



STEVE WATSON
& PARTNERS

**Budawang School - 17 Croobyar Road
Milton**

Preliminary BCA and Certification Assessment Report 2020/2844 R1.2

**Prepared for School Infrastructure NSW
April 2021**



Steve Watson and Partners Pty Ltd

SYDNEY	Level 17, 456 Kent Street, Sydney NSW 2000	Phone +61 2 9283 6555	Fax +61 2 9283 8500
MELBOURNE	Level 8, 350 Queen Street, Melbourne, VIC 3000	Phone: +61 3 9380 5552	Fax: +61 3 9380 5558
BRISBANE	Level 4, 276 Edward Street, Brisbane, QLD 4000	Phone: +61 7 3088 2333	Fax: +61 7 3088 2444
CANBERRA	Level 1, Unit 14, 27 Hopetoun, Circuit, Deakin ACT 2600	Phone: +61 2 6100 6606	Fax: +61 2 6100 6609

info@swpartners.com.au www.swpartners.com.au

ABN 33 600 478 402

Principal Certifying Authority - Steve Watson & Partners



Project Contacts

Client: School Infrastructure NSW
Architect: Group GSA

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Verifier: Anthony Ljubicic

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 design of the project at Budawang School - 17 Croobyar Road Milton 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:	Administration Office, School, Library, Multipurpose Hall, Hydrotherapy Pool
Class of Occupancy	Class 5, 9b & 10b
Type of Construction Required	Type C
Rise Storeys:	1
Number of Storeys:	1
Effective Height:	-

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

1. Each Homebase is provided with their own Accessible WC/Change/Shower facility. However, as the Accessible WC/Change/Shower facility is proposed to be a unisex facility (in lieu of separate male and female) a Performance Solution is required to address the non-compliance.

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 10.1 of this report and need to be clarified with SWP or the building certifier for the project prior to the issue of a construction certificate.



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1. Introduction

This report presents the findings of a preliminary assessment undertaken of the proposed design of the Budawang School at 17 Croobyar Road, Milton 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 School Infrastructure NSW

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, with the Development application to Council under Part 4 of the Environmental Planning and Assessment Act.

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 for submission with the Development Application to Council under Part 4 of the Environmental Planning and Assessment 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

3.3. Certification Works

This report is provided as part of SWP's contracted scope for this project, which is "Certification Work", as defined in the Building and Development Certifiers Regulation 2020. Due to the strict requirements and limits in terms of conflicts of interest imposed under that regulation, SWP cannot undertake any services other than Certification Work services on this project. Hence, the contents of this report, and any associated



correspondence, are provided in the context of a preliminary certification assessment of plans, and may not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification to ensure that the aspect will comply with legislative or code requirements, or to breach any other restriction or limitation imposed under the conflict of interest provisions of that or any other legislation.

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
Development by the Crown	Section 6.28 of the Act	Certification at the time of tender that the design complies with the State’s building laws.

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.

6.3. Development by the crown

Development by the Crown is regulated by Part 4 Division 4.6 and Part 6 Division 6.8 of the EP&A Act. Section 6.28 of the Act requires that any demolition or building work cannot be commenced unless the works are certified as complying with the State’s building laws at the date of calling for tenders. The above regulatory requirements generally still apply.

One means of ensuring compliance with the certification requirement is to obtain a construction certificate in relation to the works.

7. Methodology

7.1. Process adopted

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

- 1) Determine the basic assessment data for the building.
- 2) Assess the design of the building against the current Deemed-to-Satisfy requirements of Sections B, C, D, E, F, G, H and J of the BCA. Establish the status of each clause into the following categories:
 1. Clause is administrative information only (**Noted**);
 2. Clause is or is not relevant to the proposed work (**Applicable or N/A**)
 3. The proposed work complies with the requirements of the clause (**Complies**);



4. Compliance with the requirements of the clause is unable to be determined from the documentation provided (**Compliance Readily Achievable**). A recommendation in the “Comments” column will indicate what is required to achieve compliance. The design and construction teams are responsible to ensure compliance is achieved;
 5. Compliance with the requirements of the clause is unable to be determined from the documentation provided. Additional details or relevant information required to verify compliance (**Additional Details Required**);
 6. Proposed work does not comply with the requirements of the clause (**Does Not Comply**). An indication will be given in the Comments field as to the nature of the issue and whether an alternative solution has been proposed to address the issue;
 7. Proposed work is to be addressed on a performance basis via an Alternative Solution satisfying the relevant Performance Requirements. (**Performance Solution**);
- 3) Nominate the status of the design against each BCA requirement;
 - 4) Provide comments against each BCA requirement as appropriate.

8. Description of Proposed Development

The proposed development involves the construction of a new education facility known as Budawang School at 17 Croobyar Road, Milton.

9. Assessment Data Summary

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

9.1. Assumptions

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

1. The multipurpose hall is not intended to be used as an Entertainment Venue.
2. The multipurpose hall is not proposed to have a stage.
3. The proposed population students at the school is 80 occupants.
4. The proposed population of staff at the school is 34 occupants.
5. The proposed population of the multi-purpose hall when used by the community is 120 occupants.

9.2. Interpretations

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

1. Each Block is considered a separate building. Block A1 and A2 are considered a single building.
2. At no time will the multipurpose hall be at max capacity (120 occupants) concurrently with the 80 staff and 34 students being within the school. i.e there will either be roughly 114 persons using the school or 120 persons using the multipurpose hall – not a combination of these occupancies. (Refer to email from Ben Marshall dated 24.02.21)

10. Issues Requiring Resolution

10.1. Items requiring additional details or documentation

The following items have been identified which require further details or documentation to be provided to ensure compliance is achieved before issuing the Construction Certificate.



