MATT SHUTER + ASSOCIATES

Building Code of Australia

Design Compliance Report

DA Design Review

Proposed new storeroom at South Curl Curl SLSC

Report Number & Revision:	**MSA2499_BCA_DA_Rev03**
Prepared For:	**Northern Beaches Council**
Date of Issue:	**01.12.2022**

Revision History & Quality Management

REPORT NUMBER	REV	STATUS	DATE
MSA2499_BCA	Rev01	DA Level Design – draft issue	25.10.2022
MSA2499_BCA	Rev02	DA Level Design – updated draft issue (minor revisions)	26.10.2022
MSA2499_BCA	Rev03	DA Level Design	01.12.2022

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Contents

Executive Summary

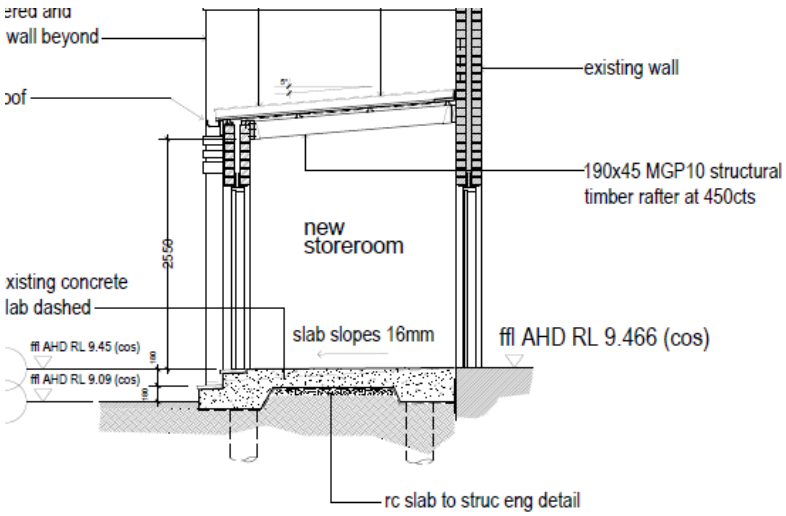
This report assesses the **DA Level Design** for the proposed **Proposed new storeroom at South Curl Curl SLSC** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

The primary purpose of the report is to identify any non-compliances with the deemed-to-satisfy provision of the BCA, relevant for the **DA Level Design.**

Subject to compliance with the recommendations of this report, the development can readily comply with the relevant requirements of the BCA. Recommendations have been identified as follows:

- Significant BCA matters, being those with the ability to affect the design have been included in Table 1.0 below.
- A BCA Compliance Schedule suitable for the current level of design is also contained in in Table 6.0 of this report. This schedule contains additional recommendations (*which are not considered to significantly affect the current design – or are subject to certification from others).*

Table 1.0 – Significant BCA Compliance Matters

#	DTS Clause	Recommendation	Status
BCA Part D1 Provision for Escape & D2 Construction of Exits			
1.	D2.15	**Thresholds** There are 2 x steps within the threshold of the external doorway (of the new storeroom). This issue is proposed to be supported via BCA Performance Solution by MSA at Construction Certificate stage.  	**Performance Solution Proposed** ***(CC Stage)***
BCA Section E Fire Services & Equipment			
2.	E1.3	**Fire Hydrants** It is not known whether the building is provided with fire hydrant coverage (as would typically be required for the existing building (as the floor area exceeds 500m^2). As the proposed works see an increase in fire compartment size (and potential fire load), it is recommended that hydrant coverage be confirmed at CC stage. Where fire hydrant coverage is not available a performance solution may need to be considered.	**Design certificate required from others** ***(CC Stage)***
3.	E1.4	**Fire Hose Reels** Where the floor area of the fire compartment(s) exceeds 500m^2, a fire hose reel (FHR) system would typically be required (none were noted in the main entrance level at the time of inspection). As the proposed works see an increase in fire compartment size (and potential fire load), it is recommended that the size of the existing fire compartments be confirmed. Where the floor area exceeds 500m^2, it is recommended that a FHR system be provided as per BCA E1.4 & AS2441 OR that the new storeroom be constructed as a separate fire compartment (this could be achieved by providing fire doors between the storeroom and remainder of existing hall.	**Design certificate required from others** ***(CC Stage)***

1.0 Introduction

This report assesses the **DA Level Design** for the proposed **Proposed new storeroom at South Curl Curl SLSC** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

2.0 Assessed Information

The following information was specifically relied upon for this assessment:

- Desktop assessment of **DA design documentation** and supporting design plans and information prepared by Building Assets Planning Delivery NBC (refer **Attachment C – Assessed Plans**)
- The Building Code of Australia (National Construction Code) 2019 – Amendment 1
- The Guide to the Building Code of Australia (National Construction Code) 2019 – Amendment 1

3.0 Purpose & Basis of the Report

3.1 Report Purpose

The purpose of this report is to assess the following:

- Assess the design documentation and requirements of the current BCA, and detail any significant issues (or those which have the ability to affect the current design);
- Provide recommendations to best address any significant departures from the requirements of BCA and to guide the detailed (construction certificate stage) design development.

