Building Code of Australia

Assessment Report

Project Address: Gillieston Public School redevelopment and new public preschool

Client: Department of Education NSW

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1. EXECUTIVE SUMMARY

The activity, the subject of this report, is for a proposed new public primary school and early learning centre.

This report has been prepared, on behalf of Department of Education, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the REF documentation for the proposed activity. Unless specifically noted this assessment and report deals with the proposed building activity.

Table 1 below identifies proposed performance solutions to be justified against the performance requirements of the BCA in accordance with BCA **Clause A2G2**.

Table 1 Proposed performance solutions

Clause	Issue
Clause NSW D2D3 Number of exits required	Deemed-to-satisfy requirements require Class 9b school buildings of more than 2 storeys or where more than 50 persons occupy the space, and early childhood centres to have access to 2 exits. Building BC has rooms that have access to only one exit and do not meet the concessions within the clause to single exits. It is proposed to consider this under the Performance Provisions of the BCA.
Clause D2D13 External Stairs in lieu of Fire-isolated exits	Building BC egress stairs to the building have been provided as external stairs in lieu of a fire isolated stair. A number of the DTS provisions relating to protection of the external stair are intended to be considered under the Performance Provisions of the BCA.
Clause D3D20 Barrier climbability	There is conflict between DTS provisions for the position of secondary handrails for a primary school and the provision of non climable area in balustrades over 4m in height from the floor below. A performance solution is proposed to consider this.
Clause F3D5 Wall cladding	External wall cladding, other than those specified in this clause, will require performance justification.

2. ACTIVITY

The Gillieston Public School have been identified by the NSW Department of Education (DoE) as requiring redevelopment. The proposed Gillieston Public School redevelopment and new public preschool is driven by service need including increase in expected student enrolments and the and removing demountable structure and replacement with permanent teaching spaces.

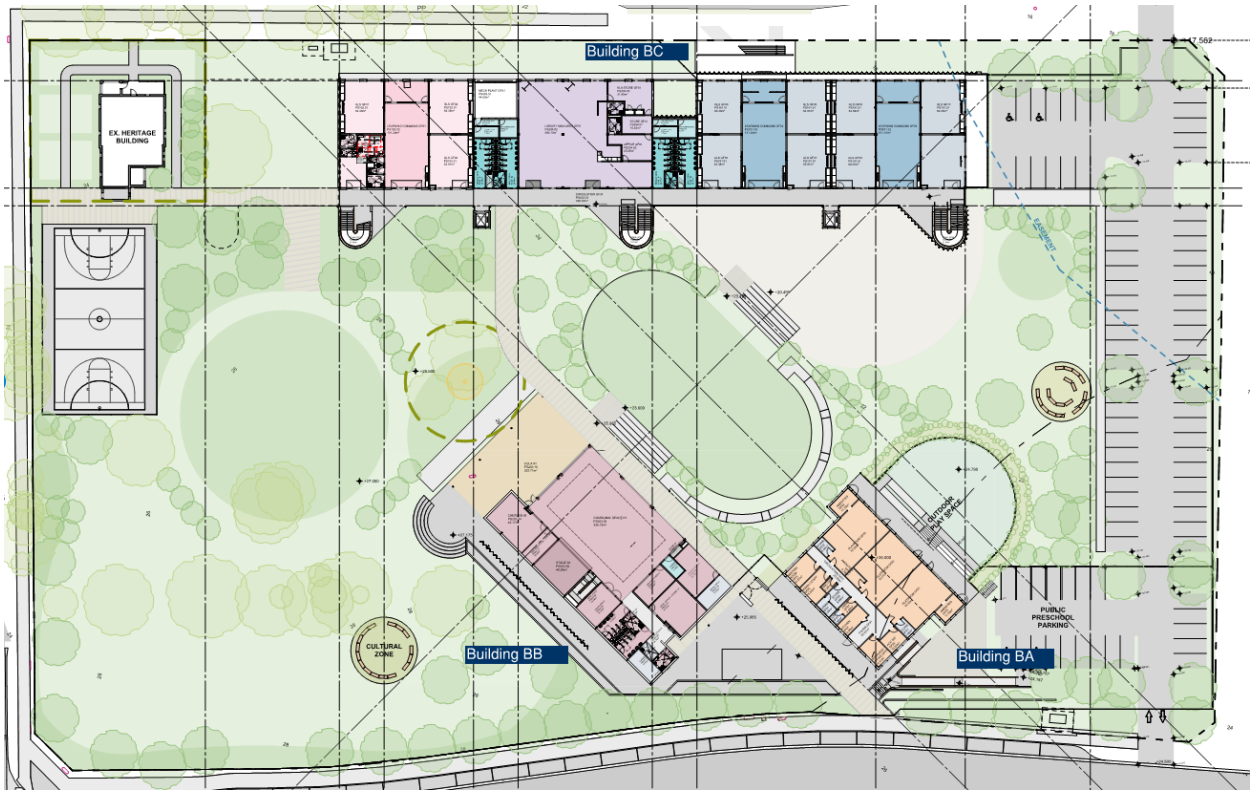
The Gillieston Public School redevelopment and new public preschool comprises the following activity:

- Demolition and removal of existing temporary structures.
- Site preparation activity, including demolition, earthworks, tree removal.
- Construction of new:
    - 32 permanent general learning spaces and 3 support teaching spaces
    - Administration and staff hubs
    - Hall, canteen and library
    - Out of school hours care
    - Public preschool (standalone building for 60 places)
    - Covered Outdoor Learning Areas (COLAs)
    - Outdoor play areas, including games courts and yarning circle
    - New at-grade car parking
    - Extension of the existing drop-off / pick-up area and new bus bay
    - Realignment of the existing fencing
    - Associated stormwater infrastructure upgrades
    - Associated landscaping
    - Associated pedestrian and road upgrade activity

3. INTRODUCTION

3.1. Introduction

This report serves as an assessment for compliance with the Building Code of Australia for the construction of new public primary school and early learning centre. The building is to be constructed of precast wall panels, masonry/steel/concrete construction generally, and CLT floor panels.



3.2. Significance of Environmental Impacts

Based on the identification of potential impacts and an assessment of the nature and extent of the impacts of the proposed activity, it is determined that all potential impacts can be appropriately mitigated to ensure that there is minimal impact on the locality, community and/or the environment

3.3. Purpose of Report

This report has been prepared, on behalf of Department of Education, to establish compliance to the Building Code of Australia and relevant Acts and Regulations of the REF for the proposed activity.

3.4. Site Description

The Site is identified as 100 Ryans Road and 19 Northview Street, Gillieston Heights, legally described as Lot 51 DP 1162489 and Lot 2 DP1308605.

The Site is located within the Maitland Local Government Area (LGA) and is zoned RU2 Rural Landscape and R1 General Residential zone under the provisions of the Maitland Local Environmental Plan 2011 (MLEP2011).

Existing attributes of the subject site are noted as follows:

- The subject site exhibits an area of approximately 23,385m² and is located in the suburb of Gillieston Heights;
- The subject site has a frontage to Ryans Road to the east, Gillieston Road to the north, and Northview Street to the south;
- In its existing state, the subject site comprises the existing Gillieston Public School. Existing school buildings are primarily located in the west portion of the subject site with a large area of open space situated in the eastern portion. There are limited permanent structures located on the subject site with thirteen (13) existing demountable classrooms currently occupying the subject site. Permanent

buildings consist of the Main Administration Building, Original Brick Cottage, Library and GLS building located in the centre of the subject site; and

- Carparking is provided from Gillieston Road for staff. Pedestrian access is available via this main entrance from Gillieston Road and via a separate pedestrian-only access gates on Northview Street and Ryans Road.

The existing site context is shown in Figure 1 and Figure 2 below.

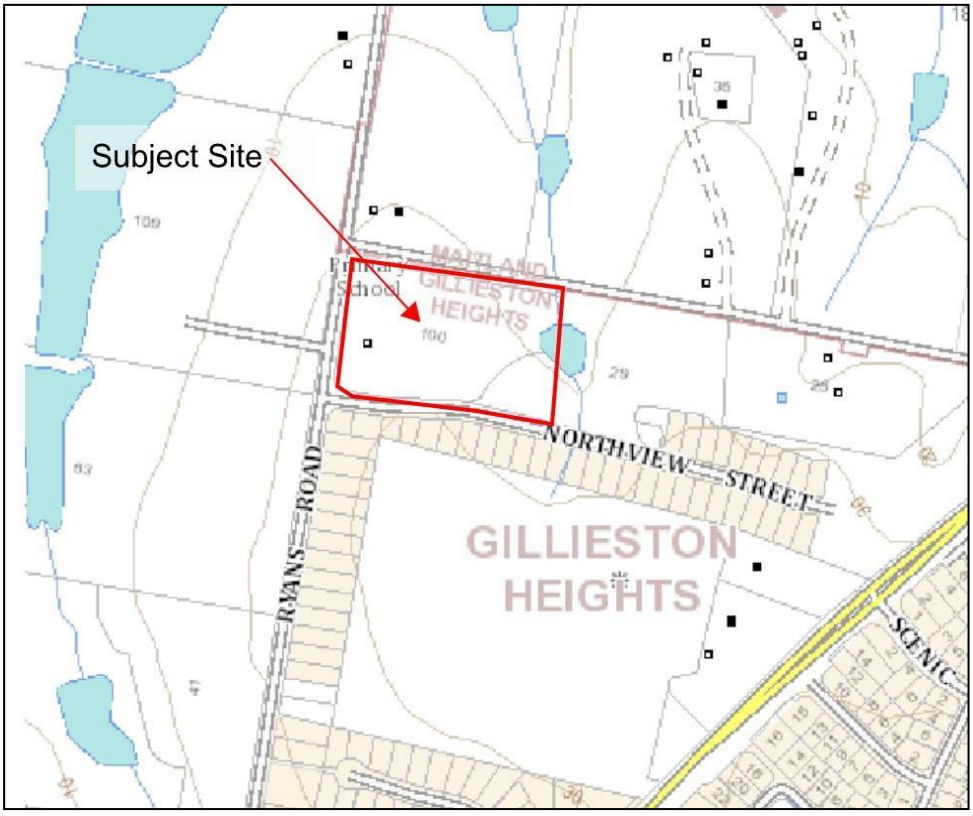


Figure 1 – Cadastral Map (Source: NSW Spatial Viewer, 2024)

Figure 2 – Site Aerial Map (Source: Near Map, 2024)

3.5. Report Basis

The following information has been directly referenced or relied upon in the preparation of this report:

- Architectural plans prepared by SHAC as identified in the attached Appendix 1.
- The Building Code of Australia 2022, inclusive of NSW variations
- Environmental Planning and Assessment Act 1979.
- Environmental Planning and Assessment (Development Certification & Fire Safety) Regulation 2021
- Environmental Planning and Assessment Regulation 2021.

3.6. Exclusions and Limitations

Refer to Attachment 2

4. BUILDING CODE OF AUSTRALIA DESCRIPTION

4.1. Classification (Part A6)

The proposed buildings consists of:

Building BA:

Ground	Class 9b Early childhood centre

Building BB:

Ground	Class 9b Communal Space & Class 7b Storage

Building BC:

Lower Ground	Class 5 Admin/Office & Class 9b Special Programs (School)
Ground	Class 9b Library and School Classrooms
First Floor	Class 9b School Classrooms
Second Floor	Class 9b School Classrooms

Covered Walkway :

The covered walkway between Building BC and Building BB is considered a Class 10a structure

4.2. Effective Height (Schedule 1)

The proposed buildings will have an effective height of under 12m for Building BA and Building BB. Building BC has an effective height of 12m.

4.3. Rise in Storeys (C2D3)

The proposed buildings will consist of the following rise in storeys:

Building BA

The proposed building will consist of a rise in storeys of one (1)

Building BB

The proposed building will consist of a rise in storeys of one (1)

Building BC

The proposed building will consist of a rise in storeys of four (4).

4.4. Type of Construction (C2D2)

The proposed buildings will consist of the following type of construction:

Building BA

The required type of construction under C2D2 of the BCA is Type C.

Building BB

The required type of construction under C2D2 of the BCA is Type C.

Building BC

The required type of construction under C2D2 of the BCA is Type A.

5. BUILDING CODE OF AUSTRALIA ASSESSMENT

5.1. Structure (BCA Section B)

BCA Clause	Assessment and Comment	Status
Part B1 Structural Provisions		
B1D2 Resistance to actions	The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	Capable of Complying
B1D3 Determination of individual actions	The structural design is to be completed by a Structural Engineer to meet the requirements of this provision. Non-structural components such as partitions, ceilings, services, etc, and their fastenings must be designed for earthquake forces to comply with AS 1170.4-2007$_{\text{Amdt 1 \& 2}}$, as relevant. Design certification should be provided by the relevant designers.	Capable of Complying
B1D4 Determination of structural resistance of materials & forms of construction	The structural resistance of the following materials and forms of construction for the following elements are to be in accordance with the standards nominated in this clause: ▪ Masonry ▪ Concrete ▪ Steel construction ▪ Composite steel and concrete ▪ Aluminium construction ▪ Timber construction ▪ Piling ▪ Glazing assemblies ▪ Termite risk management ▪ Roof construction ▪ Particleboard structural flooring ▪ Garage doors ▪ Lift shafts The plans and specifications are to identify compliance. The method of termite control shall be to use primary building elements (as defined by the BCA) that are of a material that is not subject to termite attack, i.e. primary building elements must not be timber unless the timber is naturally termite resistant, or preservative treated in accordance with AS 3660.1.	Capable of Complying

BCA Clause	Assessment and Comment	Status
	The structural design is to be completed by a Structural Engineer to meet the requirements of this provision.	
B1D5 Structural Software	Structural software used in computer aided design is to comply with the requirements of this provision.	Capable of Complying