Item	DTS Clause	Description	Requirement to Satisfy BCA
1.	F2.4	Accessible WC and Ambulant sanitary facilities to be provided	Details of the accessible sanitary facilities strategy to be submitted to SWP for review

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 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.	Compliance Readily Achievable																		
Part A6	Classification and usage Usage on each level of the building is as follows: <table><tr><th>Building (Block)</th><th>USE</th><th>CLASS</th></tr><tr><td>Block A1</td><td>Library, Staff + Admin</td><td>9b & 5</td></tr><tr><td>Block A2</td><td>Multi Purpose Hall + Life Skills Learning Space</td><td>9b</td></tr><tr><td>Block B</td><td>Homebases</td><td>9b</td></tr><tr><td>Block C</td><td>Homebases</td><td>9b</td></tr><tr><td>Block D</td><td>Hydrotherapy Pool</td><td>9b</td></tr></table>	Building (Block)	USE	CLASS	Block A1	Library, Staff + Admin	9b & 5	Block A2	Multi Purpose Hall + Life Skills Learning Space	9b	Block B	Homebases	9b	Block C	Homebases	9b	Block D	Hydrotherapy Pool	9b	Block A1 and A2 are considered a single building.	Noted
Building (Block)	USE	CLASS																			
Block A1	Library, Staff + Admin	9b & 5																			
Block A2	Multi Purpose Hall + Life Skills Learning Space	9b																			
Block B	Homebases	9b																			
Block C	Homebases	9b																			
Block D	Hydrotherapy Pool	9b																			
Part A7	United buildings Buildings are deemed united when two or more buildings adjoining each other are connected and used as one building.	The buildings (A1+A2, B, C & D) are considered separate buildings. The buildings are located more than 3m apart.	N/A																		



Clause	Description	Comment	Status
Section B: Structure			
B1.1	Resistance to actions The resistance of the building must be greater than the most critical action effect resulting from different combinations of actions	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.2	Determination of individual actions The magnitude of individual actions must be determined in accordance with Clause B1.2 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.3	-	No provisions	-
B1.4	Determination of structural resistance of materials and forms of construction The structural resistance of materials and forms of construction must be determined in accordance with the relevant Australian Standards in accordance with Clause B1.4 of the BCA.	Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
B1.5	Structural software Structural software used in computer aided design of a building or structure that uses design criteria based on DTS provisions of the BCA must comply with the ABCB Protocol for Structural Software.	-	Noted
B1.6	Construction of buildings in flood hazard areas The building if contained in a flood hazard area must comply with the ABCB Standard for Construction of Buildings in Flood Hazard Areas.	Applies to Class 2, 4, 9a and 9c buildings	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. Certification from a qualified structural engineer will need to be provided at Construction Certificate stage	Compliance Readily Achievable
Section C: Fire Resistance			
Part C1 – Fire Resistance and Stability			
C1.1	Type of construction required BCA Type C fire resisting construction is required.		Compliance Readily Achievable
C1.2	Calculation of rise in storeys Effective Height / Calculation of rise in storeys. Rise in storeys is a defined BCA term addressing the number of main building levels excluding basements. Effective height is defined under the BCA as vertical distance between the floor of the lowest	The following parameters apply: Rise in storeys: 1 storey Effective Height: -	Noted



Clause	Description	Comment	Status
	storey included in the calculation of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units). These parameters influence the BCA provisions applicable to the building.		
C1.3	Buildings of multiple classification		N/A
C1.4	Mixed types of construction		N/A
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	Not applicable to Type C construction buildings.	N/A
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 Concrete external walls that could collapse as complete panels are to be designed in accordance with Specification C1.11 to minimise the likelihood of external walls collapsing outwards in the event of a fire and separating from supporting members.		N/A
C1.12		This Clause has deliberately been left blank	Noted
C1.13	Fire-protected timber: Concession <i>Fire-protected timber</i> in a Class 2, 3 or 5 building may be used wherever an element is <i>required</i> to be <i>non-combustible</i> ,		N/A
C1.14	Ancillary elements		N/A



Clause	Description	Comment	Status
Part C2 – Compartmentation and Separation			
C2.1	Application of Part	Clauses C2.2, C2.3 and C2.4 do not apply to a sprinkler protected carpark, open deck carpark or open spectator stand.	Noted
C2.2	General floor area and volume limitations (Type C construction) The floor area and volume limitations are: Class 5, 9b or 9c: 3,000m ² and 18,000m ³	The floor area and volume of the Buildings/Blocks are within the maximum limitations outlined by Table C2.2.	Complies
C2.3	Large isolated buildings		N/A
C2.4	Requirements for open space and vehicular access		N/A
C2.5	Class 9a and 9c buildings		N/A
C2.6	Vertical separation of openings in external walls		N/A
C2.7	Separation by fire walls		N/A
C2.8	Separation of classifications in the same storey		N/A
C2.9	Separation of classifications in different storeys		N/A
C2.10	Separation of lift shafts		N/A
C2.11	Stairways and lifts in one shaft		N/A
C2.12	Separation of equipment Two-hour fire enclosure is required for: <ul style="list-style-type: none"> • emergency generators sustaining emergency equipment operating in emergency mode • 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. 	Architect and services consultant to make provisions for this requirement in the design.	Compliance Readily Achievable
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.	Architect and services consultant to make provisions for this requirement in the design.	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	Protection of openings in external walls		N/A
C3.3	Separation of external walls and associated openings in different fire compartments		N/A
C3.4	Acceptable method of protection		N/A
C3.5	Doorways in fire walls		N/A
C3.6	Sliding fire doors		N/A
C3.7	Protection of doorways in horizontal exits		N/A
C3.8	Openings in fire-isolated exits		N/A
C3.9	Service penetrations in fire-isolated exits		N/A
C3.10	Openings in fire-isolated lift shafts		N/A
C3.11	Bounding construction: Class 2, 3, 4 and 9 buildings		N/A
C3.12	Openings in floors and ceilings for services		N/A
C3.13	Openings in shafts		N/A
C3.14	-	This clause has deliberately been left blank	-
C3.15	Openings for service installations		N/A
C3.16	Construction Joints		N/A
C3.17	Columns protected with lightweight construction to achieve an FRL		N/A
Section D: Access and Egress			
Part D1 - Provision for Escape			
D1.1	Application of Part		Noted