3.2 General Basis

The general basis of this report is to assess and address compliance with the significant requirements of the Building Code of Australia (BCA) as relevant to the new building works and with regard to the site conditions and current design documentation. The scope of services is limited to assessment against *Sections C - Fire Resistance, Section D - Access & Egress and Section E - Services & Equipment, Section F - Health and Amenity, and high-level parameter advice on Section B – Structure and Section J - Energy Efficiency* of the BCA.

3.3 Regulatory Basis

3.3.1 Environmental Planning & Assessment Act, 1979 and Regulation 2000

This report assumes compliance with the Building Code of Australia is required under Environmental Planning & Assessment Act, 1979 and Regulation 2000.

3.3.2 Development within Existing Buildings (Where applicable)

Where a development is being undertaken to an existing building, the following methodology is used to determine if 'the building works' comply with the BCA:

- All *new* works must comply with the BCA, and
- The new works must not cause a contravention of the BCA within the existing building. If a contravention is caused, it must be addressed, and
- The new works must not cause a *reduction* in the fire protection afforded to the existing building when compared to existing, and
- The existing building (beyond the scope of the above three dot points) need not upgraded to comply with the BCA – *unless required otherwise by the Consent or Certifying Authority.*

4.0 Limitations & Exclusions of the Report

The Report does not specifically consider anything beyond the considerations contains in Section 2.0 "Assessed Information" and Section 3.0 "Purpose & Basis of Report" and is otherwise also subject to the following specific limitations:

- This report is limited strictly to assessment of the proposed project scope, i.e. 'the new building works' as detailed in the information referenced in Section 2.0 and does not constitute a full upgrade assessment of any existing building.
- The report is limited to assessment of the development against the deemed-to-satisfy provisions of the applicable Building Code of Australia.
- No assessment has been made of any existing Fire Engineering or BCA Performance based Reports that may apply to the base building or development, unless otherwise specifically noted.

- The information provided to MSA as nominated in Section 2.0 is accepted in good faith as accurate and correct.

- Some requirements of the BCA / Access Regulations are recognised as being interpretive in nature. Where these matters are encountered, interpretations are made in accordance with MSA policy &/or as guided by other standards, guides and industry best practice. Specific relevant interpretations relevant to this assessment are included in Section 5.2 "BCA Assessment Data" of this report.

- MSA does not support the use of combustible cladding or aluminium composite panels as external cladding, lining or ancillary element in any way. Such products are recommended to be avoided and where such products are proposed, MSA automatically excludes their assessment from any reporting and certification and will not accept liability for their use in any way.

- The report does not consider compliance with *The Disability Discrimination Act, 1992*, the *Disability (Access to Premises – Buildings) Standards 2010*, or accessibility related parts of the *BCA* (unless specifically referred to). A separate accessibility (DDA) report may be required.

- Detailed assessment of any engineering matters or Australian Standards– e.g: structural, civil, electrical, hydraulic, mechanical, fire, bushfire protection is beyond the scope of this report.

- The Report does not provide for any Alternative /Fire Engineered Solutions.

- NFPA 130 Assessment, Pedestrian modelling and flow assessment is beyond the scope of this report.

5.0 Building Characteristics

5.1 Building Details

5.1.1 Proposed new storeroom at South Curl Curl SLSC

The proposed works comprise the extension of the existing building to create a storeroom (which will be accessed internally and externally) – refer to floor plan extract in Figure 5.1.1 below.