5.2. Fire Resistance (BCA Section C)

BCA Clause	Assessment and Comment	Status
Part C2 Fire Resistance and Stability		
C2D2 Type of construction required	The type of fire resisting construction applicable for each of the buildings are as follows: Building BC Type A construction. Building BA & BB Type C construction.	Capable of Complying
	Specification 5 Fire-resisting construction	
	S5C3 Fire protection for support of another part When determining FRL's applicable to a particular building element, the requirements of this clause are required to be complied with.	Capable of Complying
	S5C4 Lintels Lintels are to be protected as required by the requirements of this clause	Capable of Complying
	S5C5 Method of attachment not to reduce the fire resistance of building elements The method of attaching or installing a finish, lining, ancillary element or service installation to the building element must not reduce the fire-resistance of that element to below that required.	Capable of Complying
	S5C6 General concessions Steel columns, other than one in a fire wall or common wall, need not have a FRL in a building that contains only 1 storey.	Capable of Complying
	S5C8 Enclosure of shafts Fire rated shafts are to be enclosed at the top and bottom in accordance with the requirements of this clause	Capable of Complying
	Type A Fire resisting construction	
	S5C11 Fire-resistance of building elements Each building element listed in Tables S5C11a, S5C11b, S5C11c, S5C11d, S5C11e, S5C11f and S5C11g and any beam or column incorporated in it, must have an FRL not less than that listed in those Tables for the particular Class of building concerned. A loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be constructed from concrete or masonry. The FRLs specified in Table S5C11c for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.	Capable of Complying
	S5C12 Concessions for floors A floor need not comply with Table S5C11g if:	Capable of Complying

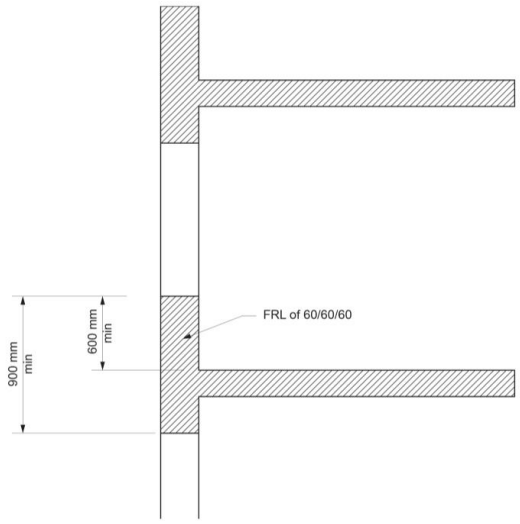
BCA Clause	Assessment and Comment	Status
	(a) it is laid directly on the ground; or in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or (b) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.	
	S5C13 Floor: Concession If a floor in a Class 5 of 9b building is designed for a live load not exceeding 3 kPa- (a) the floor next above (including floor beams) may have an FRL of 90/90/90; or (b) the roof, if that is next above (including roof beams), may have an FRL of 90/60/30	Note
	S5C15 Roof: Concession A roof need not comply with Table S5C11g if its covering is non-combustible and the building has a rise in storeys of 3 or less.	Capable of Complying
	S5C16 Roof lights There are no proposed roof lights to the building.	Note
	S5C17 Internal columns and walls: Concession Internal columns, internal walls (other than fire walls and shaft wall) immediately below the roof are permitted to achieve an FRL of 60/60/60. This concession does not apply to internal columns within 1.5m from the external windows	Capable of Complying
	S5C20 Class 2 and 3 buildings: Concession	N/A
	Buildings BA and BB are required to comply with Type C construction	
	Type C fire-resisting construction	
	S5C24 Type C fire-resisting construction — fire-resistance of building elements Both Buildings BA and BB are located more than 3m away from each other, Building BC and the boundary of the allotment i.e. fire source features. Therefore, FRLs are not required to Building BA and BC under this clause.	Capable of Complying
Vol 2 9.2.4	The covered walkway between Building BC and BB is considered a Class 10a non-habitable building/structure and as such falls under Volume 2 for consideration of fire safety. The requirement for the Class 10a structure under this part is that a Class 10a building must not significantly increase the risk of spread of fire between Class 2 to 9 buildings. The intention to prevent the spread of fire between buildings. In consideration of compliance with this clause, it would be expected that the walkway structure should be constructed of non-combustible construction, open on both sides.	Capable of Complying

BCA Clause	Assessment and Comment	Status
C2D9 Lightweight construction	Lightweight fire-resisting construction must comply with Specification 6 if it is used in a wall system.	Capable of Complying
C2D10 Non-combustible building elements	1. In Building BC, which is required to be of Type A, the following building elements and their components must be non-combustible: (a) External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. (b) The flooring and floor framing of lift pits. (c) Non-loadbearing internal walls where they are required to be fire-resisting. 2. A shaft, being a lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion, that is non-loadbearing, must be of non-combustible construction in a building required to be of Type A construction; and 3. A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shafts, must comply with Specification 5. 4. The requirements of (1) and (2) do not apply to the following: (a) Gaskets. (b) Caulking. (c) Sealants. (d) Termite management systems. (e) Glass, including laminated glass, and associated adhesives, including tapes. (f) Thermal breaks associated with: (i) glazing systems; or (ii) external wall systems, where the thermal breaks: (A) are no larger than necessary to achieve thermal objectives; and (B) do not extend beyond one storey; and (C) do not extend beyond one fire compartment. (g) Damp-proof courses. (h) Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm. (i) Isolated: (i) construction packers and shims; or (ii) blocking for fixing fixtures; or (iii) fixings, including fixing accessories; or (iv) acoustic mounts. (j) Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level. (k) Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm. (l) Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements. (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as appropriate, and associated with masonry wall construction.	Capable of Complying

BCA Clause	Assessment and Comment	Status
	(n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout. (o) A paint, lacquer or a similar finish or coating. Adhesives, including tapes, associated with stiffeners for cladding systems. (p) Fire-protective materials and components required for the protection of penetrations. 5. The following materials, when entirely composed of itself, are non-combustible and may be used wherever a non-combustible material is required: (a) Concrete. (b) Steel, including metallic coated steel. (c) Masonry, including mortar. (d) Aluminium, including aluminium alloy. (e) Autoclaved aerated concrete, including mortar. (f) Iron. (g) Terracotta. (h) Porcelain. (i) Ceramic. (j) Natural stone. (k) Copper. (l) Zinc. (m) Lead. (n) Bronze. (o) Brass. 6. The following materials may be used wherever a non-combustible material is required: (a) Plasterboard. (b) Perforated gypsum lath with a normal paper finish. (c) Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0. (f) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5. (g) Bonded laminated materials where: (i) each lamina, including any core, is non-combustible; and (ii) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and (iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively; and (iv) when located externally, are fixed in accordance with C2D15. Elevations have not been provided in the design package at present. Fire test reports for cladding, sarking, insulation would likely be needed at detailed design stage.	
NSW C2D11	Proposed internal linings, materials and assemblies are to be selected to comply with the required fire hazard properties of Specification 7.	Capable of Complying

BCA Clause	Assessment and Comment	Status
Fire hazard properties	Evidence of compliance (test certificates) shall be obtained from the supplier or manufacturer.	
C2D12 Performance of external wall in fire	Concrete external walls that could collapse as complete panels, in a building having a rise in storeys of not more than 2, must comply with Specification 8.	Capable of Complying
C2D14 Ancillary Elements	In Building BC, which is required to be of Type A construction, an ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following: (a) An ancillary element that is non-combustible. (b) A gutter, downpipe or other plumbing fixture or fitting. (c) A flashing. (d) A grate, grille or similar cover not more than 2 m² in area associated with a building service. (e) An electrical switch, socket-outlet, cover plate or the like. (f) A light fitting. (g) A required sign. (h) A sign other than one provided under (a) or (g) that: • achieves a group number of 1 or 2; and • does not extend beyond one storey; and does not extend beyond one fire compartment; and • is separated vertically from other signs permitted under (h) by at least 2 storeys. (i) An awning sunshade, canopy, blind or shading hood other than one provided under (a) that: • meets the relevant requirements of Table S7C7 as for an internal element; and • serves a storey: (A) at ground level; or (B) immediately above a storey at ground level; and • does not serve an exit, where it would render the exit unusable in a fire. (j) A part of a security, intercom or announcement system. (k) Wiring. (l) Waterproofing material installed in accordance with AS 4654.2 and applied to an adjacent floor surface, including vertical upturn, or a roof surface. (m) Collars, sleeves and insulation associated with service installations. (n) Screens applied to vents, weepholes and gaps complying with AS 3959. (o) Wiper and brush seals associated with doors, windows or other openings. (p) A gasket, caulking, sealant or adhesive directly associated with (a) to (o). ***Limitations:*** *C2D14 does not apply to ancillary elements fixed, installed or attached to the internal face or lining of an external wall.*	Capable of Complying

BCA Clause	Assessment and Comment	Status
	Notes: *C2D14 does not prevent the mounting of domestic air-conditioning condenser units on external walls.* ***Explanatory information:*** *Ancillary elements fixed, installed or attached to the internal face or lining of an external wall may be subject to other provisions such as C2D11.* Special attention should be paid to ancillary elements such as soffit/balconies, plant screens, privacy screens and signage to the building.	
C2D15 Fixing of bonded laminated cladding panels	1. In a building required to be of Type A construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame. 2. An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following: (a) A laminated glass system. (b) Layered plasterboard product. (c) Perforated gypsum lath with a normal paper finish. Fibrous-plaster sheet. (d) Fibre-reinforced cement sheeting. (e) A component of a garage door.	Capable of Complying
Part C3 Compartmentation and Separation		
C3D3 General floor area and volume limitations	The following maximum fire compartmentation floor area and volume limitations apply to the Class 5/9b fire compartments: Building BA & BB: Type C construction Floor area – 3,000 m^2 Volume – 18,000 m^3 Building BC: Type A construction Floor area – 8000 m^2 Volume – 48,000 m^3 The buildings comply with the general floor area and volume limitations identified by this clause.	Complies
NSW C3D6 Class 9 buildings	In a building containing a Class 9b early childhood centre there are requirements relating to the fire separation of the early childhood centre and required fire compartmentation. As Building BA only contains an early childhood centre these requirements for fire separation do not apply.	Note
C3D7 Vertical separation of openings in external walls	Building BC is of Type A construction. Vertical separation of openings in external walls is required to be provided by way of fire rated spandrels or horizontal slab projections in accordance with this clause. For DTS compliance this is achieved by: (a) a spandrel which- (i) is not less than 900mm in height; and (ii) extends not less than 600mm above the upper surface of the intervening floor; and	Capable of Complying

BCA Clause	Assessment and Comment	Status
	(iii) is of non-combustible material having an FRL of not less than 60/60/60 See guide diagram below for pictorial representation. (b) part of a curtain wall or panel wall that complies with (a); or (c) construction that complies with (a) behind a curtain wall or panel wall and has any gaps packed with a non-combustible material that will withstand thermal expansion and structural movement of the walling without the loss of the seal against fire and smoke; or (d) a slab or other horizontal construction that- (i) projects outwards from the external face of the wall not less than 1100mm; and (ii) extends along the wall not less than 450mm beyond the openings concerned; and (iii) is non-combustible and has an FRL of not less than 60/60/60 Spandrel representation as provided for in the Guide to NCC 2022:  Section It is also important to note for the purposes of this clause a reference to "a window or other opening" includes that part of the external wall of a building that does not have an FRL of 60/60/60. Preliminary Elevations indicate that the majority of separation of vertical openings will be achieved in Building BC by slab separation, as discussed in (d) above. However, the following areas have been identified as requiring clarification as to the proposed protection being provided: 1) North Elevation The North elevation will provide protection between opening by construction complying with (a) or (c) as discussed above.	

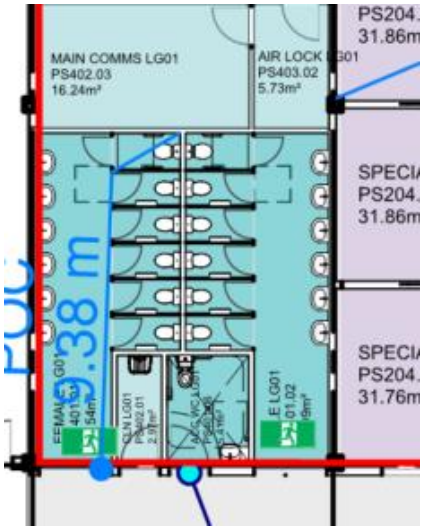
BCA Clause	Assessment and Comment	Status
	DTS compliance in design is proposed and this will be further developed in design in the next stage of design documentation. It is further noted that the proposed North elevation has an external screen that runs over the building and that is attached by a slab extension. This slab extension has been extended slightly from the 1m indicated below to 1100mm wide to provide DTS compliance for the separation of openings This 1100m design detail will be further developed in detailed design.  2) West Elevation On the West Elevation the 900mm spandrel fire rating construction will detail DTS compliance in detailed design documentation.	
C3D8 Separation by fire walls	Fire walls are not required.	Note
C3D9 Separation of classifications in the same storey	If a building has parts of different classifications located alongside one another in the same storey: • each building element in that storey must have the higher FRL prescribed in Specification 5 for that element for the classifications concerned; or • the parts must be separated in that storey by a fire wall. Building BB building has store component that is more than 10% of the storey and therefore not ancillary. However, as the building is only required to be of Type C construction the FRL of any components need only be 90 minutes regardless of classification. Therefore, the building will be need not be separated or higher FRL components needed. Building BC has different classifications in the same storey at Lower Ground – Special program rooms (Class 9b) and Admin (Class 5). However, these have the same FRL requirements and therefore will be able to comply without further separation.	Capable of Complying
C3D10 Separation of classifications	Building BC has different classifications between Lower Ground (Class 5 and 9b) and Ground (Class 9b). However, these attract the same FRL requirements and therefore will be able to comply with this clause without further separation.	Capable of Complying