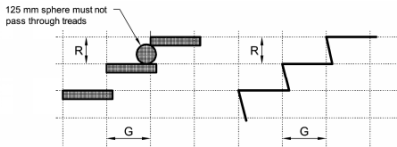


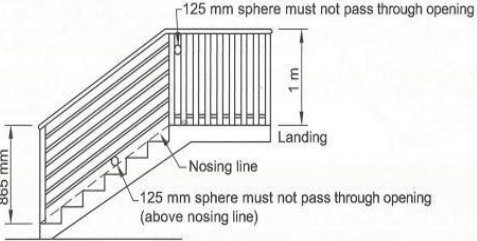
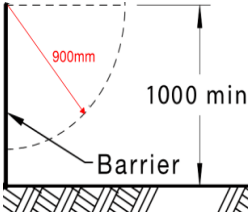
Clause	Description	Comment	Status
D1.2	Number of exits required (NSW variation for Entertainment Venues) At least two exits need to serve all areas of every storey as follows: <ul style="list-style-type: none">A storey of a Class 9 building accommodating more than 50 persons		Complies
D1.3	When fire-isolated stairways and ramps are required		N/A
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.		Complies
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.		Complies
D1.6	Dimensions of exits and paths of travel to exits (NSW variation for Entertainment Venues)		Complies
D1.7	Travel via fire-isolated exits		N/A
D1.8	External stairways or ramps in lieu of fire-isolated exits		N/A
D1.9	Travel by non-fire-isolated stairways or ramps		N/A
D1.10	Discharge from exits (NSW variation for Entertainment Venues) An exit must not be blocked nor be capable of being blocked at its point of discharge.	Details of the methods of protection of the doors are required to be provided on the plans to demonstrate compliance against the requirements of BCA Clause D1.10	Compliance Readily Achievable
D1.11	Horizontal exits		N/A
D1.12	Non-required stairways, ramps or escalators		N/A
D1.13	Number of persons accommodated	Refer to interpretation Section 9.1 of this report. The proposed population students at the school is 80 occupants. The proposed population of staff at the school is 30 occupants. The proposed population of the multi-purpose hall when used by the community is 120 occupants.	Noted
D1.14	Measurement of distances		Noted
D1.15	Method of measurement		Noted
D1.16	Plant rooms, lift machine rooms and electricity		N/A

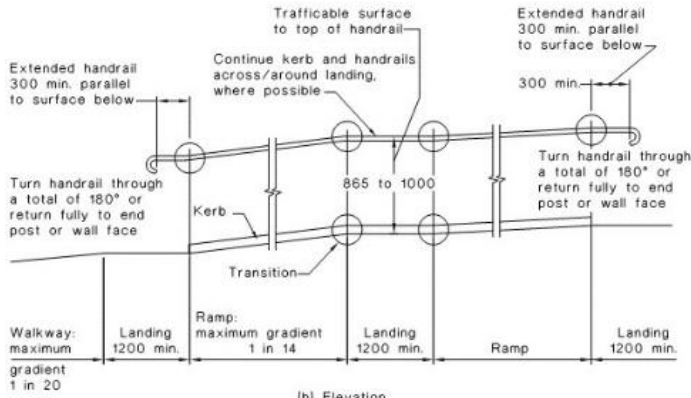
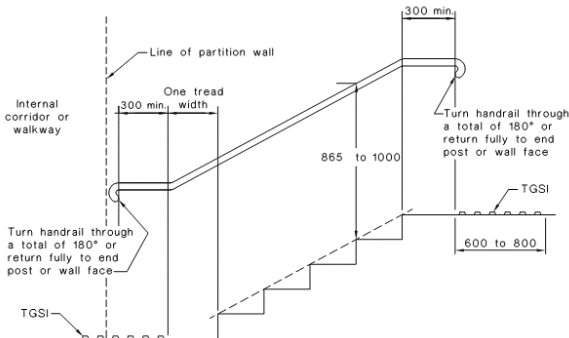
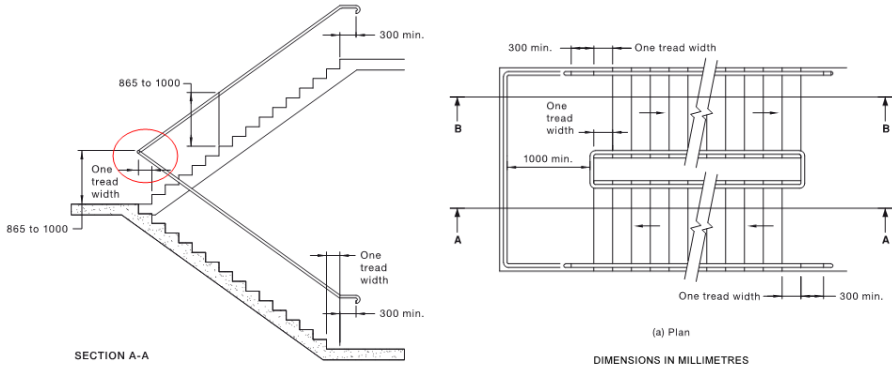