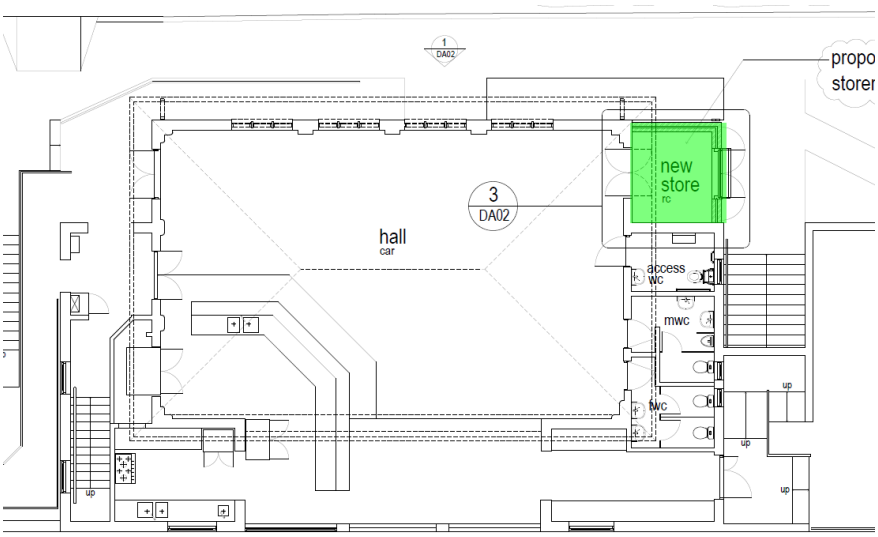


Figure 5.1.1 – Floor plan extract with new works highlighted in green.

Figure 5.1.2 – Photo showing location of proposed location of new storeroom.

5.2 BCA Assessment Data

BCA Clause		Existing	Proposed
A1.1	Classification	9b (club) *Assumed not be an 'entertainment venue' by BCA definition)* 7b (storage) 6 (café) 5 (offices) 4 (caretakers residence)	Unchanged by proposed development
A3.2	Rise in Stories	2	Unchanged by proposed development
C1.2	Construction Type	B	Unchanged by proposed development
C2.2	Floor areas and Fire Compartment Limitations	Ground floor: ≈650m^2 First floor: ≈235m^2 *(Compliant with BCA C2.2)*	Ground floor: ≈650m^2 First floor: ≈244m^2 *(Remains compliant with BCA C2.2)*
Scd 3	Effective Height	Less than 12m	Unchanged by proposed development
D1.13	Occupant Numbers	As per BCA D1.13	Unchanged by proposed development

5.3 BCA / Access Interpretation

- *Exit* means— any, or any combination of the following if they provide egress to a road or open space—

    a. An internal or external stairway.

    b. A ramp.

    c. A fire-isolated passageway.

    d. A doorway opening to a road or open space, or

    e. A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

- *Occupiable Outdoor Area* – open /unroofed sections may be considered 'occupiable outdoor area' a new definition under Part G6 of BCA 2019 that requires unroofed parts of buildings meet certain BCA criteria in relation to fire resistance, egress and services and equipment as these areas can have an effect on the safety of occupants.

6.0 BCA Recommendations

The following Table 6.0 provides a summary of assessment of the architectural plans against the significant requirements of the BCA. The following notations are made in the "Status" column of Table 6.0 for ease of reference.

Status	Description
Complies	The design documentation for the development demonstrates compliance with the BCA deemed-to-satisfy (DTS) provisions as relevant to the new building works &/or the existing level of compliance is maintained.
Can Readily Comply **Detail Required** **To be addressed in BCA Specification**	Though strict & full compliance can't necessarily be ascertained on the current level of documentation detail, compliance can be readily achieved within the constraints of the design. *Further detail should be provided as a plan or BCA specification note at construction certificate (CC) stage.*
NA / Informational	The matter is not applicable to the item of the project scope or the clause is informational only
Does Not Comply	There is an apparent or foreseeable non-compliance with the BCA deemed-to-satisfy provisions indicated on the design documentation that will require re-design or further consideration.
Fire Engineering or BCA Performance Solution	A BCA Performance Solution Report (or Fire Engineering Report) is proposed to support a non-compliance with the DTS provisions. *The recommendations of the performance solution report must be incorporated into the design.*
Design Cert Required from Others	A certificate is required from the relevant designer &/or design engineer to certify their design is compliant with the specified requirements of the BCA &/or referenced Australian Standards. This design certificate will typically accompany their design plans or specifications.

Table 6.0 provides a summary of key BCA considerations only and should be read in conjunction with the full terms, wording and requirements of the Building Code of Australia to ensure compliance. Some BCA Clauses that are not relevant have specifically not been included in the Table.