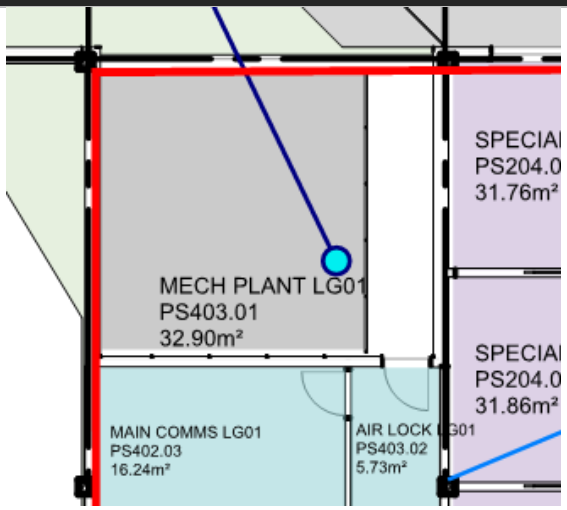
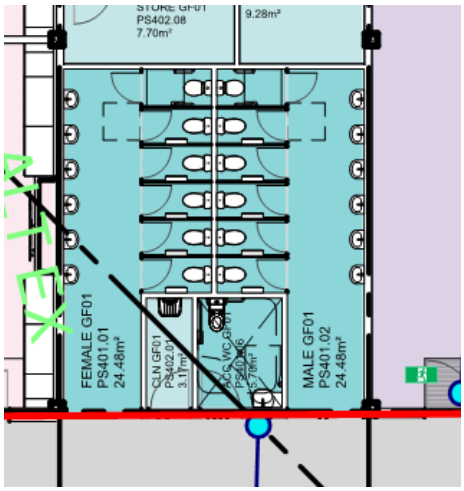
BCA Clause	Assessment and Comment	Status
in different storeys		
C3D11 Separation of lift shafts	1. Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which in a building required to be of Type A construction - the walls have the relevant FRL prescribed by Specification 5; and 2. Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C4. This would apply to Building BC.	Capable of Complying
C3D12 Stairways and lifts in one shaft	A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.	Complies
C3D13 Separation of equipment	The following equipment is required to be fire separated from the remainder of the building by 120/120/120 FRL construction: ▪ Lift motor rooms and lift control panels. ▪ Emergency Generators. ▪ Central smoke control plant. ▪ Boilers. ▪ Battery systems 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 must comply with the requirements of AS 2419.1. That is, where the building is not sprinkler throughout according to AS 2118.1, internal pump rooms should have an FRL not less that required for a firewall, with fire resistant doorways with a FRL of the fire wall except the insulation level should not be less than 30 min. Construction joints, service penetrations and other openings should be protected. (para 6.11.2, AS2419.1-2021) Details to be provided for compliance in detailed design documentation.	Capable of Complying
C3D14 Electricity supply system	Any main switchboard located in the building which sustains emergency equipment operating in emergency mode, is required to be fire separated from the remainder of the building by 2 hr fire resisting construction. Electrical conductors and switchboards are required to comply with this clause. All switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear.	Capable of Complying
Part C4 Protection of Openings		
C4D3 Protection of openings in external walls	Openings in an external wall that is required to have an FRL must be protected in accordance with C4D5 and if wall wetting sprinklers are used, they must be located externally. Building BA and Building BB are located within 6 metres of each other however do not have external walls that are required to have an FRL (External walls are located more than 3 metres of each other).	N/A

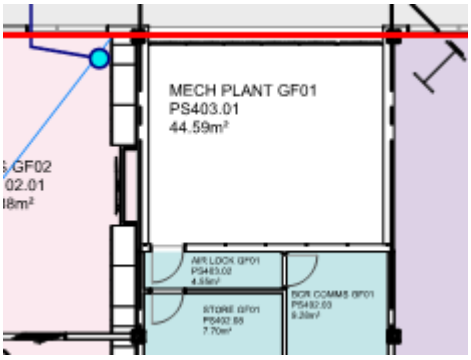
BCA Clause	Assessment and Comment	Status
C4D4 Separation of external walls and associated openings in different fire compartments	Each storey is a separate fire compartment to Building BC and therefore there are no external walls and associated openings in different fire compartments affected (generally applicable where fire walls are used to provide separate compartment on same storey).	N/A
C4D9 Openings in fire isolated exits	The proposed stairs to Building BC have been considered as external stairs in lieu of fire-isolated stairs (under D2D13) therefore this clause is N/A. Further clarification has been provided on the surround to the stairs, being of perforated metal screen, with perforation openings of at least 50% of the screen. The stairs would therefore be considered as external stairs and designed under the provisions of clause D2D13 below.	Note
C4D11 Openings in fire isolated lift shafts	The lift doors are required to be -/60/- fire doors and comply with this provision. A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than -/60/60 if it exceeds 35,000 mm^2 in area.	Capable of Complying
C4D13 Openings in floors and ceilings for services.	Fire separation between floors is required to be maintained where services penetrate though floors in accordance with this clause.	Capable of Complying
C4D14 Openings in shafts	Opening in shafts to Building BC, which is of Type A construction, are required to be protected in accordance with this clause.	Capable of Complying
C4D15 Openings for service installations	Services that penetrate a building element that is required to have an FRL must be protected utilising one of the options listed under this clause. Test certificates describing each individual service penetration and configuration will be required at the construction certificate stage.	Capable of Complying
C4D16 Construction joints	Construction joints in building elements required to be fire resistant are required to be protected in accordance with this clause.	Capable of Complying
C4D17 Columns protected with lightweight construction to achieve an FRL	Any columns protected with fire resisting lightweight construction to achieve an FRL must be installed in a manner that's identical to the tested prototype.	Capable of Complying

5.3. Access and Egress (BCA Section D)

BCA Clause	Assessment and Comment	Status
Part D1 Access and Egress		
NSW D2D3 Number of exits required	Not less than 2 exits are required to any storey in a Class 9b early childhood centre and to each storey in a primary school with a rise in storeys of 2 or more. Otherwise in a Class 9b building any storey that accommodates more than 50 persons is required to have two exits.	Performance Solution

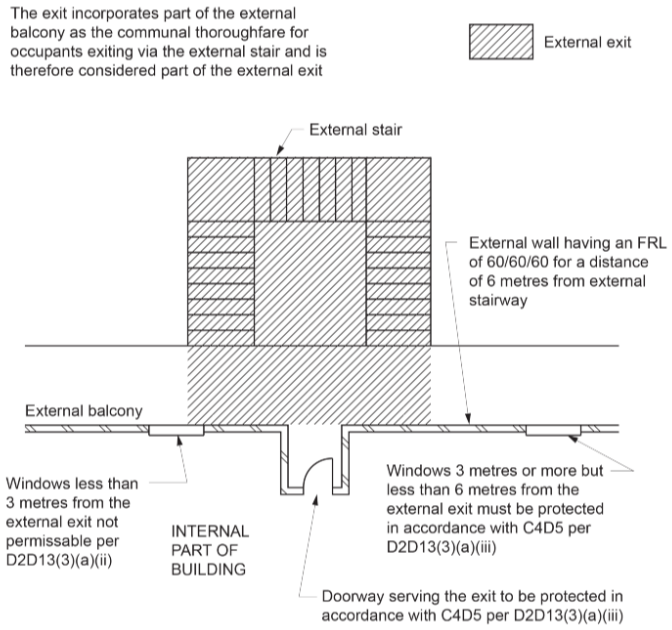
BCA Clause	Assessment and Comment	Status
	The above requirements do not apply to a part of a storey that- (i) is a plant room, machinery room, storeroom, lift-machine room or the like; (ii) is provided with direct egress to a road, open space or a fire-isolated exit complying with D2D12(2); and (iii) satisfies D2D5 by the provision of 1 exit. Therefore, all buildings are required to be provided with a minimum of two exit(s). Building BC has four levels that are at no part more than 3 storeys above each other and egress is staggered over the levels to part. The following areas do not comply with DTS provisions are concessions within this clause: <u>Lower Ground</u> Building BC: Sanitary provisions only have one exit  Building BC: The mech plant room LG.01 is able to comply with DTS exemption for access to 2 exits however the Main Comm LG01 PS402.03 and air lock PS403.02 do not have access to 2 exits	

BCA Clause	Assessment and Comment	Status
	 <u>Ground Level</u> Building BC: Sanitary provisions only have one exit  Building BC: SLSO office 01 PS 102.06 & staff WC do not have access to 2 exits 	

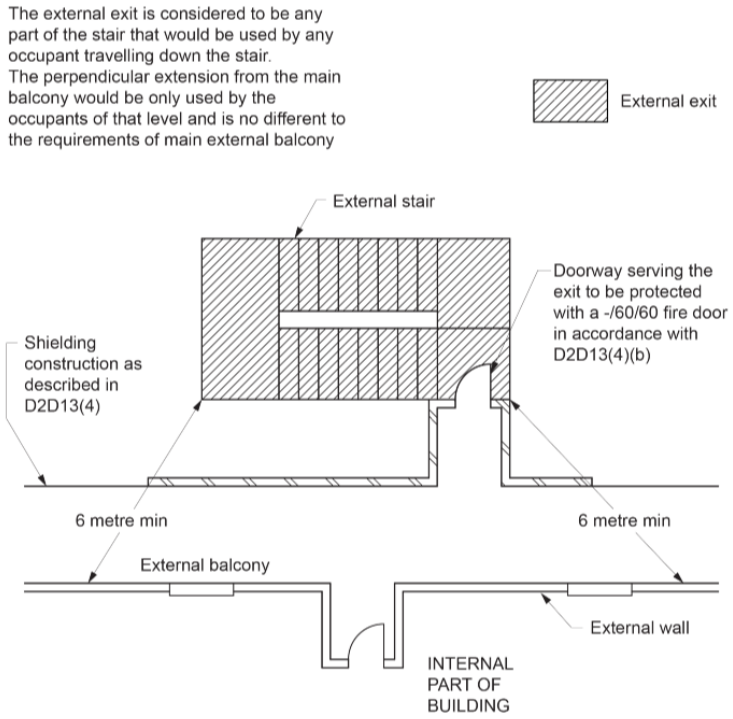
BCA Clause	Assessment and Comment	Status
	Building BC: Mech plant GF 01 is able to comply with the concession of only one exit however Store GF 01 and Comms GF do not have access to two exits. 	
D2D4 When fire isolated exits are required	All stairs serving Building BC directly are required to be fire isolated stairs as they connect or pass through more than 2 storeys of Class 9b use and are not sprinklered to AS 2118.1 throughout (to allow an additional storey over 2): The stairs are configured as external stairs and therefore have been considered under the provisions of D2D13 below as external stairs in lieu of fire-isolated stairs. Further clarification has been provided on the surround to the stairs, being of perforated metal screen, with perforation openings of at least 50% of the screen. The stairs would therefore be considered as external stairs and designed under the provisions of clause D2D13 below.	Note
D2D5 Exit travel distances	**Class 5, and 9b parts** - No point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40m. The buildings are able to comply with the distances to exits.	Complies
D2D6 Distance between alternative exits	Exits that are required to serve as alternative means of egress must not be than 60m. The distance between alternative exits comply. Exits required as alternative means of egress must be located not less than 9m apart and located so that the alternative paths of travel do not converge such that they become less than 6m apart. The exits comply with the requirements above.	Complies
D2D7 Height of exits, paths of travel to exits and doorways	In a required exit or path of travel to an exit the unobstructed height throughout must be not less than 2m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm.	Capable of Complying
NSW D2D8 Width of exits and paths of travel to exits	The unobstructed width of each required exit or path of travel to an exit, except for ladders provided in accordance with D2D21 or D3D23 and doorways, must be not less than 1 m. D2D8 further requires:	Capable of Complying

BCA Clause	Assessment and Comment	Status
	(1) Where a storey accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width of required exits or paths of travel to an exit, except for doorways, must be not less than 1m plus 250mm for each 25 persons (or part) in excess of 100. (2) Where the storey accommodates more than 200 persons, the aggregate unobstructed width of required exits or paths of travel to an exit, except for doorways, must be not less than- (i) 2m plus 500mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or (ii) in any other case, 2m plus 500mm for every 75 persons (or part) in excess of 200. The figures given by the design team (See NSW D2D18) allow for a number of students across the whole site of 1012 and staff of 69, without specific breakdown per school building (asides from early childhood numbers which are not part of these numbers). Therefore, in the first instance the occupancy numbers using factors given in NSW D2D18 have been determined. <u>Building BB:</u> Aggregate exit width required is 2 metres (200 persons) and this is easily provided for in the building with egress points out of the COLA and Circulation 02. <u>Building BA (early childhood centre):</u> The early childhood centre with under 70 persons including staff has sufficient egress width. <u>Building BC:</u> To establish a worst-case scenario the occupancy factors in NSW D2D18 state the following aggregate width is required: The aggregate exit width required is as follows: Lower Ground: 1m width needed (76 persons occupancy number) Ground: 5m width needed (513 persons occupancy number) First Floor: 5m aggregate width is needed (517 persons) Second Floor: 2.5m aggregate width is needed (260 persons) All levels comply with these required egress widths.	
NSW D2D9 Width of doorways in exits or paths of travel to exits	In a required exit or path of travel to an exit, the unobstructed width of a doorway must be not less than the unobstructed width of each exit provided to comply with D2D8(1), (2), (3) or (4), minus 250 mm.	Capable of Complying

BCA Clause	Assessment and Comment	Status
D2D10 Exit width not to diminish in direction of travel	The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with D2D8 (1)(b) or D2D9(a)(i).	Capable of Complying
D2D11 Determination and measurement of exits and paths of travel to exits	The required width of stairs and ramps is to be measured in accordance with this clause.	Capable of Complying
D2D12 Travel via fire isolated exits	The stairs to Building BC are required to be fire-isolated however as they are external stairs they have been assessed as external stairs or ramps in lieu of fire-isolated exits.	Note
D2D13 External Stairs or ramps in lieu of Fire-isolated exits	Building BC has external stairs provided in lieu of fire isolated exits. The design of external stairs in lieu of fire-isolated stairs still intended to provide an equivalence of fire isolation. For prescriptive compliance the following design principles are to be followed: (1) Stair to be non-combustible throughout and protection within 6m of the external wall of the building it serves. (2) Protection to be provided as follows: (a) the part of the external wall of the building to which the wall is exposed must have- (i) external wall of the building should have an FRL not less than 60/60/60 (ii) no openings less than 3m from the exit (except a -/60/30 fire door serving the exit in accordance with C4D19(1)) (iii) Openings 3m or more but less than 6m should be protected in accordance with C4D5) and if wall wetting sprinklers are used they should be located internally NCC 2022 guide indicates this protection described in (2)(a) as below:	Performance Solution

BCA Clause	Assessment and Comment	Status
	 OR (b) the exit must be protected by construction of a wall, roof, floor or other shielding element from any part of the external wall of the building having an FRL of less than 60/60/60 and any openings in the external wall. The wall, roof, floor or other shielding element must - (i) have an FRL of not less than 60/60/60; and (ii) have no openings less than 3m from the external wall of the building ((except a -/60/30 fire door serving the exit in accordance with C4D19(1); and (iii) have any opening 3 or more but less than 6m from any part of the external wall of the building in accordance with C4D5 and wall wetting sprinklers should be located on the side exposed to the external wall NCC 2022 guide indicates this shielding protection described in (2)(b) as below:	

