviewed.</p>	<p>The electrical/mechanical engineer/s are to design and certify the facilities for energy monitoring system to comply with the requirements under this Clause at Construction Certificate stage.</p>	<p>Achievable</p>



15. Appendix A – Referenced Documentation

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

Drawing No.	Title	Issue	Date	Drawn By
AR_B10_00_20	General Arrangement Plan - Site Plan Access & Egress Level 00	1	02/07/2221	BVN Architects
AR_A10_01_20	General Arrangement Plan - Site Plan Access & Egress Level 1	1	02/07/2221	BVN Architects
AR_A10_02_20	General Arrangement Plan - Site Plan Access & Egress Level 2	1	02/07/2221	BVN Architects
AR_DA_B10_00_00	General Arrangement Plan – Level 00	10	18/08/2021	BVN Architects
AR_DA_B10_01_00	General Arrangement Plan – Level 1	10	18/08/2021	BVN Architects
AR_DA_B10_02_00	General Arrangement Plan – Level 2	10	18/08/2021	BVN Architects
AR_DA_B10_03_00	General Arrangement Plan – Level 3	10	18/08/2021	BVN Architects
AR_DA_B10_04_00	General Arrangement Plan – Level 4	10	18/08/2021	BVN Architects
AR_DA_B10_05_00	General Arrangement Plan – Roof Plan	10	18/08/2021	BVN Architects



16. 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 2019 Amendment 1 Clause C3.13 and tested prototypes (AS 1530.4 – 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of fire detection in accordance with BCA 2019 Amendment 1 Clause D2.21.
Automatic Fire Detection And Alarm System (<i>Smoke Detection System</i>)	BCA 2019 Amendment 1 Clause 4 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System (<i>Smoke Detection System To Automatically Shutdown Air-Handling System</i>)	BCA 2019 Amendment 1 Clause 6 of Specification E2.2a NSW table E2.2b and AS 1670.1 – 2018
Building Occupant Warning System	BCA 2019 Amendment 1 Clause 7 of Specification E2.2a and AS 1670.1 – 2018
Emergency Lighting	BCA 2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Emergency Warning And Intercommunication System	BCA 2019 Amendment 1 Clause E4.9, and AS 1670.4 – 2018
Exit Signs	BCA 2019 Amendment 1 Clause E4.5, NSW E4.6, E4.8 and AS/NZS 2293.1 – 2018
Fire Dampers	BCA 2019 Amendment 1 Clause C3.15 and AS 1668.1 – 2015 (AS 1682.1 – 2015 and AS 1682.2 – 2015)
Fire Doors	BCA 2019 Amendment 1 Specification C3.4 and AS/NZS 1905.1 – 2015
Fire Hydrants Systems	BCA 2019 Amendment 1 Clause E1.3 and AS 2419.1 – 2005
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA 2019 Amendment 1 Clause C3.15, Specification C3.15, AS 1530.4 – 2014, AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA 2019 Amendment 1 Clause E1.4 and AS 2441 – 2005
Lightweight Construction	BCA 2019 Amendment 1 Specifications C1.8, Clause A2.3 and AS 1530.4 – 2014
Mechanical Air Handling System (<i>Automatic Shut Down Of Air-Handling System</i>)	BCA 2019 Amendment 1 NSW Table E2.2b Spec E2.2a (clause 6) Clause E2.2 and AS 1668.1 – 2015
Portable Fire Extinguishers	BCA 2019 Amendment 1 Clause E1.6 and AS 2444 – 2001
Smoke Detectors And Heat Detectors (<i>Detectors For The Automatic Closing Operation Of Fire Doors To Fire Isolated Exits</i>)	BCA 2019 Amendment 1 Clause C3.8 and AS 1670.1 – 2018
Warning And Operational Signs	BCA 2019 Amendment 1 Clauses D2.23 & E3.3

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



17. Appendix C1.1 – Fire Rating Requirements

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



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

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

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

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

In addition, in non-sprinklered areas, wall and ceiling linings must have a smoke growth rate index not more than 100 or an average specific extinction area less than 250m²/g.

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



19. Appendix D3 – Significant Accessibility Requirements

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

Principle requirements are:

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

The following general requirements apply to accessible toilets:

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



20. Appendix F2.3 – Requirements for Sanitary Facilities

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

Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
9b	OSHC – after hours school care	Students 150	Male							
			Female	150	6	7	N/A		4	4
			Unisex Disabled				N/A			
9b	OSHC – after hours school care	Staff 6	Male	3	1	1			1	1
			Female	3	1	3	N/A		1	3
			Unisex Disabled		1	1	N/A		1	1
9b	ELC – Early Childhood Centre	Children 90	Male							
			Female	90	6	9	N/A		6	5
			Unisex Disabled				N/A			
9b	ELC – Early Childhood Centre	Staff 15	Male	8	1	1			1	1
			Female	8	1	1	N/A		1	1
			Unisex Disabled		1	1	N/A		1	1
9b	Junior School & Wellness Centre	Students 654	Male							
			Female	654	17	22	N/A		11	22
			Unisex Disabled				N/A			
9b	Junior School & Wellness Centre	Staff 44	Male	22	2	4	2	0	1	4
			Female	22	3	4	N/A		1	4
			Unisex Disabled		4	4	N/A		4	4

Notes:

1. A common unisex accessible facility may be counted once for both male and female facilities in accordance with Clause F2.2(c) of the BCA;
2. In schools staff and patrons are not permitted to share the same facilities in accordance with Clause F2.3(d) of the BCA;
3. At least one ambulant sanitary compartment must be provided within each the male and female facilities complying with Section 16 of AS1428.1 – 2009.
4. A WC is able to be used in place of a urinal.

Level	Use		
		Students / children	Staff
Level 00	OSHC	150	6
Level 1	Dance & Junior School	240	12
Level 2	ELC	90	15
Level 2	Junior School	96	4
Level 3	Junior School/Stem	288	17
Level 4	Wellness Centre	30	11