Table 6.0 –BCA Compliance Schedule

BCA Cl.	BCA Requirement	Compliance Comment	Status
BCA Regulatory Compliance			
Various	**BCA Compliance – New Works & No Reduction in Fire & Life Safety** For works within existing buildings, it must be demonstrated that the modifications to maintain the existing level of fire safety.	*Fire & Life Safety* The certifying authority will need to confirm the development will not 'reduce the fire protection afforded to the occupants of the building' in comparison the existing building design to meet the Environmental Planning & Assessment Act, 1979 (EP&A Act) Regulatory benchmark.	**Informational**
Section B – Structure			
Section B	**Structural Compliance** All new works must meet current Structural Requirements of Section B of the BCA. Existing structures should be confirmed as capable of supporting any new loads.	Structural Engineer to certify any new structural works are in accordance with BCA Section B & Australian Standards in detailed (construction certificate stage) design. For existing buildings, the structural engineer should confirm the existing building is capable of supporting the new loads.	**Design certificate required from others**
B1.4	**Glazing – BCA Clause B1.4** All glazing must be selected and installed in accordance with AS2047 & AS1288.	There is no glazing affected.	**Non applicable**
Section C – Fire Resistance			
Part C1 – Fire Resistance & Stability			
C1.1	**Type of Construction / Fire Resistance of Building Elements** All new works must meet current Fire Resistance Level (FRL) requirements of Section C and Specification C1.1 of the BCA for the required Type of Construction.	The building is required to be Type B construction. The proposed new works are not required to achieve a FRL under this clause (on the assumption that the external walls are located more than 18m from the far side of the adjoining road)	**Complies**
Spec C1.1.	**Fire Protection for Support of Another Part** Where a building element vertically or laterally supports a building element required to have an FRL, that part must generally maintain the same FRL as the part it supports.	NA to subject works.	**Non applicable**
	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 a building element must not reduce the fire-resistance of that element below that required.	To be noted by the design team.	**Informational**
C1.2	**Rise in Stories** The building rise in stories is generally the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space above the finished ground next to that part.	Informational clause. Refer to Table 5.2 of this report for calculation of rise in storeys of the subject building.	**Informational**
C1.3	**Buildings of Multiple Classification** In a building of multiple classification, the type of construction applying to the top storey, applies throughout.	Informational clause.	**Informational**
C1.4	**Mixed Types of Construction** Informational clause relating to the requirements for buildings more than one type of construction.	Informational clause.	**Informational**
C1.5	**Two Storey Class 2, 3 or 9 buildings** Provides a concession for construction type in certain Class 2, 3 and 9b buildings.	Informational clause.	**Informational**
C1.6	**Class 4 Parts** Provides construction type requirements for Class 4 parts	There are no class 4 parts in the subject development.	**Informational**

BCA Cl.	BCA Requirement	Compliance Comment	Status
C1.7	**Open Spectator Stands** Provides construction type requirements for buildings containing open spectator stands.	There are no open spectator stands in the subject building.	**Informational**
C1.8	**Lightweight Construction** Lightweight construction must comply with Specification C1.8 where it is used for fire rated elements and/or lifts shafts.	There do not appear to be any areas where fire rated lightweight construction is proposed/required.	**Non applicable**
C1.9	**Non-combustible building elements** a) In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible: • External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation. • The flooring and floor framing of lift pits. • Non-loadbearing internal walls where they are required to be fire-resisting. b) 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 • a building required to be of Type B construction, subject to C2.10, in— - a Class 2, 3 or 9 building; and - a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys. c) A loadbearing internal wall and a loadbearing fire wall, including those that are part of a loadbearing shaft, must comply with Specification C1.1. d) Certain concession apply for elements containing certain combustible elements such as plasterboard, FC and come bonded laminates	As the building is required to be of Type A or B construction, non-combustible elements must be proposed for all specified building elements. The proposed cavity brickwork is expected to generally comply however, the architect should confirm full compliance during detailed (construction certificate stage) design. *Important Note: In any case, MSA does not support the use of combustible cladding or aluminium composite panels as an external cladding, lining or ancillary element in any way. Such products are recommended to be avoided and where such products are proposed, MSA automatically excludes their assessment from any reporting and certification and will not accept liability for their use in any way. Non-combustible materials are recommended.*	**Can Readily Comply**
C1.10	**Fire Hazard Properties** Fire hazard properties for all new floor, wall and ceiling linings and assemblies must comply with BCA Specification C1.10 (or otherwise considered non-combustible).	All floor, wall and ceiling linings must meet the fire hazard properties specified in BCA Specification C1.10 or will be non-combustible. Plan or specification note required and test reports for all products should be obtained from a registered testing authority confirming compliance.	**To be addressed in BCA Specification**
C1.11	**Performance of external walls in fire** Concrete external walls that could collapse as complete panels (e.g. tilt-up and pre-cast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification C1.11.	Tilt-up panels do not appear to be proposed in the subject development.	**Non applicable**
C1.13	**Fire protected timber: Concession** Fire protected timber can be used in certain Class 2, 3 or 5 buildings subject to meeting specified conditions in this clause.	NA – no protected timber proposed	**Non applicable**
C1.14	**Ancillary Elements** An ancillary element must not be fixed, installed or attached to the internal parts or external face of an external wall that is required to be non-combustible unless it is non-combustible or otherwise specified (given concession) in this clause.	Refer to comments in BCA C1.9 above. *Important Note: MSA does not support the use of combustible cladding or aluminium composite panels as an external cladding, lining or ancillary element in any way. Such products are recommended to be avoided and where such products are proposed, MSA automatically excludes their assessment from any reporting and certification and will not accept liability for their use in any way. Non-combustible materials are recommended.*	**Can Readily Comply**