BCA Clause	Assessment and Comment	Status



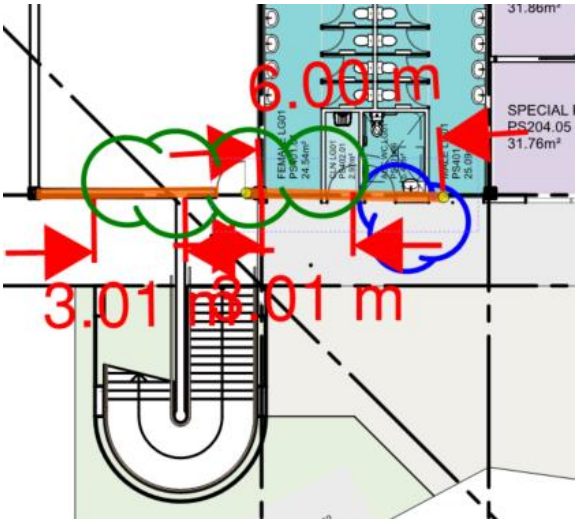
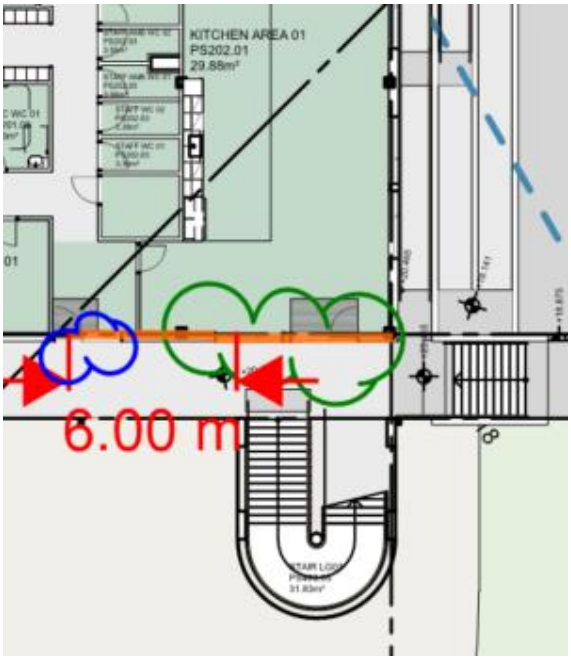
The following areas in particular should be clarified for DTS compliance or a performance solution provided by a suitably qualified fire engineer as appropriate. Please note the comments below have considered protection as in (2)(a) above:

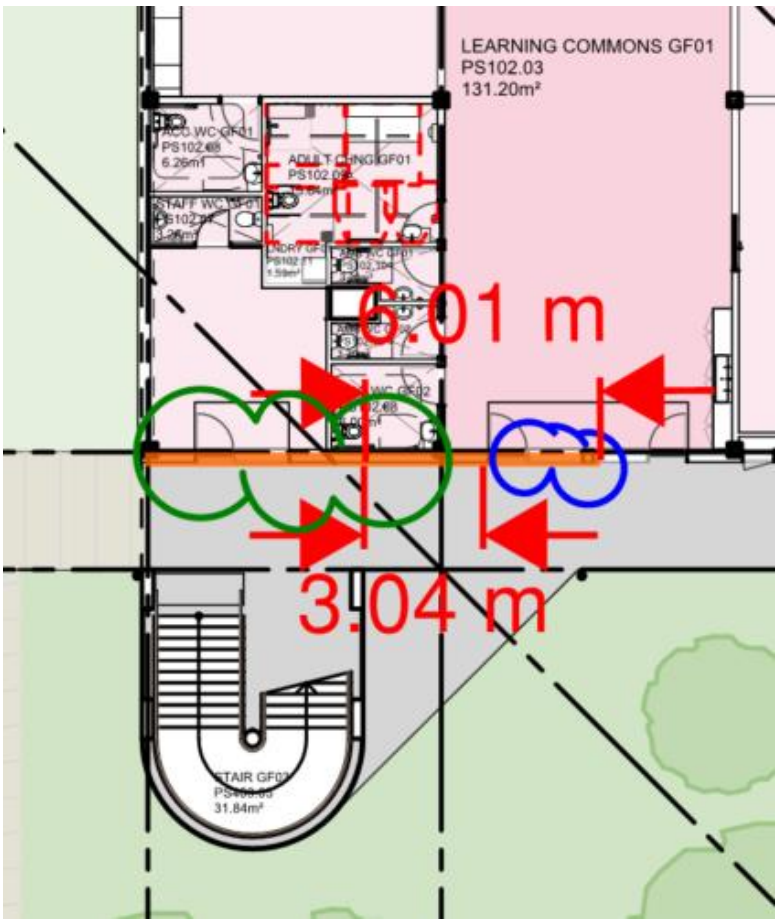
a) All external walls to the within 6m of the exit (external stairs – nearest part of landing) are required to achieve an FRL of 60/60/60. Where this can not be achieved a Performance Solution may be appropriate. See snips provided below for areas that are required to be 60/60/60 highlighted in **orange line**.

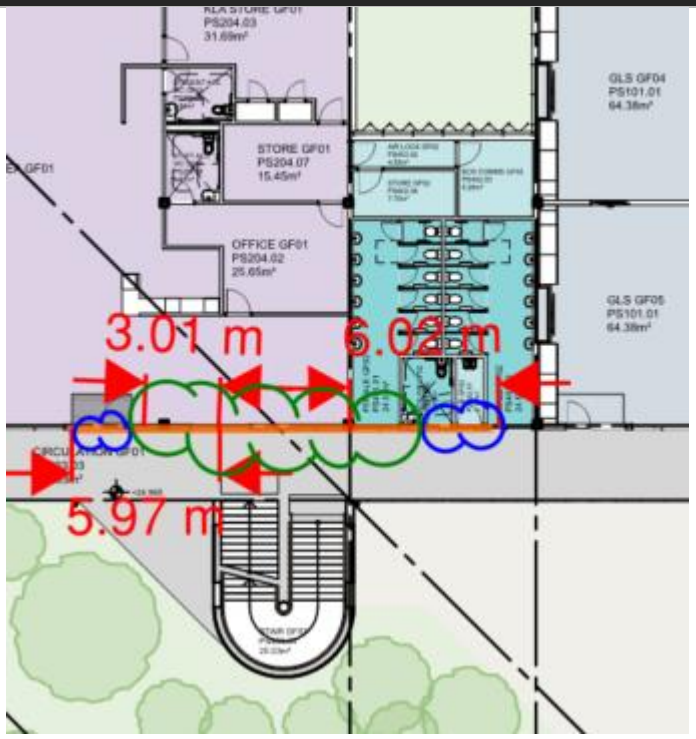
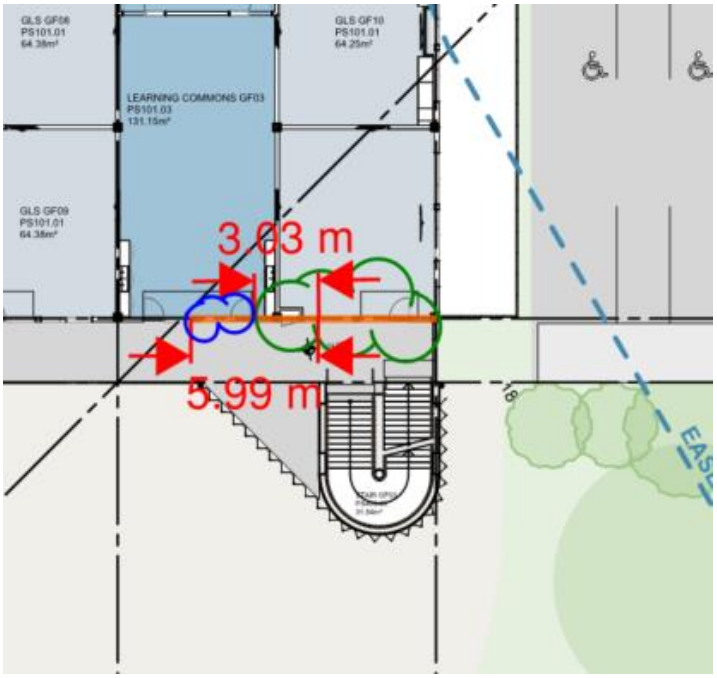
b) Openings located within 3m of the exit (external stairs – nearest part of landing) are not permitted. These are indicated in **green cloud** in snips below. A performance solution would be needed.

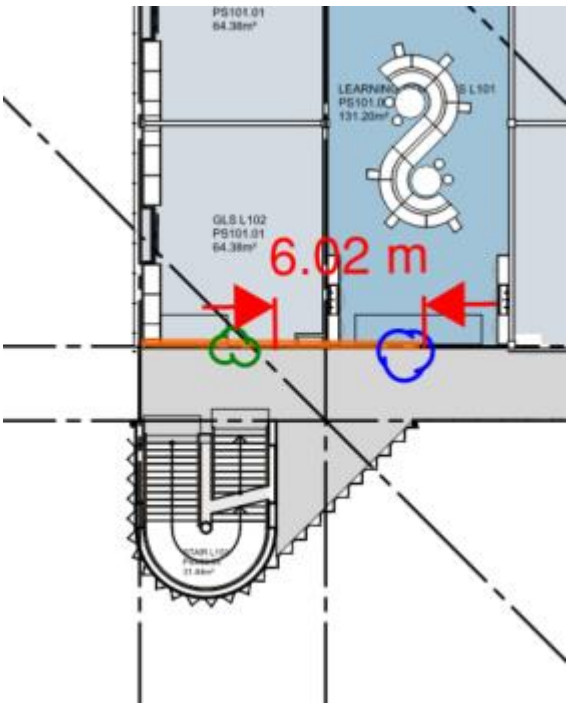
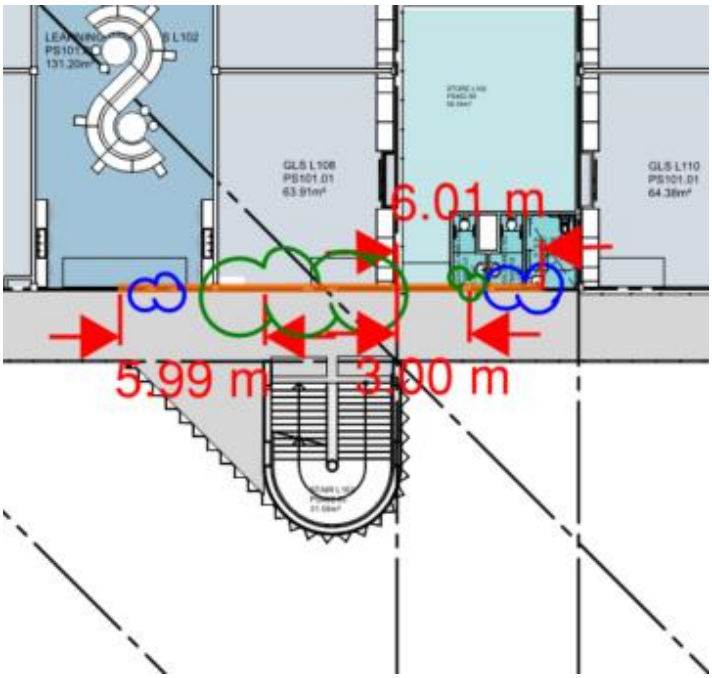
c) Openings located more than 3m but within 6m of the exit (external stairs nearest part of landing) can be protected in accordance with C4D5. Alternatively, a performance solution may be achievable. The openings affected are indicated in **blue cloud** in snips below.

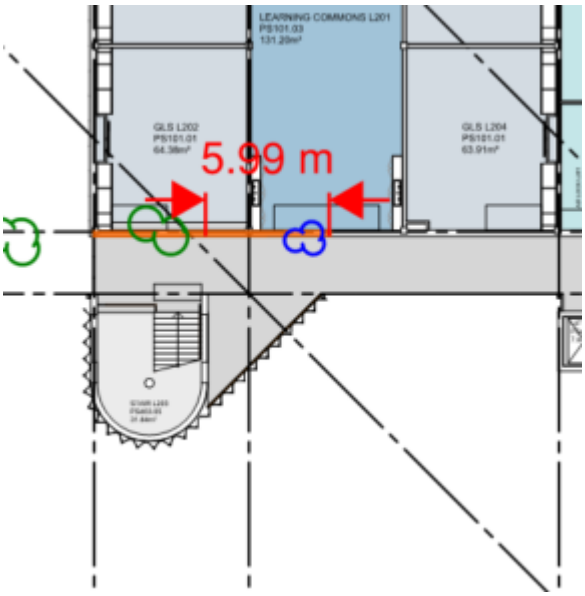
Where protection is provided in accordance in (2)(b) above, further advice can be provided after the shielding device is shown as proposed.

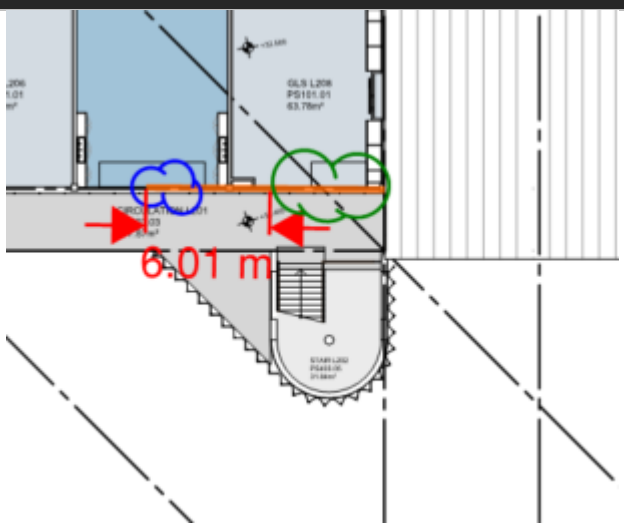
BCA Clause	Assessment and Comment	Status
	<u>Building BC</u> Lower Ground:  	

BCA Clause	Assessment and Comment	Status
	Ground:  	

BCA Clause	Assessment and Comment	Status
	 	

BCA Clause	Assessment and Comment	Status
	Level One:   	