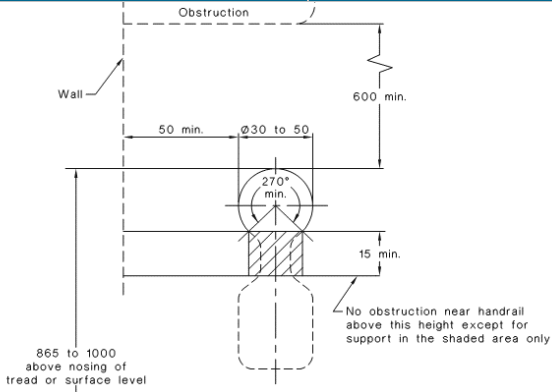
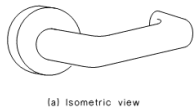
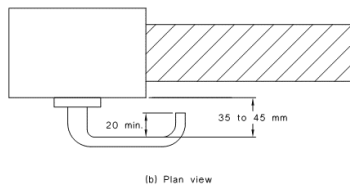
Clause	Description	Comment	Status
	network substations: Concession A ladder may be used in lieu of a stairway as an exit from: a) a plant room with a floor area not more than 100m ² , or b) all but one point of egress from a plant room with a floor area not more than 200m ² .		
D1.17	Access to lift pits Access requirements apply to lift pits over 3m in depth.		N/A
D1.18	Egress from early childhood centres		N/A
Part D2 – Construction of Exits			
D2.1	Application of Part <i>(NSW variation for Entertainment Venues)</i>		Noted
D2.2	Fire-isolated stairways and ramps		N/A
D2.3	Non-fire-isolated stairways and ramps		N/A
D2.4	Separation of rising and descending stair flights		N/A
D2.5	Open access ramps and balconies		N/A
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.	Install non-combustible linings to the internal walls, ceiling and doors of relevant cupboards and install smoke seals to the doors.	Compliance Readily Achievable
D2.8	Enclosure of space beneath stairs and ramps		N/A
D2.9	Width of required stairways and ramps		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.		Compliance Readily Achievable
D2.11	Fire-isolated passageways		N/A
D2.12	Roof as open space		N/A



Clause	Description	Comment	Status																												
D2.13	<p>Going and risers <i>(NSW variation for Entertainment Venues)</i></p> <p>To provide safe passage, stairways must comply with the following:</p> <ul style="list-style-type: none">• minimum 2 risers / maximum 18 in each flight• risers 115mm min 190 mm max - going 250mm min 355mm max - 2R+G 550mm min 700mm max.• Adjacent risers, or between adjacent goings a variation no greater than 5mm is permitted and the largest and smallest riser within the flight or the largest and smallest going within a flight is not to exceed a variation of 10mm.• Under the requirements of AS1428.1-2009 open riser are not permitted.• All treads to be fitted with non-slip finish or non-skid strips.• Treads are required to have a surface or nosing strip with a slip-resistance classification not less than listed in Table D2.14 when tested in accordance with AS 4586 <table><tr><td></td><td colspan="2">Riser (R)</td><td colspan="2">Going (G) ⁽²⁾</td><td colspan="2">Quantity (2R+G)</td></tr><tr><td></td><td>Max</td><td>Min</td><td>Max</td><td>Min</td><td>Max</td><td>Min</td></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> 		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	Further detail of the stairs will need to be provided to confirm compliance	Compliance Readily Achievable
	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><td><u>Application</u></td><td><u>Dry Surface Conditions</u></td><td><u>Wet Surface Condition</u></td></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 <i>(NSW variation for Entertainment Venues)</i></p> <p>Steps should not occur at doorways without a threshold landing except as follows:</p> <ul style="list-style-type: none">• Or in any other case a single 190mm step is permitted at doors leading to the exterior.	Note that where access for people with disabilities is required it is not permitted to have a step at the threshold of a doorway	Compliance Readily Achievable																												
D2.16	Barriers to prevent falls		Compliance																												

Clause	Description	Comment	Status
	<p><i>(NSW variation for Entertainment Venues)</i></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> 		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>Handrail details to be confirmed by the access consultant</p> <p>Handrails are to be provided in compliance with Clause D3.3 and include the following-</p> <p>Non-Fire Isolated Stairways and Ramps</p> <p>All stairs and ramps not used as an emergency exit are to have handrails installed on both sides that comply with Clause 10 & 11 of AS1428.1-2009</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>All stairs including fire stairs are required to be designed to comply with Clause 12 of AS1428.1 – 2009</p> <p>In a Class 9b building used as a primary school –</p> <ul style="list-style-type: none"> (A) Have one handrail fixed at not less than 865mm; and (B) Have a second handrail fixed at a 	Compliance Readily Achievable

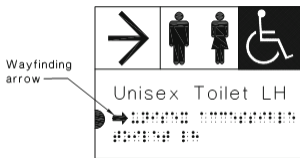


Clause	Description	Comment	Status
		height between 665mm and 750mm measured above the nosing of stair treads and the floor surface of the ramp, landing or the like.	
	<p style="text-align: center;">Ramps</p>  <p style="text-align: center;">(b) Elevation</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 14 RAMP HANDRAILS</p> <p style="text-align: center;">Stairways</p>  <p style="text-align: center;">SECTIONAL VIEW</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">FIGURE 26(B) STAIRWAY LOCATION AND HANDRAIL EXTENSIONS AT END OF STAIRWAY OTHER THAN AT LINE OF BOUNDARY</p>  <p style="text-align: center;">SECTION A-A</p> <p style="text-align: center;">(a) Plan</p> <p style="text-align: center;">DIMENSIONS IN MILLIMETRES</p> <p style="text-align: center;">Handrail Profile</p>		