BCA Cl.	BCA Requirement	Compliance Comment	Status
Part C2 – Compartmentation & Separation			
C2.2	**Fire Compartment Floor Area & Volume Limitations** The BCA requires that the floor area of fire compartments is limited to certain areas and volumes dependant on the Type of Construction. • Type C - Max FA of 3, 000m^2 & Volume of 18, 000m^2 • Type B - Max FA of 5, 500m^2 & Volume of 33, 000m^2 • Type A - Max FA of 8, 000m^2 & Volume of 48, 000m^2	The floor area and volume of the proposed fire compartments is within the limitations for the relevant Construction Type.	**Complies**
C2.3	**Large Isolated Buildings** Provides concessions from the fire compartment floor area and volume limitations of BCA C2.2 for 'large-isolated buildings'	The building is not considered to be a 'large-isolated building'.	**Non applicable**
C2.4	**Requirements for Open Space & Vehicular Access** Provides requirements for open space and vehicular Access for large-isolated buildings.	The building is not considered to be a 'large-isolated building'.	**Non applicable**
C2.5	**Class 9a & 9c Buildings** Class 9a and 9c buildings are subject to further requirements in terms of smoke and fire compartmentation. Note BCA NSW C2.5 contains variations to this clause (Applicable in NSW)	The building is not a Class 9a or 9c building.	**Non applicable**
C2.6	**Vertical Separation of Openings in External Walls** In buildings required to be of Type A construction, openings in external walls are required to be protected with vertical spandrels or horizontal slabs to prevent fire from spreading from a storey below. Vertical separation must be in the form of: • 'Vertical spandrels' which must be non-combustible, have a FRL of at least 60/60/60, and a height of at least 900mm. At least 600mm must be above the surface of the intervening floor; OR • Horizontal Slab separation (e.g. balcony) – which must have a FRL of not less than 60/60/60 and extend outwards of the opening not less than 1100mm and horizontally not less than 450mm from the side of the opening.	The building is not required to be of Type A construction and not subject to this clause.	**Non applicable**
C2.7	**Separation by Fire Walls** Provides the requirements for fire wall construction.	There are no fire walls required in the subject development.	**Non applicable**
C2.8	**Separation of Classifications Within the Same Storey** Separate classifications within the same storey must either be (a) separated by a fire wall or built to the highest FRL required by the two classifications throughout.	The storeroom is considered part of the class 9b classified (being less than 10% of the floor area of the storey) and is not required to be fire separated under this clause.	**Non applicable**
C2.9	**Separation of Classification between Stories** Floor separating differing classifications must meet the FRL required for the upper level floor.	NA to subject development.	**Non applicable**
C2.10	**Separation of Lift Shafts** Where a lift connects or passes by more than 2 stories, or more than 3 stories in a sprinkler protected building, the lift must be contained in a fire rated lift shaft achieving an FRL of no less than: • Type A Construction – the shaft meets the FRLs specified in Table 3 of Spec C1.1 • Type B Construction - if loadbearing, the shaft meets the FRLs specified in Table 3 of Spec C1.1, if non-loadbearing, the shaft must be non-combustible. • Openings for lift landing doors and services must meet BCA Part C3.	NA to subject development.	**Non applicable**

<table>
<tr><th>BCA Cl.</th><th>BCA Requirement</th><th>Compliance Comment</th><th>Status</th></tr>
<tr><td>C2.11</td><td>Stairways & 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.</td><td>NA to subject development.</td><td>Non applicable</td></tr>
<tr><td>C2.12</td><td>Separation of Equipment

Certain equipment must be separated from the remainder of the building with 120/120/120 construction including lift motors & control panels, emergency generators for emergency equipment, central smoke control plant, boilers, batteries and fire hydrant pumps.</td><td>NA to subject development.</td><td>Non applicable</td></tr>
<tr><td>C2.13</td><td>Electricity Supply System

Electrical substation and main electrical switchboards must generally be separated from the remainder of the building by 120/120/120 construction.</td><td>NA to subject development.</td><td>Non applicable</td></tr>
<tr><td>C2.14</td><td>Public corridors in Class 2 & 3 Buildings