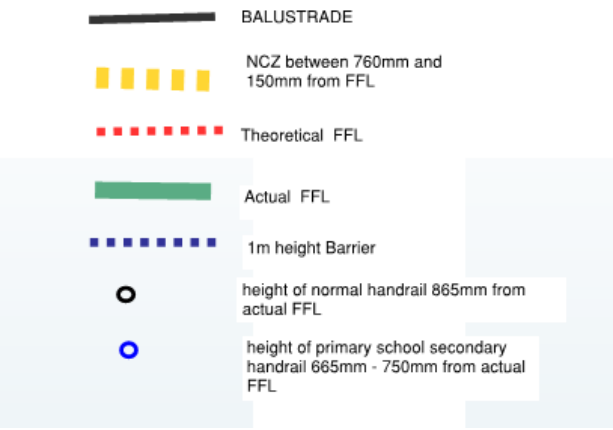
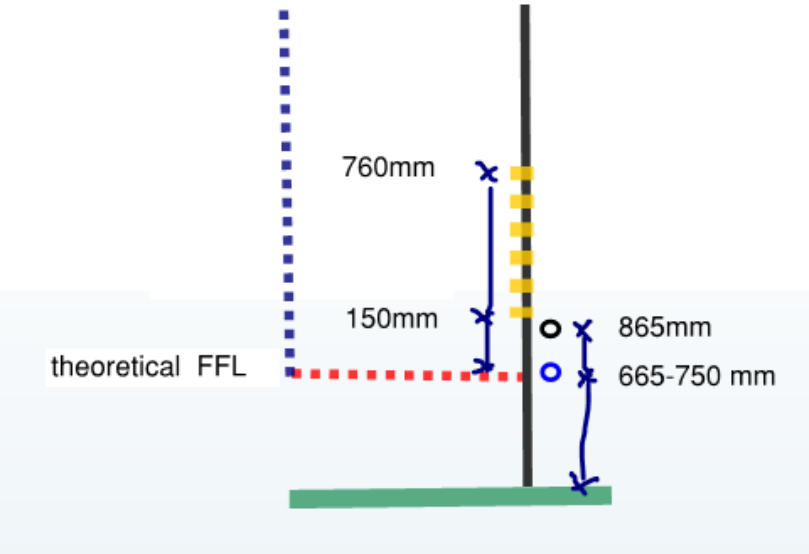
BCA Clause	Assessment and Comment	Status
	 Level Two: 	

BCA Clause	Assessment and Comment	Status
		
D2D14 Travel via non-fire-isolated stairways or ramps	There are no non-fire isolated stairs that are provided.	N/A
NSW D2D15 Discharge from exits	Principles applicable under this clause for discharge of exits that affect this site are as follows:- • Where a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than the minimum width of the required exit; or 1 m, whichever is the greater. • Where there is a change of level, the path must contain a complying stair or ramp. • The discharge point of alternative exits must be located as far apart as practical. Egress out of the site is provided to streets to the North and South of the site. The design of the path and stairs will be detailed further to comply with this clause through detailed design development stage.	Capable of Complying
D2D16 Horizontal exits	Horizontal exits are not proposed.	N/A
D2D17 Non-required stairways, ramps or escalators	Non-required stairways, ramps or travellators are not proposed.	Note
NSW D2D18 Number of persons accommodated	Populations have been assessed in accordance with Table D2D18, as follows: Communal Space @2m^2/person Stores @30m^2/person Office/Admin/Staff@10m^2/person Canteen/Kitchen@10m^2/person	Note

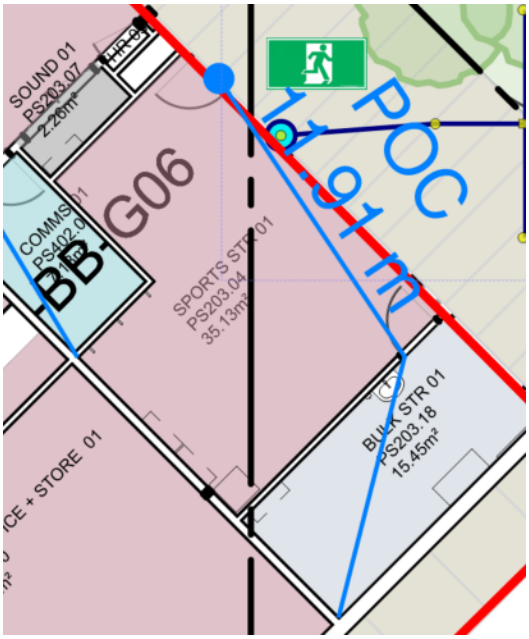
BCA Clause	Assessment and Comment	Status
	Comms/plant@30m^2/person Laundry@10m^2/person Early childhood centre GLS/playroom@2m^2/person Meeting room @2m^2/person Library @2m^2/person Classrooms @2m^2/person* *Learning Commons excluded as part of common learning space between GLS The following population numbers have been derived from these figures (unless provided by the design team as indicated below) 1. Building BC The aggregate exit width required is as follows: Lower Ground: 1m width needed (76 persons occupancy number) Ground: 5m width needed (513 persons occupancy number) First Floor: 5m aggregate width is needed (517 persons) Second Floor: 2.5m aggregate width is needed (260 persons) Lower Ground: 76 persons Ground: 513 persons First Floor: 517 persons Second Floor: 260 persons 2.Building BB: 200 persons 3.Building BA (early childhood centre) has been advised by the design team has having placement for 60 children and under 10 staff. Please note the following figures have been provided by the design team as detailed in Draft Design Management Report provided in email 22.07.24 from SHAC: Part Building BC: Students x 736 Staff x 50 Preschool Children x 60 Preschool Staff x <10	
D2D21 Plant rooms, lift machine rooms and electricity network substations: Concession	Currently there are no ladder access proposed to any plant or associated services rooms.	N/A

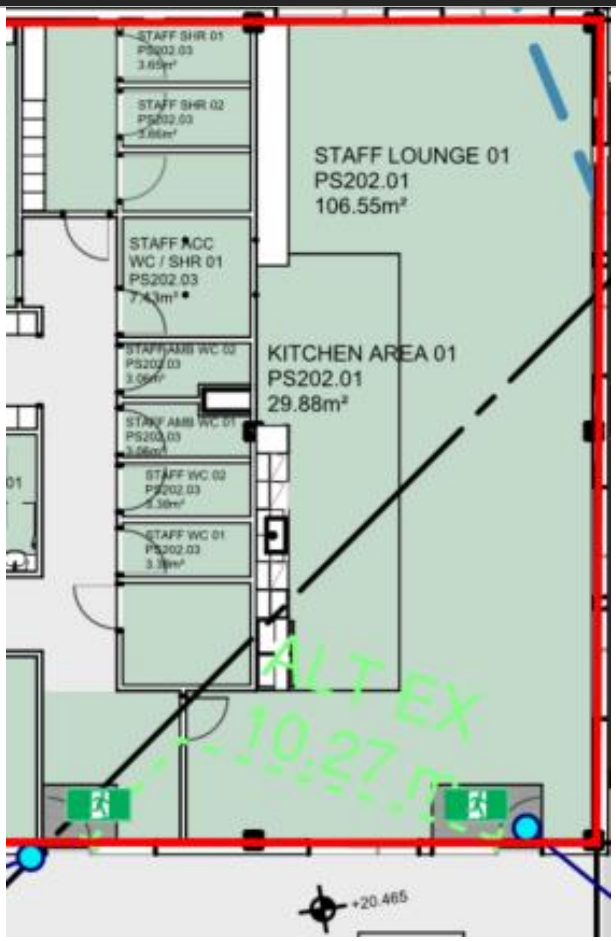
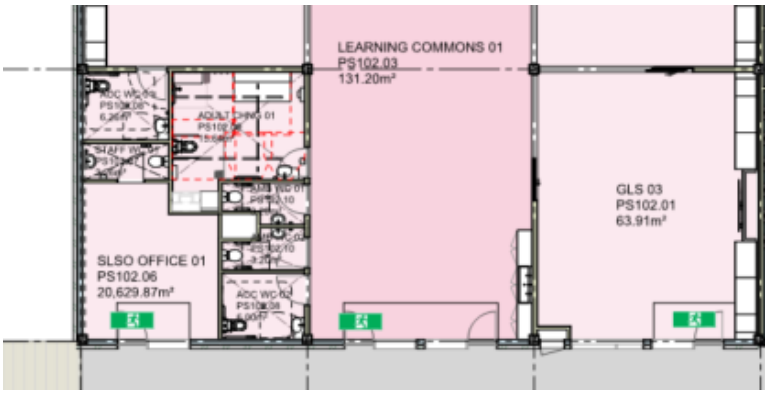
BCA Clause	Assessment and Comment	Status
D2D22 Access to lift pits	Access to lift pits is to be in accordance with this clause.	Capable of Complying
D2D23 Egress from primary schools	Every part of a primary school is to be located within a storey with direct egress to a road or open space. The requirements of this clause do not apply to a building of a rise in storeys of 4 or less, where the primary school is the only use in that building.	Complies
Part D3 Construction of exits		
NSW D3D2 Application of Part	The general requirements of Part D3 apply to all parts of the buildings.	Note
D3D3 Fire-isolated stairways and ramps	A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed of non-combustible materials and so that if there is local failure it will not cause structural damage to or impair the fire-resistance of the shaft.	N/A
D3D4 Non-fire isolated stairs and ramps	Non-fire isolated stairs are not proposed.	N/A
D3D8 Installation in exits and paths of travel	Gas or other fuel services must not be installed in a required exit. Electrical or telecommunications cupboards opening onto a corridor, or the like must be of non-combustible construction and smoke sealed from the corridor (including metal lining to inside face of door and smoke seals to door).	Capable of Complying
D3D9 Enclosure of space under stairs and ramps	The space below the external stairway must not be enclosed to form a cupboard or other enclosed space unless: (a) the enclosing walls and ceilings have an FRL of not less than 60/60/60; and (b) any access doorway to the enclosed space is fitted with a self-closing –/60/30 fire door. No cupboards are proposed under the external fire stairs.	Capable of Complying
D3D10 Width of stairways	A required stairway or ramp that exceeds 2m in width is counted as having a width of only 2m unless it is divided by a handrail or barrier continuous between landings and each division has a width of not more than 2m.	Capable of Complying
D3D11 Pedestrian ramps	A ramp must: (a) where the ramp is also serving as an accessible ramp under Part D4, be in accordance with AS 1428.1; or (b) in any other case, have a gradient not steeper than 1:8. The floor surface of a ramp must have a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
NSW D3D14	Goings and risers are to be designed in accordance with this clause.	Capable of Complying

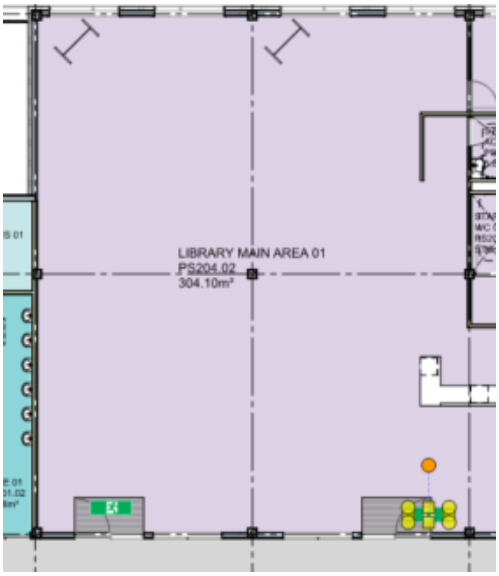
BCA Clause	Assessment and Comment	Status
Goings and risers	The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	
D3D15 Landings	Landings are to be designed in accordance with this clause.	Capable of Complying
NSW D3D16 Thresholds	Doorway thresholds are to be designed in accordance with this clause. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
D3D17 Barriers to prevent falls	Balustrades are to be designed in accordance with this clause. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
NSW D3D18 Height of barriers	Balustrades are to be designed in accordance with this clause. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
D3D19 Openings in barriers	Balustrades are to be designed in accordance with this clause. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
D3D20 Barrier climbability	Balustrades are to be designed in accordance with this clause. A barrier under D3D17 above, located on a floor more than 4m above the surface beneath, must not incorporate horizontal or near horizontal elements that could facilitate climbing between 150mm and 760mm above the floor. Within a school building this conflicts with the DTS requirements under D3D22 for a secondary handrail which is to be fixed at a height between 665mm and 750mm which would then be located in this required non climable zone. This would affect all stairs and landings located at more than 4m above the ground level below to Building BC. Due to the topography of the site and the height between floor to floor indicated on elevations this is likely to have affect on the ground floor to second floor. A performance solution would be required to provide a suitable solution to resolve this item One possible performance solution would be to increase the height of the balustrades. The handrail required under D3D22 could then be provided in a DTS position and the non-climable zone (no horizontal elements) of between 150mm – 760mm, required for the balustrade, could be provided from a theoretical FFL higher up the balustrade so that the handrail would not overlap. This potential performance solution is sketched out broadly below.	Performance Solution

BCA Clause	Assessment and Comment	Status
	  The documentation does not provide the level of detail of the balustrade and handrail to the stairs at present. Where this solution is to be considered the balustrade and handrails would need to be considered as above and the performance solution developed in the next stage of documentation.	
D3D21 Wire barriers	Wire balustrades are to be designed in accordance with this clause. The documentation does not provide this level of detail at present. Details to be provided in detailed design documentation to show compliance.	Capable of Complying
D3D22 Handrails	Handrails are required to be designed in accordance with this clause. It is noted that there are additional requirements relating to a Class 9b building used as a primary school or a building that contains an early childhood centre:	Capable of Complying

BCA Clause	Assessment and Comment	Status
	(i) One handrail to be fixed at a height of not less than 865 mm; and (ii) In addition to (i) have a handrail- (A) fixed at a height between 665 mm and 750 mm in a primary school; and (B) with a cross-sectional dimension not less than 16mm and not greater than 45mm as measured in any direction across its centre, fixed at a heigh between 450mm and 700mm in a Class 9b childhood centre Please see commentary in D3D20 above in terms of possible affect on climable zones in balustrades at landings to stairs. A performance solution is proposed to the balustrade horizonal component of the handrail sitting in the climable zone of the balustrade under D3D20 above. It is proposed to provide DTS compliance with the handrail under this clause. Details to be provided in detailed design documentation to show compliance.	
D3D23 Fixed platforms, walkways, stairways & ladders	Fixed platforms, walkways, stairways & ladders are to be designed in accordance with this clause.	N/A
NSW D3D24 Doorways and doors	Doorways and doors are to be designed in accordance with this clause.	Capable of Complying
D3D25 Swinging doors	A swinging door must not encroach and impede the path of travel/exit width by more than 500mm at any part of it swing. When in the fully open position, it must not encroach into the path of travel/exit width by more than or 100mm. Doors in or serving as a required exit must swing in the direction of egress unless they are subject to the concession in this clause. This concession allows the swinging door to not swing in the direction of egress: (a)where the building or part has a floor area not more than 200m^2, it is the only required exit from the building or part, and it is fitted with a device for holding it in the open position; OR (b) it serves a sanitary compartment or airlock (in which case it may swing in either direction) The following are is noted as being able to comply with maintaining the inward opening door. a) Building BA:	Capable of Complying