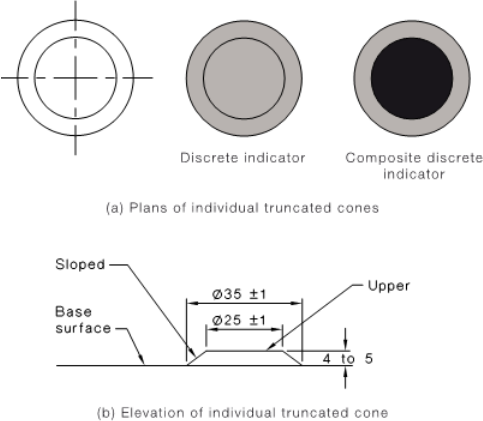
Clause	Description	Comment	Status
			
D2.18	Fixed platforms, walkways, stairways and ladders Platforms, walkways, stairs, ladders and the like that give access to and around plant and equipment, machine rooms, attic spaces and other low use areas of the building are permitted provided that construction details are to AS1657.	Certification to AS1657 is to be provided	Compliance Readily Achievable
D2.19	Doorways and doors <i>(NSW variation for Entertainment Venues)</i> Must not be revolving door, roller shutter or tilt door. Can be fitted with a sliding door if it leads directly to open space and can be opened manually under a force of not more than 110N and be fitted with a fail-safe device if the door is power operated.	Architect to make provisions for this requirement in the design.	Compliance Readily Achievable
D2.20	Swinging doors Defined exit doors that serve a part of a building with a floor area over 200m ² must swing outward in the direction of exit travel. Must not encroach more than 500mm into the required width of the stair or 100mm when fully open and swing in the direction of travel.		Complies
D2.21	Operation of latch <i>(NSW variation for Entertainment Venues)</i> 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.   Where the latch operation device is not located on the door leaf itself- <ul style="list-style-type: none"> manual controls to power-operated doors must be at least 25 mm wide, proud of the 	All exit doors and doors in the path of travel must comply. Doors serving the Multipurpose hall in a Class 9b building serving a storey or room accommodating more than 100 people must be provided with a panic bar. Architect to make provisions for this requirement in the design.	Compliance Readily Achievable



Clause	Description	Comment	Status
	<p>surrounding surface and located not less than 500 mm from an internal corner; and</p> <ul style="list-style-type: none"> • for a hinged door, between 1 m and 2 m from the door leaf in any position; • and for a sliding door, within 2 m of the doorway and clear of a surface mounted door in the open position. • braille and tactile signage complying with Clause 3 and 6 of Specification D3.6 must identify the latch operation device. 		
D2.22	Re-Entry from Fire-Isolated Exits		N/A
D2.23	Signs on doors		N/A
D2.24	Protection of openable windows		N/A
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>	Access is required throughout. Consultation with the access consultant is required	Compliance Readily Achievable
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. 	Refer to access consultant's report.	Compliance Readily Achievable
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>Access ways must have passing spaces and turning spaces complying with AS 1428.1.</p> <p>Pile height or pile thickness of carpets shall comply with the requirements of this Clause and AS 1428.1.</p>	Refer to access consultant's report.	Compliance Readily Achievable
D3.4	Exemptions		Noted



Clause	Description	Comment	Status
	<p>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> <ul style="list-style-type: none"> A) if the room or space accommodates up to 500 persons, 1 receiver for every 25 persons or part thereof, or 2 receivers, whichever is the greater; and B) if the room or space accommodates more than 500 persons but not more than 1000 persons, 20 receivers plus 1 receiver for every 33 persons or part thereof in excess of 500 persons; and C) if the room or space accommodates more than 1000 persons but not more than 2000 persons, 35 receivers plus 1 receiver for every 50 	Refer to access consultant's report.	Compliance Readily Achievable

Clause	Description	Comment	Status
	<p>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, 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>	Refer to access consultant's report.	Compliance Readily Achievable
D3.9	Wheelchair seating spaces in Class 9b assembly building		N/A
D3.10	<p>Swimming pools</p> <p>Not less than 1 means of accessible water entry/exit in accordance with Specification D3.10 must be provided.</p> <p>An accessible entry/exit must be by means of—</p> <ol style="list-style-type: none"> a fixed or movable ramp and an aquatic wheelchair; or a zero depth entry and an aquatic wheelchair; or a platform swimming pool lift and an aquatic wheelchair; or a sling-style swimming pool lift. <p>Latching devices on gates and doors forming part of a swimming pool safety barrier need not comply with AS 1428.1.</p>	Refer to access consultant's report.	Compliance Readily Achievable
D3.11	Ramps	Refer to access consultant's report.	Compliance Readily



Clause	Description	Comment	Status
	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.		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 shopfronts will need to have solid and non-transparent decals installed in accordance with AS 1428.1	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). Certification from a qualified fire services engineer will need to be provided at Construction Certificate stage. <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>	Compliance Readily Achievable
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: -	With the exception of offices and classrooms and their associated corridors, the remainder of the buildings will require fire hose reels complying with Clause E1.4 of the BCA and AS 2441 – 2005 Certification from a qualified fire services engineer will need to be provided at Construction Certificate stage.	Compliance Readily Achievable



Clause	Description	Comment	Status
	<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 		
E1.5	Sprinklers		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 Class 2, 3 or 4 residential areas are to be protected by 2.5kg ABE type fire extinguishers located in common areas on the storey served and located not more than 10m from each sole occupancy unit entry door. 	Where fire hose reels are not installed (eg. Classrooms and associated corridors), Portable Fire Extinguishers are required be installed to Table E1.6 and AS 2444 requirements. Certification from a qualified fire services engineer will need 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		N/A
E1.10	Provisions for special hazards		N/A
Part E2 – Smoke Hazard Management			
E2.1	Applicable of Part	Part is not applicable to <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 	Noted
E2.2	Smoke hazard management - General requirements		N/A
E2.3	Provisions of special hazards		N/A
Part E3 – Lift Installations			
Part E3	Lift installations.		N/A
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.	Certification from a qualified electrical consultant will need to be provided at Construction Certificate stage.	Compliance Readily Achievable