Where 'public corridors' in a Class 2 or 3 building exceed a length of 40m, they must be subdivided into smoke compartments (at intervals of not more than 40m).</td><td>NA to subject development.</td><td>Non applicable</td></tr>
<tr><td colspan="4">Part C3 – Protection of Openings</td></tr>
<tr><td>C3.2</td><td>Protection of Openings in External Walls

Openings in an external wall that is required to have an FRL must be protected against the spread of fire (drenchers, fire rated glazing, fire shutters) if they are not less than:

• 3m from a side or rear boundary of the allotment, or

• 6m from the far boundary of a road, river lake or the like adjoining the allotment (except for ground level openings), or

• 6m from another building on the same allotment

• If required to be protected, must not occupy more than 1/3 of the area of the external wall of the storey in which it is located</td><td>There are no openings in external walls requiring protection under this clause (new external door opening >3m from any fire source feature).</td><td>Complies</td></tr>
<tr><td>C3.3</td><td>Separation of External Walls and Associated Openings in Different Fire Compartments

Distance (and angle) between external walls and associated openings in different fire compartments must be:

<table><tr><th>Angle Between Walls (Degrees)</th><th>Minimum Distance</th></tr><tr><td>0</td><td>6m</td></tr><tr><td>0-45</td><td>5m</td></tr><tr><td>45-90</td><td>4m</td></tr><tr><td>90-135</td><td>3m</td></tr><tr><td>135-180</td><td>2m</td></tr><tr><td>180 or more</td><td>NIL</td></tr></table>
Concessions apply if those parts of each wall have an FRL of minimum 60/60/60, and any openings protected in accordance with C3.4</td><td>There are no external walls/openings subject to this clause.</td><td>Non applicable</td></tr>
<tr><td>C3.4</td><td>Acceptable Methods of Protection

(a) Openings required to be protected under Clause C3.2 (or C3.3) above must be protected as follows:

(i) Doorways—

(A) internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing; or

(B) /60/30 fire doors that are self-closing or automatic closing.

(ii) Windows—</td><td>Informational clause only.</td><td>Informational</td></tr>
</table>

BCA Cl.	BCA Requirement	Compliance Comment	Status
	(A) internal or external wall-wetting sprinklers as appropriate used with windows that are automatic closing or permanently fixed in the closed position; or (B) /60/ fire windows that are automatic closing or permanently fixed in the closed position; or (C) /60/ automatic closing fire shutters. (iii) Other openings— (A) excluding voids — internal or external wall-wetting sprinklers, as appropriate; or (B) construction having an FRL not less than /60/. (b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.		
C3.5	**Doorways in Fire Walls** • The aggregate width of doorways in fire walls must not exceed ½ of the length of the fire wall. • The doorways can be protected with 1 or 2 doors to achieve the required FRL • Doors must be self or automatic closing	There are no doorways in fire walls currently proposed.	**Non applicable**
C3.6	**Sliding Fire Doors** Sliding fire doors must automatically close in accordance with this clause and be provided with warning signage.	There are no sliding fire doors currently proposed.	**Non applicable**
C3.7	**Protection of Doorways in horizontal exits** • Doors in horizontal exits must achieve the same FRL as that of the fire wall • Doors must be self or automatic closing	There are no horizontal exits currently proposed.	**Non applicable**
C3.8	**Openings if fire isolated exits** Doorways serving the fire isolated exit must be protected with a self-closing fire door achieving a FRL of not less than -/60/30. Where the window in the external wall of a fire isolated exit is within 6m and exposed to a window or other opening in a wall of the same building it must be protected externally in accordance with Clause C3.4.	There are no fire isolated exits required/proposed.	**Non applicable**
C3.9	**Service Penetrations in fire-isolated exits** Service penetrations in fire exits must comply with this clause. Generally, only electrical wiring and water supply pipes for fire services are permitted within the exits.	There are no fire isolated exits required/proposed.	**Non applicable**
C3.10	**Openings in Fire isolated lift shafts** • The entrance doorways must be protected with fire doors (achieving a FRL of not less than -/60/- which comply with AS1735.11 and are set to remain in the closed position (except when discharging or receiving passengers) • The lift indicator panels and the like must be backed with construction achieving a FRL of not less than -/60/60 – if it exceeds an area of 35,000mm^2	There are no fire isolated lift shafts required/proposed.	**Non applicable**
C3.11	**Bounding Construction** • Applies to Class 2 and 3 buildings and Class 4 parts • The entrance doorways of the sole occupancy units, which open onto a public corridor must be protected with a self-closing fire door achieving a FRL of not less than -/60/30. • In a Class 2 or 3 building, where the path of travel to an exit does not provide a person seeking egress with a choice of travel in different directions to alternative exits and is along an open balcony, landing or the like and	There are no class 2, 3, 4 or 9b parts in the subject building subject to this clause.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	passes the external wall of another unit or other room, then that wall must be fire rated and openings protected internally. • Note NSW C3.11 Bounding Construction: Class 2, 3, 4 and 9b buildings		
C3.12 & C3.15 & C3.16	**Openings for Service Installations & Construction Joints** • Where services penetrate a building element required to have an FRL, the services must generally be protected against the spread of fire (mechanical with dampers, hydraulic with collars and electrical with fire rated mastic). Alternatively, a fire rated shaft can be provided through floors if desired. • All cable penetrations through floors or fire walls must be fire stopped in accordance with BCA C3.15 and AS1530.4. • Fire-rated mastic or other approved product tested to AS1530.4 is required to seal gaps in fire rated construction.	There are no building elements required to achieve a FRL.	**Non applicable**
C3.17	**Columns protected in lightweight construction to achieve FRL** Columns protected in lightweight construction which penetrate a building element required to achieve a FRL or a RISF must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or RISF.	There are no columns proposed to be protected in lightweight construction.	**Non applicable**
Section D – Access & Egress			
Part D1 – Provision for Escape			
D1.2	**Number of Exits Required** At least one exit must be provided from each storey of every building At least 2 alternative exits must be provided from: • Every storey of a building which has an effective height of more than 25m • Basement storeys where egress from the building involves a vertical rise of 1.5m or more (some small basements provided with an exemption) • Class 8 buildings with a rise in storeys of more than 6 • A storey which contains a 'patient care area' • A storey which contains sleeping areas in a Class 9c building • Every storey in a childcare centre • Each storey of a primary/secondary school with a rise in storeys of 2 or more • Any storey in a Class 9 building which accommodates more than 50m • Additional requirements apply to Class 9a and 9c buildings and to open spectator stands. • Egress is not permitted to be provided through another sole occupancy unit.	The design shows general compliance with this clause.	**Complies**
D1.3	**When Fire Isolated Exits Are Required** Exits are required to be fire isolated depending on the Classification of the building and number of storeys connected. The following general requirements apply (exits are required to be fire isolated in the following circumstances): • Class 2 buildings – > 3 consecutive storeys • Class 3 buildings – > 2 consecutive storeys • Class 5-9 buildings (> 2 consecutive storeys) • Class 9a (patient care parts) & 9c buildings – all exits to be fire isolated. Note D1.7 in relation to discharge of exits.	Fire isolated exits are not required in the subject building.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status