BCA Clause	Assessment and Comment	Status
	The sports star 01 PS203.14 and Bulk Str 01 are able to comply with the concession as they are under 200m^2 and the door can be held open with a device whilst in occupation  The following areas do not prescriptively comply with this clause: Lower Ground: Building BC Staff Lounge 01 And Entry 01	

BCA Clause	Assessment and Comment	Status
	 Ground: b) Building BC learning commons 01 PS102.03, GLS 03 PS102.01, SLSO office 01 room 	

BCA Clause	Assessment and Comment	Status
	c) Library main area  The above doors are intended to be altered to comply with prescriptive DTS provisions during the next stage (Phase 4).	
NSW D3D26 Operation of latch	Door hardware is to comply with this clause.	Capable of Complying
D3D29 Protection of openable windows	Window openings in a Class 9b early childhood centre must be protected in accordance with this clause to limit the risk of a person falling through an openable window. Furthermore, all windows throughout the school building where the floor below the window is 4m more more above the surface beneath the window, should have protection in accordance with the provisions of D3D29 (3).	Capable of Complying
Part D4 Access for People With Disabilities		
D4D2 – D4D13 Access requirements	Access and facilities required for persons with disabilities to be clarified by the access consultant within their report.	Note

5.4. Services and Equipment (BCA Section E)

BCA Clause	Assessment & Comment	Status
Part E1 Firefighting Equipment		
E1D2 Fire hydrants	A fire hydrant system must be provided in accordance with this clause to serve all buildings as they are over 500m^2. The fire hydrant system must also be installed in accordance with AS 2419.1-2021. Where	Capable of Complying

BCA Clause	Assessment & Comment	Status
	internal hydrants are provided, they must only serve the storey in which they are located, except where permitted by this clause. Internal fire hydrants are proposed. The hydraulic consultant has advised that performance solutions for the location of the fire hydrants and supplementary hydrants will be required in relation to Building BC. Hydrants have not yet been indicated to the Building BA. Building BA fire compartment is over 500m2 (including the covered play area outside of playrooms leading to the outdoor space). The hydraulic consultant to provide details of compliance. Fire hydrant boosters and pumps are currently proposed to be located along the frontage of the site facing Northview Street. The location of boosters and fire pump to be clarified for compliance with AS2419.1-2021. Where deviations with compliance are proposed these are to be identified by hydraulic consultant.	
E1D3 Fire hose reels	A fire hose reel system must be provided – (a) to serve the whole building where one or more internal fire hydrants are installed; or (b) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500m^2 However, fire hose reel systems are not required to all of the buildings and the following exclusions apply: • classrooms and associated corridors in the primary school. • administration and office areas in the primary school Fire hose reels to be provided to all buildings except where excluded above. The hose reel system must be installed in accordance with this clause and AS 2441. Details to be provided in detailed design.	Capable of Complying
E1D4- E1D13 Sprinklers	A sprinkler system is not required. Preschool (early childhood centres) are afforded a concession to requiring sprinkler provision where they are located wholly with a storey that provides direct egress to a road or open space or where they are contained 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 the building. Building BA early childhood centre would comply with this concession and not require sprinkler protection.	Note
E1D13 Where sprinklers are required: occupancies of excessive hazard	No special hazards have been identified.	N/A
E1D14 Portable fire extinguishers	Portable fire extinguishers are to be provided in accordance with this clause and comply with this provision and sections 1, 2, 3 and 4 of AS 2444.	Capable of Complying

BCA Clause	Assessment & Comment	Status
E1D15 Fire control centres	A fire control centre is not required as the total floor area of the development is under 18,000m^2.	N/A
E1D16 Fire precautions during construction	In a building under construction not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit. After the building has reached an effective height of 12 m the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storeys and any required booster connections must be installed.	Capable of Complying
E1D17 Provision for special hazards	No special hazards have been identified.	N/A
Part E2 Smoke Hazard Management		
E2D3 General requirements	An air-handling system which does not form part of a smoke hazard management system in accordance with E2D4 to E2D20 and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must, subject to (2), be designed and installed- (c) to operate as a smoke control system in accordance with AS 1668.1; or (d) such that it- (i) incorporates smoke dampers where the air-handling ducts penetrate any elements Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1 serving more than one fire compartment not forming part of a smoke hazard management system must comply with these Sections of the Standard. Building BC has been considered as four separate compartments, separated by each floor level see NSW E2D19.	Capable of Complying
E2D9 Buildings not more than 25 m in effective height: Class 5, 6, 7b, 8 and 9b buildings	The following smoke hazard management measures are required to any Class 5, 6, 7b, 8 and 9b building or part of a building: • an automatic smoke detection and alarm system complying with Specification 20; or • a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. The above is only applicable to buildings not more than 25m in effective height that- a) is a class 5 or 9b school building or part having a rise in storeys of more than 3; or b) is a Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or c) has a rise in storeys of more than 2 and contains- i) a Class 5 or 9b school part; and	Capable of Complying

BCA Clause	Assessment & Comment	Status
	ii) a Class 6, 7b, 8 or 9b (other than a school) part Building BC consists of four storeys and therefore is required to be provided with smoke hazard management in accordance with this clause.	
NSW E2D16 Class 9b - assembly buildings: All	This clause sets out provisions that apply to all Class 9b assembly buildings and are therefore applicable to all buildings on the site in respect of the following provision: a) a building or part of a building uses as assembly building must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity of not more than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 6 of AS 1668.1) which does not form part of the smoke hazard management system, on the activation of- (i) smoke detectors installed complying with S20C6; and (ii) any other installed fire detection and alarm system, including a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. Building BB contains a stage. The stage is proposed to be under 50m^2 and generally would therefore not need any further smoke hazard management under this clause. This would change if the stage was separated from the auditorium by a proscenium wall and the following parts would then need to be considered. For the purposes of this clause, where a stage is separated from the auditorium by a proscenium wall incorporating a proscenium opening, a backstage room or area that is not separated from the stage by construction having an FRL of not less than 60/60/60 is taken to form part of the stage. Backstage area is defined under the BCA as “a space associated with, and adjacent to, as stage in a Class 9b building for scenery, props, equipment, dressing rooms, or the like.” ‘Proscenium’ is not defined in the BCA however the Collins dictionary refers to it as “the arch or opening separating the stage from the auditorium together with the area immediately in front of the arch.” Whilst arch design for proscenium openings is rarely provided walls separating stages from the auditorium are common and are seen under the BCA as the “proscenium wall.”. The stage and any proposed separation of the stage will be further developed in the next stage of documentation. The design team will either confirm that the stage is not proposed to be separated from the auditorium by a “proscenium wall” incorporating a “proscenium” opening. Alternatively, that the backstage area as defined above is separated from the stage by 60/60/60 minute fire resisting construction. Further smoke hazard management will be required should “backstage areas” not be fire separated by 60/60/60 construction in accordance with BCA NSW E2D16.	Capable of Complying

BCA Clause	Assessment & Comment	Status
	Details to be provided in detailed design documentation to show compliance.	
NSW E2D19 Class 9b - assembly buildings: other assembly buildings (not listed in NSW E2D16 to E2D18)	In a Class 9b buildings or parts of buildings where the floor area of the fire compartment is more than 2000m^2, the fire compartment must be provided with – (a) an automatic smoke exhaust system complying with Specification 21; or (b) roof mounted automatic smoke-and-heat vents complying with Specification 22, in a single storey building or the top storey of a multi-storey building; or (c) if the floor area of the fire compartment is not more than 5,000m^2 and the building has a rise in storeys of not more than 2- (i) an automatic smoke detection and alarm system complying with Specification 20 or (ii) a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17. School classrooms are exempt from the above provisions Building BC has each floor level under 2000m^2 in floor area. Therefore, for the purposes of compartment limits each floor level forms its own compartment under 2000m^2. A building containing a Class 9b early childhood centre must be provided with an automatic smoke detection and alarm system complying with Specification 20 throughout the whole building. Building BA is able to comply. Documentation to show compliance will be provided in Construction Certificate stage.	Capable of Complying
	Specification 20 Smoke detection and alarm systems	
	S20C2 Type of system Building BC and Building BA should be provided with a smoke detection system complying with S20C4	Capable of Complying
	S20C4 Smoke detection system Building BC and Building BA smoke detection system should comply with the requirements of this clause.	Capable of Complying
	S20C6 Smoke detection for smoke control systems Building BC and Building BA smoke detection system should comply with the requirements of this clause.	Capable of Complying
	S20C7 Building occupant warning system Building BC and Building BA building occupant warning system should comply with the requirements of this clause.	Capable of Complying
E2D21 Provision for special hazards	No special hazards have been identified.	N/A

BCA Clause	Assessment & Comment	Status
Part E3 Lift Installations		
E3D2 Lift installations	An electric passenger lift installation and an electrohydraulic passenger lift installation must comply with Specification 24.	Refer below
	Specification 24 Lift installations	
	S24C2 Lift cars exposed to solar radiation	Capable of Complying
	S24C3 Lift car emergency lighting	Capable of Complying
	S24C4 Cooling of lift shaft	Capable of Complying
	S24C5 Lift foyer access	Capable of Complying
	S24C6 Emergency access doors in a single enclosed lift shaft	Capable of Complying
E3D3 Stretcher facility in lifts	The lift/s specified in this clause, must be able to accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.	Capable of Complying
E3D4 Warning against use of lifts in fire	Warning signs must be displayed near every lift call button in accordance with this clause. Details to be provided in detailed design documentation.	Capable of Complying
E3D6 Landings	Access and egress to and from lift well landings must comply with the DTS provision of Parts D2, D3 & D4	Capable of Complying
E3D7 Passenger lift types and their limitations	Lift types are to be selected in accordance with this clause.	Capable of Complying
E3D8 Accessible features required for passenger lifts	Lifts are to have features in accordance with this clause.	Capable of Complying
E3D9 Fire service controls	Fire service controls are required to every lift serving any storey above an effective height of 12m. Fire service controls are required to comply with the requirements of this provision.	Capable of Complying
E3D12 Lift car fire service drive control switch	Lift car fire service drive control switch required by E3D9 must be activated from within the car and the switch must comply with the requirements of this clause.	Capable of Complying
Part E4 Visibility in an Emergency, Exit Signs and Warning Systems		
E4D2 to E4D4 Emergency lighting requirements	Emergency lighting must be provided in accordance with these clauses. Emergency lighting is required to comply with AS 2293.1-2018. Details to be provided in detailed design documentation.	Capable of Complying

BCA Clause	Assessment & Comment	Status
E4D5 to E4D8 Exit signs	Exit signage must be provided in accordance with these clauses. Exit signage is required to comply with AS 2293.1-2018 and be clearly visible at all times. Details to be provided in detailed design documentation.	Capable of Complying
E4D9 Emergency warning and intercom systems	EWIS is required to Building BC as the building is more than 3 storeys in rise in storeys EWIS is required in accordance with AS1670.4-2018 and this clause	Capable of Complying

5.5. Health and Amenity (BCA Section F)

BCA Clause	Assessment and Comment	Status
Part F1 Surface Water Management, Rising Damp and External Waterproofing		
F1D2 Application of Part	1. F1D4 and F1D5 do not apply to a roof with a covering complying with F3D2(a) to (d). 1. F1D3 to F1D5 do not apply to a balcony, podium or similar horizontal surface part of a building - where the flooring is of timber decking or other perforated flooring; or which is located directly above ground.	Note
F1D3 Stormwater drainage	Stormwater drainage is required to be designed to comply with AS/NZS 3500.3-2021.	Capable of Complying
F1D4 Exposed joints	Exposed joints in the drainage surface on a roof, balcony, podium or similar horizontal surface part of a building must: • be protected in accordance with Section 2.9 of AS 4654.2; and • not be located beneath or run through a planter box, water feature or similar part of the building.	Capable of Complying
F1D5 External above ground membranes	A roof, balcony, podium or similar horizontal surface part of a building must be provided with a waterproofing membrane - consisting of materials complying with AS 4654.1; and designed and installed in accordance with AS 4654.2.	Capable of Complying
F1D6 Damp-proofing	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1D7 Damp-proofing of floor on ground	Damp proofing is required to be provided in accordance with this clause.	Capable of Complying
F1D8 Sub-floor ventilation	The sub-floor space between the suspended floor of a building and the ground must be provided with cross ventilation, be cleared of all debris, and graded to prevent ponding and evenly spaced ventilation openings in accordance with this clause.	Capable of Complying
Part F2 Wet Areas and Overflow Protection		
F2D2 Wet area construction	Wet areas, as required by this clause, must be water resistant or waterproof in accordance with Specification 26; and comply with AS 3740-2021	Capable of Complying
F2D3	Rooms containing urinals are to be designed in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
Rooms containing urinals		
F2D4 Floor wastes	Floor wastes and falls to floor wastes are required to be provided in accordance with this clause.	N/A
Part F3 Roof and Wall Cladding		
F3D2 Roof coverings	A roof must be covered with: • roof tiles complying with AS 2049-2002, fixed in accordance with AS 2050; or • metal sheet roofing complying with AS 1562.1-2018; or • plastic sheet roofing designed and installed in accordance with AS 1562.3-206; or • terracotta, fibre-cement and timber slates and shingles designed and installed in accordance with AS 4597-1999, except in cyclonic areas; or • an external waterproofing membrane complying with F1D5.	Capable of Complying
F3D3 Sarking	Sarking-type material used for weatherproofing of roofs and walls must comply with AS 4200.1-2017 and AS 4200.2-2017.	Capable of Complying
F3D4 Glazed assemblies	Glazed assemblies to comply with AS 2047-2014, as applicable.	Capable of Complying
F3D5 Wall cladding	External wall cladding must comply with one or a combination of the following: • Masonry, including masonry veneer, unreinforced and reinforced masonry: AS 3700. • Autoclaved aerated concrete: AS 5146.3. • Metal wall cladding: AS 1562.1. External wall cladding, other than specified above, will require performance justification. From the elevations provided there are some masonry facades but other areas will be different façade types which will require a performance solution for weatherproofing in compliance with Performance Requirement F3P1.	Performance solution
Part F4 Sanitary and Other Facilities		
NSW F4D4 Facilities in Class 3 to 9 buildings	The following should generally be provided: 1. Separate sanitary facilities for males and females must be provided for Class 5 and 9 buildings, except where permitted for accessible facilities, in accordance with Tables, F4D4f, F4D4g as appropriate. 2. If not more than 10 persons are employed, a unisex facility may be provided instead of separate facilities for each sex. 3. Employees and the public are not permitted to share the same facilities in a school and early childhood centre. 4.Adequate means of disposal of sanitary products must be provided in sanitary facilities for use by females. 5. Not less than one washbasin must be provided where closet pans or urinals are provided.	Capable of Complying

BCA Clause	Assessment and Comment	Status

Building BA Early Childhood Centre:

A Class 9b early childhood centre must be provided with:

- a kitchen or food preparation area with a kitchen sink, separate hand washing facilities, space for a refrigerator and space for cooking facilities, with:
  - (i) 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
  - (i) the ability to facilitate supervision of children from the facilities if the early childhood centre accommodates children younger than 2 years old; and
- one bath, shower or shower-bath; and
- if the centre accommodates children younger than 3 years old—
  - (i) a laundry facility comprising a washtub and space in the same room for a washing machine; and
  - (ii) a bench type baby bath, which is within 1 m of the nappy change bench; and
  - (iii) a nappy changing bench which—is within 1 m of separate adult hand washing facilities and bench type baby bath; and must be not less than 0.9 m^2 in area and at a height of not less than 850 mm, but not more than 900 mm above the finished floor level; and must have a space not less than 800 mm high, 500 mm wide and 800 mm deep for the storage of steps; and is positioned to permit a staff member changing a nappy to have visibility of the play area at all times.