Clause	Description	Comment	Status
	<p>Emergency lighting is to be provided in:</p> <ul style="list-style-type: none">• every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway.• Every passageway, hallway, corridor or the like, and• 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 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 opening directly to the road or open space; or• if the egress involves a vertical rise within the building of more than 1.5m.		
E4.3	Measurement of distances		Noted
E4.4	Design and operation of emergency lighting Emergency lighting must comply with to AS2293.1	Certification from a qualified electrical consultant will need 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. Exit signs must be clearly visible to person approaching the exit and must be installed on, above or adjacent to; <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 door serving as or forming part of a required exit in a storey required to be provided with emergency lighting.	Certification from a qualified electrical consultant will need to be provided at Construction Certificate stage.	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	Certification from a qualified electrical consultant will need to be provided at Construction Certificate stage.	Compliance Readily Achievable
E4.7	Class 2 and 3 buildings and Class 4 parts: Exemptions		N/A

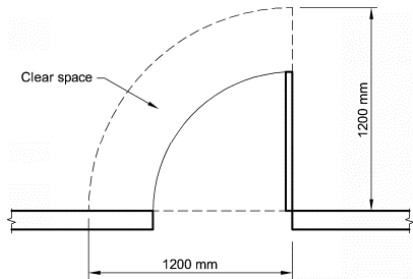


Clause	Description	Comment	Status
E4.8	Design and operation of exit signs 1. Exit signs are to operate in accordance with AS 2293.1. 2. Photo luminescent exit sign are to comply with Specification E4.8	Certification from a qualified electrical consultant will need to be provided at Construction Certificate stage.	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.		N/A
Section F: Health and Amenity			
Part F1 – Damp and Weatherproofing			
F1.0	Water proofing of external walls Weatherproofing of external wall systems must be in accordance with BCA Verification Method FV1.	A test report on the proposed wall system is to be provided. The test report must include the following information: (i) Name and address of the person supervising the test. (ii) Test report number. (iii) Date of the test. (iv) Cladding manufacturer's name and address. (v) Construction details of the test specimen, including a description, and drawings and details of the components, showing modifications, if any. (vi) Test sequence with the pressures used in all tests. (vii) For each of the static and cyclic pressure tests, full details of all leakages, including position, extent and timing.	Performance Solution
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.	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.	Compliance Readily Achievable
F1.5	Roof coverings Metal sheet roofing complying with AS 1562.1		Compliance Readily Achievable
F1.6	Sarking Sarking type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.		Compliance Readily Achievable
F1.7	Water proofing of wet areas in buildings Water proofing of wet areas within a building to		Compliance Readily



Clause	Description	Comment	Status
	comply with AS 3740.		Achievable
F1.8	-	This clause has deliberately been left blank	-
F1.9	Damp-proofing Moisture from the ground must be prevented from reaching the lowest floor timber and the walls above the lowest floor joists, the walls above the damp proof course and the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders. Damp proof course must consist of a material that complies with AS/NZS 2904 or an impervious termite shield in accordance with AS 3660.1.		Compliance Readily Achievable
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.		Compliance Readily Achievable
F1.11	Provision of floor wastes The floor of each bathroom and laundry in each sole occupancy of the Class 2 and 3 building portions must have a floor waste and the floor graded to the floor waste to permit drainage of water.		Compliance Readily Achievable
F1.12	Subfloor ventilation The lower ground sub floor space is to be cleared of all building debris and vegetation and be cross ventilated in accordance with Table F1.12 by evenly distributed openings provided in the external walls Additionally the sub floor space is to contain no dead air spaces and be graded to prevent water ponding under the building.		Compliance Readily Achievable
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.		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.	Refer to appendix F2.3 of this report. Refer to interpretation 9.2 of this report.	Complies
		Each Homebase is provided with their own Accessible WC/Change/Shower facility. Each homebase block is also provided with an accessible WC. As such the number of sanitary facilities is suitable for the proposed student numbers. However, as the Accessible WC/Change/Shower facility is proposed to be a unisex facility (in lieu of separate male and female) a Performance Solution is required to address the non-compliance.	Performance Solution



Clause	Description	Comment	Status
F2.4	Accessible sanitary facilities Accessible unisex toilets for people with a disability are required on each storey and at 50% of toilet banks on any storey. At each bank of toilets where there is one or more toilets in addition to an accessible unisex sanitary compartment at that bank of toilets, a sanitary compartment suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females. Facilities should be constructed to AS1428.1 – 2009 although an existing WC facility that fully complies with AS1428.1 – 2001 may substitute as a concession.	Refer to access consultant's report. Details of the accessible sanitary facilities strategy to be submitted to SWP for review.	Additional Details Required
F2.5	Construction of sanitary compartments Where clear space between closet pan and doorway is less than 1.2m, doors must open outwards, slide or be readily removable from outside.	All hinged doors that swing inward to sanitary facilities and do not comply with achieving a 1200mm clearance to pan are required to be installed with lift-off hinges 	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	(NSW variation – Deleted)		-
F2.8	Waste management		Compliance Readily Achievable
F2.9	Accessible adult change facilities Note: applies to- <ul style="list-style-type: none"> • Shopping centre >3,500 people • Sports venue >35,000 people • Swimming pool >70m perimeter • Museum, art gallery, theatre >1,500 patrons • Airport terminal 	Refer to access consultant's report	Compliance Readily Achievable
Part F3 – Room Heights			
F3.1	Height of rooms and other spaces Generally, a minimum ceiling height of 2.4m is required throughout. In a Class 9b building in a school classroom or other assembly building with more than 100 persons — 2.4 m; A theatre, public hall or other assembly building with more than 100 persons — 2.7 m In a corridor that serves an assembly building with not more than 100 persons — 2.4 m	Architect to make provisions for this requirement in the design.	Compliance Readily Achievable