D1.4	**Exit Travel Distances**
	• Class 2 & 3 buildings
	  ○ The distance between the entrance door of a Sole Occupancy Unit (SOU) and an exit or Point of Choice (POC) to 2 alternative exits must not exceed 6m (20m on ground floor)
	  ○ From all parts not in a SOU – 20m to exit or POC
	• Class 4 buildings – entrance door of SOU to exit or POC must not exceed 6m
	• Class 5, 6, 7, 8 or 9 buildings – 20m to exit or POC
	• Additional requirements apply to Class 9 buildings, and open Spectator stands
		Travel distances are considered generally compliant with this clause.	**Complies**

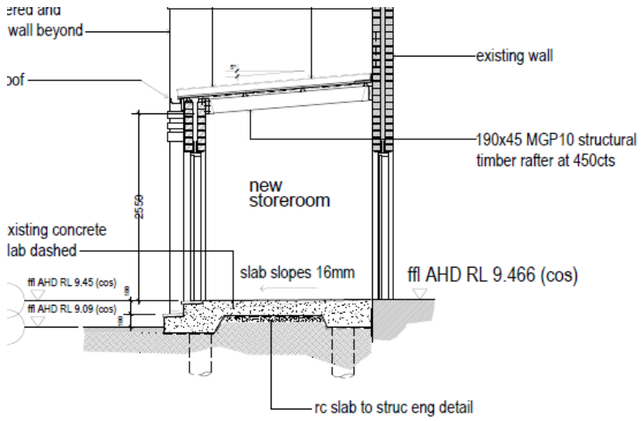
D1.5	**Distance Between Alternative Exits** • BCA requires that where exits are provided as 'alternative' should be distributed as uniformly as possible around the storey. • Alternative exits must: • Be not less than 9m apart • Be not more than 45m apart in a Class 2 or 3 building (or patient care area in a Class 9a building) • Be not more than 60m apart in any other case • Be located so that alternative paths of travel do not converge to be less than 6m apart.	Distances between exits are considered generally compliant with this clause.	**Complies**
D1.6	**Dimensions of Exits & Paths of Travel to Exits** • A minimum 1m egress path of travel must be provided, which can be reduced to 750mm at doorways (850mm for accessibility). • Appropriate aggregate exit width must be provided or maintained in the building to allow for safe egress of the building populations. • Exits should not diminish in width in the direction of travel / egress.	Dimensions for exits and paths of travel and doorways to be provided on plans and in door schedule, with attention paid to the following: • At least one leaf of the internal doors to the storeroom must provide a clear width of 750mm	**Can Readily Comply**