Urinals are not required for a Class 9b early childhood centre

Facilities for use by children must be-

- (a) junior pans, and
- (b) washbasins with a rim height not exceeding 600mm; and
- (c) accessible from both indoor and outdoor play areas

Early childhood centre Sanitary Facilities types and details have not will be provided on the next stage of documentation. The below advice has been provided on types and facilities required.

Early childhood centre Sanitary Facilities required:

	Occupancy users	**Occupancy numbers**	**WC**	**Urinals**	**Basins**
Male	Employees	5	0	0	0
Female	Employees	5	0	N/A	0
Accessible	Employees		1	N/A	1
Children	Students	60	4	N/A	4

The following to be clarified in detailed design.:

- Sanitary facilities and details to comply with the above;
- Provision of one bath, shower or shower-bath; and

BCA Clause	Assessment and Comment	Status

- Is the centre proposing to cater for under 3 year olds? Previous design advice has been that the early childhood centre will just be for 3-5 year olds
- Early childhood centre has indicated an ambulant sanitary facility, and one should be provided for each sex. Alternatively, a performance solution may be achievable for a unisex ambulant facility
- Spouts to be indicated to trough washbasin
- Junior pans and washbasin rim heights

<u>Buildings BB and BC:</u>

Primary School Sanitary Facilities Provided:

	Occupancy users	**Occupancy numbers**	**WC**	**Urinals**	**Basins**
Male	Employees	-	1	0	1
Female	Employees	-	1	N/A	1
Accessible	Employees	-	2	N/A	2
Ambulant - Male	Employees	-	1	0	1
Ambulant - Female	Employees	-	1	N/A	1
Male	Students		15	0	15
Female	Students		15	N/A	15
Accessible	Students	-	10	N/A	10
Ambulant - Male	Students	-	6	0	6
Ambulant - Female	Students	-	6	N/A	6

Primary School Sanitary Facilities Required:

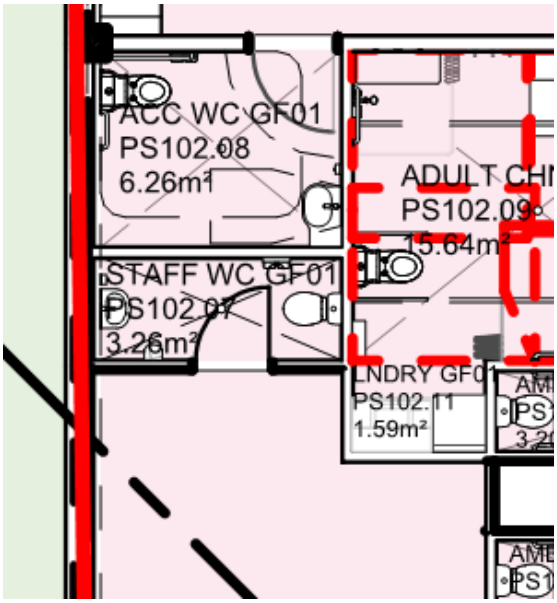
	Occupancy users	**Occupancy numbers**	**WC**	**Urinals**	**Basins**
Male	Employees	35	2	2	2
Female	Employees	35	3	N/A	2
Accessible	Employees	-	2	N/A	2
Ambulant-Male	Employees	-	1	N/A	1
Ambulant - Female	Employees	-	1	N/A	1
Male	Students	506	8	7	9
Female	Students	506	14	N/A	9

<table>
<tr><th>BCA Clause</th><th>Assessment and Comment</th><th>Status</th></tr>
<tr><td></td><td>
<table>
<tr><td>Accessible</td><td>Students</td><td>-</td><td>8</td><td>N/A</td><td>8</td></tr>
<tr><td>Ambulant-Male</td><td>Students</td><td>-</td><td>6</td><td>N/A</td><td>6</td></tr>
<tr><td>Ambulant - Female</td><td>Students</td><td>-</td><td>6</td><td>N/A</td><td>6</td></tr>
</table>

As can been seen from the calculations above the numbers of sanitary facilities are suitable for the occupancy levels given.

The following is to be clarified in the next stage of design documentation:

1. Staff WC at Ground to Building BC is not DTS as a unisex facility. The facility to be clarified as Male or Female.

</td><td></td></tr>
<tr><td>F4D5
Accessible sanitary facilities</td><td>Accessible unisex and ambulant sanitary facilities are required in accordance with clause. The design of accessible sanitary facilities is to comply with AS1428.1-2009.
Comments on compliance to be provided by access consultant.</td><td>Note</td></tr>
<tr><td>F4D6
Accessible unisex sanitary compartments</td><td>The number of accessible sanitary facilities is to be provided in accordance with this clause.

Comments on compliance to be provided by access consultant.</td><td>Capable of Complying</td></tr>
<tr><td>F4D8
Construction of sanitary compartments</td><td>Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate compartments that extend-
(i) From floor level to the ceiling in the case of a unisex facility; or
(ii) To a height of not less than 1.5m above the floor if primary school children are the principal users; or</td><td>Capable of Complying</td></tr>
</table>

BCA Clause	Assessment and Comment	Status
	(iii) 1.8m above the floor in all other cases Where sanitary compartment doors swing into the sanitary compartment room and the hinge side of the door is less than 1.2 m from the WC pan, lift off hinges are required to the door. In an early childhood centre, facilities for the use of the children must have each sanitary compartment screened by a partition which, except for the doorway, is opaque for a height of at least 900mm but not more then 1200mm above the floor level. Details for compliance with these requirements to be provided in detailed documentation.	
Part F5 Room heights		
F5D2 Height of rooms and other spaces	The height of rooms and other spaces is to be in accordance with this clause.	Capable of Complying
Part F6 Light and Ventilation		

F6D2
Provision of natural light
	Natural light must be provided in:
	• A Class 9b building - to all general purpose classrooms in primary or secondary schools and all playrooms or the like for the use of children in an early childhood centre.
	• the sills of the early childhood centre for 50% of windows in children's rooms must be located not more than 500mm above the floor level in accordance with F6D3(4). The guide to the BCA advises that the following is not considered 'children's room' for this purpose:
	  • A passageway or thoroughfare (including door swings);
	  • A toilet and hygiene facilities;
	  • A room permanently set aside for storage;
	  • A room for staff or administration;
	  • A kitchen, unless the use of the kitchen is part of an educational program provided by the service;
	  • Any other space that is not suitable for children.
	
	Building BA
	The current elevations proposed to the playrooms (children's rooms) indicate that natural lighting can comply in accordance with this clause.
	
	Building BC
	The proposed shade construction over the façade to Building BC may affect access to natural lighting. Details of how compliance is achieved in accordance with F6D3 below, for measurement of natural light, is to be provided in the next stage of design documentation.
		Capable of Complying

F6D3	The methods and extent of natural light is to be in accordance with this clause.	Capable of Complying

BCA Clause	Assessment and Comment	Status
Methods and extent of natural light	Required natural light must be provided by- (a) Windows, excluding roof lights, that- (i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and (ii) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like; or (b) Roof lights, that (i) Have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 3% of the floor area of the room; and (ii) are open to the sky; (c) A proportional combination of windows and rooflights required by (a) and (b)	
F6D4 Natural light borrowed from adjoining room	Required natural light (F6D2) cannot be borrowed from another room for Class 9b buildings.	Note
F6D5 Artificial lighting	Artificial lighting is to be provided in accordance with AS/NZS1680.0 to spaces required by this clause.	Capable of Complying
NSW F6D6 Ventilation of rooms	Ventilation is to be provided by natural or mechanical means in accordance with this provision and Clause F6D6.	Capable of Complying
F6D7 Natural ventilation	Natural ventilation is to comply with this clause. Details of compliance to be provided in detailed design documentation	Capable of Complying
F6D8 Ventilation borrowed from adjoining room	Natural ventilation can be borrowed from adjoining room is compliance with this clause. Details of compliance to be provided in detailed design documentation	Capable of Complying
F6D9 Restriction on the position of water closets and urinals	A sanitary compartment must not open directly into a kitchen or pantry; or a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or a workplace normally occupied by more than one person.	Capable of Complying
F6D10 Airlocks	If a sanitary compartment is prohibited under F6D9 from opening directly to another room: • in a Class 5, 6, 7, 8 or 9 building (which is not an early childhood centre, primary school or open spectator stand) access must be by an airlock, hallway or other room with a floor area of not less than 1.1 m² and fitted with self-closing doors at all access doorways; or the sanitary compartment must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.	Capable of Complying
F6D12	A commercial kitchen must be provided with a kitchen exhaust hood complying with AS 1668.1 and AS 1668.2 where:	Capable of Complying

BCA Clause	Assessment and Comment	Status
Kitchen local exhaust ventilation	• any cooking apparatus has a total maximum electrical power input exceeding 8 kW; or a total gas power input exceeding 29 MJ/h; or • the total maximum power input to more than one apparatus exceeds 0.5 kW electrical power; or1.8 MJ/hour gas, per m^2 of floor area of the room or enclosure.	

5.6. Ancillary Provisions (BCA Section G)

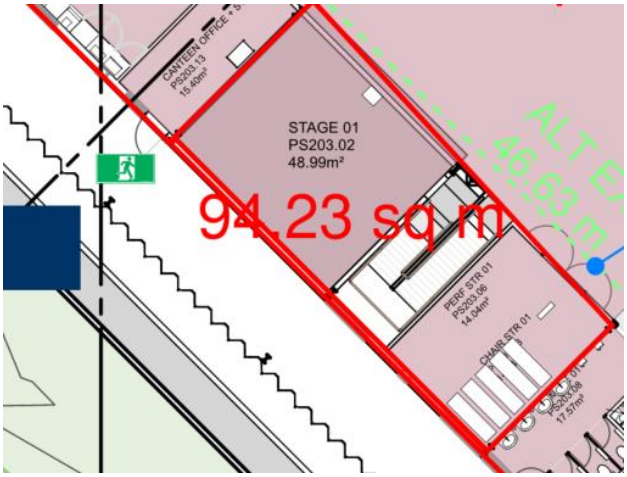
BCA Clause	Assessment and comment	Status
Part G1 Minor Structures and Components		
G1D3 Refrigerated chambers, strong rooms & vaults	Refrigerated chambers, strong rooms & vaults to comply with the requirements of this provision. Details to be provided in detailed design documentation.	Capable of Complying
G1D4 Outdoor Play Spaces	1. Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which: (a) where the edge of the trafficable surface of the outdoor play space is at the same level or less than 2m above the surface beneath - complies with AS 1926.1; and (b) where the edge of the trafficable surface of the outdoor play space is 2 m or more above the surface beneath - is not less than 1.8 m high, as measured from above the trafficable surface; and is non-climbable and does not contain horizontal or other elements that could facilitate climbing; and does not have any openings or apertures through which a 100 mm or greater sphere could pass; and is not within 1.8 m, as measured directly from the top of the barrier, of any elements within the outdoor play space that facilitate climbing; and is not within 900 mm of elements in a wall that facilitate climbing; and (c) has strength and rigidity complying with AS 1926.1. 2. For the purposes of (1)(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. 3. The requirements of (1) do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre, except where the wall is within a non-climbable zone for a barrier provided under (1)(a). Details to be provided in detailed design documentation.	Capable of Complying
NSW G1D5 Provision for cleaning windows	The method of provision for the cleaning of windows under this clause is not applicable as no building has windows located 3 or more storeys above the ground levels.	Capable of Complying
Part G5 Construction in Bushfire Prone Areas		
NSW G5D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply in a designated bushfire prone area to: 1.a Class 9 building that is a special fire protection purpose located in an area subject to a Bushfire Attack Level (BAL) not exceeding BAL—	Refer to separate report from Bushfire Consultant

BCA Clause	Assessment and comment	Status
	12.5, determined in accordance with Planning for Bush Fire Protection; or 4. a Class 10a building or deck immediately adjacent or connected to a building or part of a type as above ***Notes*** • *If a building of a type listed above is subject to a BAL exceeding BAL—12.5, the building would need to comply with Performance Requirement NSW G5P2 by means of a Performance Solution.* • *There are no Deemed-to-Satisfy Provisions for these buildings.* The bushfire mapping, associated APZ, and ownership of adjacent land is currently in a process of review and acquisition with a number of parties as discussed in Eco Logical Australia correspondence dated 6 October 2023. Finalisation of this process will determine the level of affect of the provisions of this part. Note: Special fire protection purpose is defined as per Section 100B(6) of the Rural Fires Act 1997, which includes the following purposes: 1. a school, 2. a child care centre,	
G5D4 Protection - certain Class 9 buildings	In a designated bushfire prone area, a Class 9 building that is a special fire protection purpose or a Class 10a building or deck immediately adjacent or connected to a such a building or part, must comply with: • for a Class 9 building that is special fire protection purpose, Specification 43 except as amended by Planning for Bush Fire Protection; or • for a Class 10a building or deck immediately adjacent or connected to a Class 9 building that is a special fire protection purpose — (i) AS 3959 except as amended by Planning for Bush Fire Protection; and (ii) S43C13; or • the requirements of (a) or (b) above as modified by the development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997 for the purposes of integrated development.	Refer to separate report from Bushfire Consultant
Part G6 Occupiable Outdoor Areas		
G6D1-G6D9 Application of part	There are no occupiable outdoor spaces proposed.	Note

5.7. Special Use Buildings (BCA Section I)

5.7.1. Class 9b Buildings (Part I1)

BCA Clause	Assessment and Comment	Status
NSW I1D1	1. For a Class 9b building or part of a building that is not an entertainment venue:	Note

BCA Clause	Assessment and Comment	Status
Application of Part	(a) the Deemed-to-Satisfy Provisions of Part I11 apply to every enclosed Class 9b building or part of a building which—is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300 m²;; or has a stage with an associated rigging loft; and (b) notwithstanding (1)(a)—I1D4 applies to every open or enclosed Class 9b building; andI1D7 applies to every enclosed Class 9b building. Building BB as a school assembly building contains a stage and backstage area. This is currently under 300m^2 including the backstage area. Backstage area is defined under the BCA as "a space associated with, and adjacent to, as stage in a Class 9b building for scenery, props, equipment, dressing rooms, or the like."  Clarification will be provided by the design team as to whether there is a rigging loft proposed to the building in the next stage of design documentation.	
I1D2 Separation	This clause only applies if a rigging loft is provided to Building BB over the stage. Details to be provided in the next stage of design documentation.	Capable of Complying
I1D3 Proscenium wall construction	This clause only applies if a rigging loft is provided to Building BB over the stage. Details to be provided in in the next stage of design documentation.	Capable of Complying
I1D4 Seating area	This clause applies to every enclosed Class 9b building. Details to be provided in in the next stage of design documentation for any proposed seating areas. Clarification of design to be provided to any proposed bleacher steps to the COLA which are considered to be used for an audience to Building BB.	Capable of Complying
I1D5	This clause only applies if a rigging loft is provided to Building BB over the stage. Details to be provided in detailed design documentation.	Capable of Complying

BCA Clause	Assessment and Comment	Status
Exits from stages		
I1D6 Access to platforms and lofts	This clause only applies if a rigging loft is provided to Building BB over the stage. Details to be provided in the next stage of design documentation.	Capable of Complying

5.8. Energy Efficiency (BCA Section J – Class 3 and 5 to 9 Buildings)

(a) From 1 October 2023 Section J of NCC 2022 Volume One applies.