Clause	Description	Comment	Status
	In a corridor that serves an assembly building with more than 100 persons — 2.7 m;		
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. 	Architect to make provisions for this requirement in the design.	Compliance Readily Achievable
F4.2	Methods and extent of natural lighting		Noted
F4.3	Natural light borrowed from adjoining room		Noted
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	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	Compliance Readily Achievable
F4.6	Natural ventilation	Design details and certification from an mechanical engineer is required	Compliance Readily Achievable
F4.7	Ventilation borrowed from adjoining room	Design details and certification from an mechanical engineer is required	Compliance Readily Achievable
F4.8	Restriction on location of sanitary compartments		Compliance Readily Achievable
F4.9	Airlocks		Compliance Readily Achievable
F4.10	-	This clause has intentionally been left blank	-
F4.11	Carparks		N/A
F4.12	Kitchen local exhaust ventilation		N/A
Part F5 – Sound Transmission and Insulation			
Part F5	Sound Transmission and Insulation		N/A
Part F6 – Condensation management			
Part F6	Condensation management		N/A
Section G: Ancillary Provisions			
Part G1- Minor Structures and components			
G1.1	Swimming pools <i>(NSW variation for swimming pools)</i>		N/A



Clause	Description	Comment	Status
G1.2	Refrigerated chambers, strong rooms and vaults		N/A
G1.3	Outdoor play spaces		N/A
NSW G1.101	Provision for cleaning windows		N/A
Part G2 - Boilers, pressure vessels, heating appliances, fire places, chimneys and flues			
Part G2	Boilers, pressure vessels, heating appliances, fire places, chimneys and flues		N/A
Part G3 - Atrium Construction			
Part G3	Atrium Construction		N/A
Part G4 - Construction in Alpine Areas			
G4.1	Application of Part		N/A
G4.2	-	This clause has deliberately been left blank.	-
G4.3	External doorways		N/A
G4.4	Emergency lighting		N/A
G4.5	External trafficable structures		N/A
G4.6	Clear space around buildings		N/A
G4.7		This clause has deliberately been left blank.	N/A
G4.8	Fire-fighting services and equipment		N/A
G4.9	Fire orders		N/A
Part G5 - Construction in Bushfire Prone Areas			
G5.1	Application of Part	Refer to Bushfire Consultants Report. Architect to make provisions for this requirement in the design.	Compliance Readily Achievable
G5.2	Protection (NSW variation for bushfire prone area)	Refer to Bushfire Consultants Report. Architect to make provisions for this requirement in the design.	Compliance Readily Achievable
Part G6 – Occupiable outdoor areas			
Part G6	Occupiable outdoor areas		N/A
Section H: Special Use Buildings – Auditoriums, Public Halls, Public Transport Buildings			
Part H1 - Class 9b Buildings			
Part H1	Application of Part – Class 9b Building (NSW variation for Entertainment Venues) For a Class 9b building that is an entertainment venue refer to NSW Part H101.	The multi-purpose space is not proposed to have a stage	N/A



Clause	Description	Comment	Status
NSW Part - H101 Entertainment Venues other than Temporary Structures and Drive-In Theatres			
NSW Part H101	H101 Entertainment Venues other than Temporary Structures and Drive-In Theatres	Entertainment Venue is defined as a building used as a cinema, theatre or concert hall or an indoor sports stadium.	N/A
NSW Part - H102 Temporary Structures			N/A
NSW Part - H103 Drive-In Theatres			N/A
Part H2 - Public Transport Buildings			N/A
Part H3 - Farm Building and Farm Sheds			N/A
NSW Section J: Energy Efficiency Energy Efficiency for buildings requires buildings to reduce greenhouse gas emissions by efficiently using energy. A building's services must have features that facilitate the efficient use of energy. The discipline of Energy Efficiency with the BCA has become a specialised field where compliance with BCA Section J is to be certified with the issue of a Certificate of Compliance – Design from the relevant Services Engineer/Consultant. The purpose of this section is to provide a brief explanation of which areas are to achieve compliance with BCA Section J – Energy Efficiency during design and construction. The BCA should be referenced for exact requirements, clarification and further explanation.			
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 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. The building is to be assessed by an Energy Efficiency Consultant and non-compliances addressed via a Verification Method from the Energy Efficiency Consultant.			Compliance Readily Achievable



15. Appendix A – Referenced Documentation

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

Drawing No.	Title	Issue	Date	Drawn By
SSDA-2000	Site Plan	D	08/04/2021	Group GSA
SSDA-2001	Block A Plan	E	08/04/2021	Group GSA
A2002	Block B Plan	O	16/03/2021	Group GSA
A2003	Block C Plan	M	16/03/2021	Group GSA
A2004	Hydrotherapy Plan	P	16/03/2021	Group GSA



16. Appendix B – Statutory Fire Safety Measures

Schedule of Statutory Fire Safety Measures

Measure	Standard of Performance
Emergency Lighting	BCA 2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Exit Signs	BCA 2019 Amendment 1 Clause E4.5, NSW E4.6, E4.7, E4.8 and AS/NZS 2293.1 – 2018
Fire Hydrants Systems	BCA 2019 Amendment 1 Clause E1.3 and AS 2419.1 – 2005
Hose Reel System	BCA 2019 Amendment 1 Clause E1.4 and AS 2441 – 2005
Portable Fire Extinguishers	BCA 2019 Amendment 1 Clause E1.6 and AS 2444 – 2001
Warning And Operational Signs	BCA 2019 Amendment 1 Clauses D3.6