The below is based on BCA 2022.

BCA Clause	Assessment and Comment	Status
Part J4 Building Fabric		
NSW J4D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and Class 5 to 9 building.	Note
NSW J4D3 Thermal construction - general	Insulation is to be provided in accordance with this clause.	Capable of Complying
J4D4 Roof and ceiling construction	A roof or ceiling must achieve a Total R-Value required by this clause.	Capable of Complying
J4D5 Roof lights	There are no rooflights proposed.	N/A
J4D6 Walls and glazing	Walls and glazing must be designed to comply with this clause	Capable of Complying
J4D7 Floors	Floors must be designed to comply with this clause	Capable of Complying
Part J5 Building Sealing		
NSW J5D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part apply to building elements forming the envelope of a Class 3 and Class 5 to 9 building, other than areas exempt by this clause.	Note
J5D3 Chimneys and flues	There are no solid-fuel burning appliances proposed.	N/A
J5D4 Roof lights	There are no rooflights proposed.	N/A
NSW J5D5 Windows and doors	Windows and doors are to be designed in accordance with this clause, inclusive of: • windows compliant with AS 2047; • seals to restrict air infiltration;	Capable of Complying

BCA Clause	Assessment and Comment	Status
	• unconditioned zones for cafes, restaurants, open front shop; and • rapid roller doors, as required by this clause.	
J5D6 Exhaust fans	An exhaust fan must be fitted with a sealing device such as a self-closing damper or the like when serving a conditioned space; or a habitable room in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D7 Construction of ceilings, walls and floors	Ceilings, walls, floors and any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage in accordance with this clause when forming part of the envelope; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
J5D8 Evaporative coolers	An evaporative cooler must be fitted with a self-closing damper or the like when serving a heated space; or in climate zones 4, 5, 6, 7 or 8.	Capable of Complying
Part J6 Air-Conditioning and Ventilation		
NSW J6D2 Application of part	The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 8 electricity network substation.	Note
J6D3 Air-conditioning system control	An air-conditioning system is to be designed in accordance with this clause.	Capable of Complying
J6D4 Mechanical ventilation system control	Mechanical ventilation control is to be designed in accordance with this clause.	Capable of Complying
J6D5 Fans and duct systems	Fans and duct systems to be designed in accordance with this clause.	Capable of Complying
J6D6 Ductwork insulation	Ductwork insulation to be provided in accordance with this clause.	Capable of Complying
J6D6 Ductwork sealing	Ductwork sealing is to be provided in accordance with this clause.	Capable of Complying
J6D8 Pump systems	Pumped systems are to be designed in accordance with this clause.	Capable of Complying
J6D9 Pipework insulation	Pipework insulation to be provided in accordance with this clause	Capable of Complying
NSW J6D10 Space heating	Space heating is to be provided in accordance with this clause	Capable of Complying
J6D11 Refrigerant chillers	Refrigerant chillers are to be designed in accordance with this clause.	Capable of Complying
J6D12 Unitary air-conditioning equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
J6D13 Heat rejection equipment	Unitary air-conditioning equipment are to be designed in accordance with this clause.	Capable of Complying
Part J7 Artificial Lighting and Power		

BCA Clause	Assessment and Comment	Status
NSW J7D2 Application of Part	J7D3, J7D4 and J7D6(1)(b) do not apply to a Class 8 electricity network substation.	Note
NSW J7D3 Artificial lighting	Artificial lighting is to be designed in accordance with this clause.	Capable of Complying
NSW J7D4 Interior artificial lighting and power control	Interior artificial lighting and power control is to be designed in accordance with this clause.	Capable of Complying
J7D5 Interior decorative and display lighting	Interior decorative and display lighting is to be designed in accordance with this clause.	Capable of Complying
J7D6 Exterior artificial lighting	Exterior artificial lighting is to be designed in accordance with this clause.	Capable of Complying
J7D7 Boiling water and chilled water storage units	Boiling water and chilled water storage units are to be designed in accordance with this clause.	Capable of Complying
J7D8 Lifts	Lifts are to be designed in accordance with this clause.	Capable of Complying
J7D9 Escalators and moving walkways	There are no escalators and moving walkways proposed.	N/A
Part J8 Heated Water Supply and Swimming Pool and Spa Pool Plant		
J8D2 Heated water supply	A heated water supply system for food preparation and sanitary purposes must be designed and installed in accordance with Part B237 of NCC Volume Three - Plumbing Code of Australia.	Capable of Complying
NSW J8D3-J8D4 Swimming pool /spa heating and pumping	There is no swimming pool or spa associated with the activity.	N/A
Part J9 Energy Monitoring and On-site Distributed Energy Resources		
J9D2 Application of Part	The Deemed-to-Satisfy Provisions of this Part do not apply to a Class 8 electricity network substation.	Note
J9D3 Facilities for energy monitoring	Facilities for energy monitoring are to be designed in accordance with this clause.	Capable of Complying
J9D4	There are no enclosed carparks associated with electric vehicle charging.	N/A

BCA Clause	Assessment and Comment	Status
Facilities for electric vehicle charging equipment		
J9D5 Facilities for solar photovoltaic and battery systems	Facilities for Facilities for solar photovoltaic and battery systems are to be designed in accordance with this clause.	Capable of Complying

6. CONCLUSION

The design as proposed is capable of complying with the Building Code of Australia and will be subject to construction documentation that will provide appropriate details to demonstrate compliance. This report has identified areas of non-compliance with the deemed-to-satisfy provisions and indicates the design intent to demonstrate compliance with the Performance Requirements of the BCA. Whilst the performance-based solutions are to be design developed, it is our view that the solutions will not impact on the current design.

Table 2 below identifies proposed performance solutions to be justified against the performance requirements of the BCA in accordance with BCA Clause A2.G2.

Mitigation Measures

Project Stage ***Design (D)*** ***Construction (C)*** ***Operation (O)***	**Mitigation Measures**	**Relevant Section of Report**
D	Deemed-to-satisfy requirements require Class 9b school buildings of more than 2 storeys or where more than 50 persons occupy the space, and early childhood centres to have access to 2 exits. Building BC has rooms that have access to only one exit and do not meet the concessions within the clause to single exits. It is proposed to consider these under the Performance Provisions of the BCA. (Clause NSW D2D3 Number of exits required) An appropriately qualified fire engineer to provide a fire engineered solution to satisfy the Performance Provisions of the BCA.	Section 5.3
D	Building BC egress stairs to the building have been provided as external stairs in lieu of a fire isolated stair. A number of the DTS provisions relating to protection of the external stair are intended to be considered under the Performance Provisions of the BCA. (Clause D2D13 External Stairs in lieu of Fire-isolated exits) An appropriately qualified fire engineer to provide a fire engineered solution to satisfy the Performance Provisions of the BCA.	Section 5.3

D	There is conflict between DTS provisions for the position of secondary handrails for a primary school and the provision of non-climable area in balustrades over 4m in height from the floor below. A performance solution is proposed to consider this. (Clause D3D20 Barrier climbability) An appropriately qualified person to provide a performance solution to satisfy the Performance Provisions of the BCA.	Section 5.3
D	Swinging exit doors must swing in the direction of egress. There are a number of doors to Buildings BC that do not meet the concessions of the DTS clause. (Clause D3D25 Swinging Doors) It is intended to swing the doors to comply with the DTS Provisions of the BCA in the next stage of design (Phase 4).	Section 5.3
D	External wall cladding, other than those specified prescriptively in this clause, will require performance justification. (Clause F3D5 Wall cladding) An appropriately qualified person to provide a performance solution to satisfy the Performance Provisions of the BCA.	Section 5.5

ATTACHMENT 1 – ASSESSED PLANS

Assessed plans prepared by SHAC

Plan Title	Drawing No	Revision	Date
Cover	4814 0000	C	17.09.24
Existing Site	4814 1001	E	17.09.24
Existing Infrastructure / Demolition	4814 1101	A	17.09.24
Proposed Lower Ground Site Plan	4814 1201	F	17.09.24
Proposed Ground Floor Site Plan	4814 1202	F	17.09.24
Proposed Level One Site Plan	4814 1203	F	17.09.24
Proposed Level Two Site Plan	4814 1204	F	17.09.24
Proposed Level Three Site Plan	4814 1205	F	17.09.24
Public Domain Works Plan	4814 1301	A	17.09.24
Proposed Lower Ground Site – Services Strategy Plans	4814 1401	A	17.09.24
Proposed Ground Floor Site – Services Strategy Plans	4814 1402	A	17.09.24
Proposed Level One Site – Services Strategy Plans	4814 1403	A	17.09.24
Proposed Level Two Site – Services Strategy Plans	4814 1404	A	17.09.24
Lower Ground Floor – Access and Security Strategy	4814 1501	A	17.09.24
Ground Floor – Access and Security Strategy	4814 1502	A	17.09.24
Signage Strategy	4814 1601	A	17.09.24
Building A + B Ground Floor	4814 2011	E	17.09.24
Building A +B Roof Plan	4814 2012	C	17.09.24
Building A +B Upper Roof Plan	4814 2013	C	17.09.24
Building C Lower Ground + Ground Floor Plan	4814 2021	E	17.09.24
Building C First + Second Floor Plan	4814 2022	E	17.09.24
Building C Roof Plan	4814 2023	E	17.09.24

Building A+B Elevation	4814 3111	C	17.09.24
Building C Elevations	4814 3121	C	17.09.24
Site Sections	4814 3211	A	17.09.24
Materials Study	4814 5001	A	17.09.24
Privacy and Outlook Analysis	4814 5002	A	17.09.24
Public Art and CwC Strategy	4814 5003	A	17.09.24
Perspectives	4814 5101	A	17.09.24
Perspectives	4814 5102	A	17.09.24
Perspectives	4814 5103	A	17.09.24
Perspectives	4814 5104	A	17.09.24
Perspectives	4814 5105	A	17.09.24
Perspectives	4814 5106	A	17.09.24

ATTACHMENT 2 - EXCLUSIONS AND LIMITATIONS

1. This report has been prepared by City Plan for Department of Education and may only be used and relied on by Department of Education for the purpose agreed between City Plan and Department of Education as set out in section 2.1 and 2.2 of this report.
2. City Plan otherwise disclaims responsibility to any person other than Department of Education arising in connection with this report. City Plan also excludes implied warranties and conditions, to the extent legally permissible.
3. City Plan Services Pty Ltd undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
4. The services undertaken by City Plan in connection with preparing this report are limited to those specifically detailed within the report and subject to scope limitations as set out in the report but specifically exclude:
   - Structural design in any form or content.
   - The Disability Discrimination Act 1992.
   - Disability (Access to Premises – Building) Standards 2010.
   - The existing level of Building Code of Australia compliance unless specifically identified in Section 2.3 within this report.
   - The operational capabilities or compliance of any existing services installed within the building.
   - Assessment of any existing Performance Solutions, including Fire Safety, addressing compliance with the Performance Requirements of the BCA.
5. This report is not a Part 6 compliance certificate under the Environmental Planning & Assessment Act 1979
6. The opinions, conclusions and any recommendations within this report are based on conditions encountered and information reviewed at the date of preparation of the report. City Plan has no responsibility or obligation to update this report to account for events or changes occurring after the date that the report was prepared.
7. The methodologies adopted within this report specifically relate to the subject building and must not be used for any other purpose.
8. City Plan has prepared this report based on information provided by others, including but not limited to Architectural Plans and Annual Fire Safety Statements. City Plan has not independently verified or checked beyond the agreed scope of work the validity of the documentation prepared and provided by others. City Plan accepts no liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions within the information relied upon.
9. The documentation relied upon has been reviewed only to the degree reasonable as pertaining to City Plan's scope, as defined within the contract and fee agreement. It is expressly not City Plan's responsibility to:
   - Familiarise ourselves with all information and documentation relating to the project, or the potential BCA, Access, or fire safety aspect derivatives thereof,
   - Conduct a "full BCA audit or compliance assessment" in any way defined, implied, or assumed, for matters outside of City Plans scope.
   - Prepare a holistic BCA, Access or Fire Safety strategy for the building or carry out a full assessment of all information and documentation relating to the project, or the potential BCA, Access, or Fire Safety aspect derivatives thereof.
10. Where the report relied on a site inspection, the inspection was based on a visual, non-invasive check of representative samples of the building to which the report and scope applied, and to which safe and reasonable access was available/permitted on the date and time of the inspection. The inspection should not be considered as a testing, commissioning or maintenance procedure nor act as a guarantee or warranty of any kind.