17. Appendix C1.1 – Fire Rating Requirements

Type C 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 therein) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
less than 1.5m	90/90/90	90/90/90	90/90/90	90/90/90
1.5 to less than 3 m	-/-/-	60/60/60	60/60/60	60/60/60
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
EXTERNAL COLUMN not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is-				
less than 1.5 m	90/-/-	90/-/-	90/-/-	90/-/-
1.5 or less than 3 m	-/-/-	60/-/-	60/-/-	60/-/-
3 m or more	-/-/-	-/-/-	-/-/-	-/-/-
COMMON WALLS and FIRE WALLS				
	90/90/90	90/90/90	90/90/90	90/90/90
INTERNAL WALLS-				
Bounding public corridors, public lobbies and the like-				
	60/60/60	-/-/-	-/-/-	-/-/-
Between or bounding sole-occupancy units-				
	60/60/60	-/-/-	-/-/-	-/-/-
Bounding a stair if required to be rated-				
	60/60/60	-/-/-	-/-/-	-/-/-
ROOFS	-/-/-	-/-/-	-/-/-	-/-/-



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 C2.2 – Floor Areas and Volumes

Floor areas and volumes of each storey

Floor	Approx. Area (m ²)	Approx. Volume (m ³)	Comment
Block A1 – building 1	520m ²	2600m ³	
Block A1 – building 2	365m ²	1825m ³	
Block B	425m ²	1828m ³	
Block C	564m ²	2425m ³	
Block D	525m ²	2625m ³	

Nominated Fire Compartments

These are indicated in the table above.



20. 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

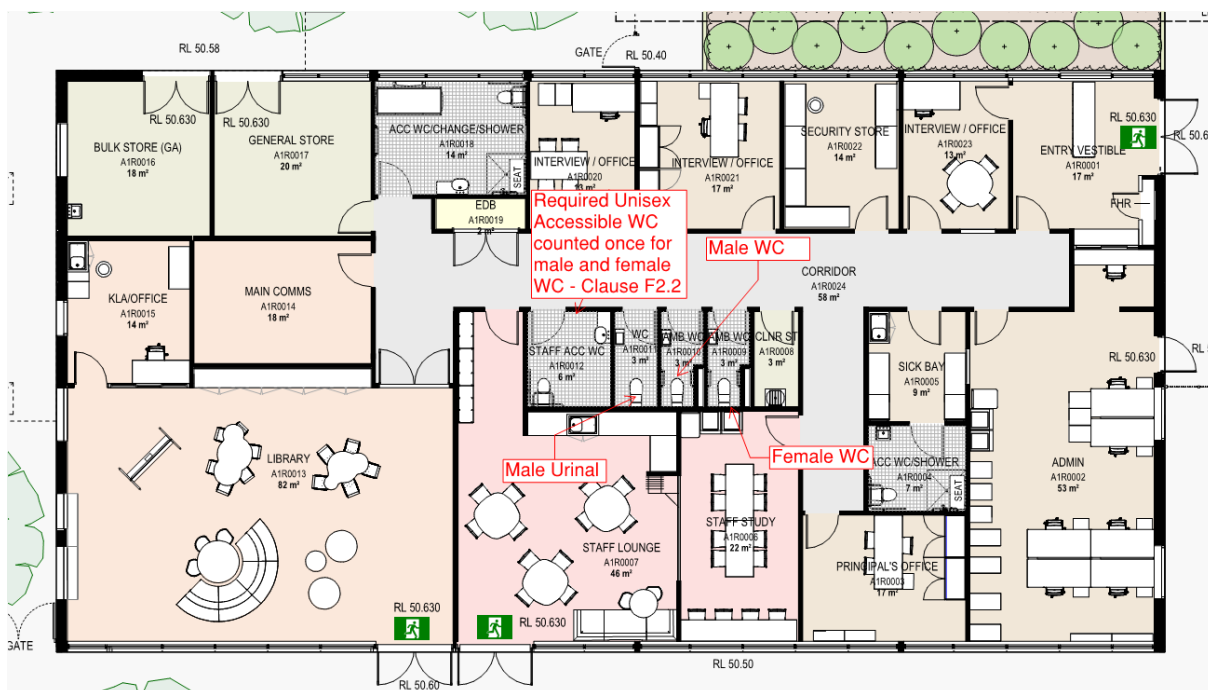
21. Appendix F2.3 – Requirements for Sanitary Facilities

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	Multipurpose Space (community use)	114	Male	57	1	1^	2	1*	2	2
			Female	57	3	2(3^)	N/A		2	2
			Unisex Disabled		1	1^	N/A		1	1

*As the multipurpose hall will never be at max capacity concurrently with the Library and Staff/Admin Block (Block A1), the shortfall in one urinal while the multipurpose space is being used is accounted for with the use of the adjoining toilet facilities within Block A.

Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
9b	Staff (teachers and admin office)	34	Male	17	1	1	1	1*	1	2
			Female	17	2	1 (2^)	N/A		1	2
			Unisex Disabled		1	1	N/A		1	1



Class	Use	Occupant Numbers			WC Required / Provided		Urinal Required / Provided		Basin Required / Provided	
		Total								
9b	Students	80	Male	40	2		1		2	
			Female	40	3		N/A		2	
			Unisex Disabled		1		N/A		1	

Each Homebase is provided with their own Accessible WC/Change/Shower facility. Each homebase block is also



provided with an accessible WC. As such the number of sanitary facilities is suitable for the proposed student numbers. However, as the Accessible WC/Change/Shower facility is proposed to be a unisex facility a Performance Solution is required to address the non-compliance.

Notes:

1. ^A **required** 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. At least one ambulant sanitary compartment must be provided within each the male and female facilities complying with Section 16 of AS1428.1 – 2009.
3. *A WC is able to be used in place of a urinal.