D1.7	**Travel via Fire Isolated Stairs**
	• Doors from rooms must not open directly into a fire isolated exit (unless the room is a public corridor, lobby, SOU occupying the whole of storey, or sanitary compartment.
	• Fire isolated exists must provide independent egress from each storey served and discharge directly to:
	  ○ A road or open space
	  ○ A covered area of the building which is suitably open
	• Where a path of travel from a fire isolated exit involves passing within 6m of the external wall of the building, the external wall must be fire rated and openings protected in accordance with BCA C3,4.
		Fire isolated exits are not required in the subject building.	**Non applicable**

D1.8	**External Stairways or ramps in lieu of Fire Isolated Stairs** This clause permits external stairways to be used in lieu of fire isolated exits – providing the external stairs are suitably protected.	There are no external stairs proposed to be used in lieu of fire isolated exits.	**Non applicable**
D1.9	**Travel Via Non-Fire Isolated Stairs & Ramps** • Non-fire-isolated exits serving as a required exit must provide a continuous measure of travel by its own flights and landings to the level at which egress to a road or open space is provided.	There are no stairs/ramps subject to this clause.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	• The distance between the doorway of an SOU and the point of egress to a road or open space must not exceed – 30m (Type C construction) or 60m in any other case. • The distance between any point on the floor and the point of egress to road/open space in a Class 5, 6, 7, 8 or 9 building must not exceed 80m. • The distance between the point of discharge of a non-fire isolated stair and a doorway leading to road open space must not exceed 15m for Class 2 or 3 buildings, or 20m for Class 5, 6, 7, 8 or 9 buildings • In Class 2 or 3 buildings – non-fire isolated exits must provide separate egress to road/open space and be smoke separated at the level of discharge.		
D1.10	**Discharge of Exits** • Exits from the building must be provided with an unobstructed path of travel to the street. Where exits discharge at a level that is different to the street level, compliant stairs and ramps must be provided to the street. • Where necessary, exits must be provided with suitable barriers or bollards to prevent vehicles blocking them.	Discharge from exits appears generally compliant with this clause.	**Complies**
D1.11	**Horizontal Exits** • Horizontal exits must not be used between SOUs or from a childcare centre or primary/secondary school. • Sufficient space must be allocated on either side of the fire wall serving as a horizontal exit. • Additional requirements apply in Class 9a or 9c buildings.	There are no horizontal exits currently proposed.	**Non applicable**
D1.12	**Non-required Stairways, Ramps or Escalators** An escalator, moving walkway or non-required non-fire-isolated stairway or pedestrian ramp must not connect more than 2 consecutive stories, or 3 consecutive stories in a sprinklered building where one storey is at the level of open space.	There are no non-required stairways, ramps or escalators proposed.	**Non applicable**
D1.13	**Number of Persons Accommodated** The number of persons accommodated on each storey can be determined by using the estimates based on floor area in Table D1.13.	Informational clause to calculate populations where they are not otherwise known.	**Informational**
D1.14 & D1.15	**Measurement of Distances & Method of Measurement** Provides details for how to measure distances for exits.	Informational clause only.	**Informational**
D1.16	**Plant Rooms and lift Motor Rooms: Concession** Provides concessions for egress requirements in certain plantrooms.	Informational clause only.	**Informational**
D1.17	**Access to lift pits** Provides requirements /concessions relating to access to lift pits	Lift pits not currently indicated.	**Informational**
Part D2 - Construction of Exits			
D2.1	**Application of Part** With the exception of certain clauses (relating to stair construction, handrails, balustrades, door hardware and window fall protection, this Part does not apply to the internal parts of a SOU in residential buildings – to be noted.	Informational clause only.	**Informational**
D2.2	**Fire-Isolated stairways and ramps** The fire isolated stairs must be of non-combustible construction and be design such that if there is local failure it will not cause structural damage to or impair the fire resistance of the shaft.	There are no fire isolated stairs or ramps proposed/required.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
D2.3	**Non-Fire Isolated Stairways & Ramps** Must generally be concrete, steel or 44mmm timber. Applies to buildings with a rise in storeys of more than 2.	There are no non-fire isolated stairs subject to this clause.	**Non applicable**
D2.4	**Separation of Rising and Descending Stairs** In a fire isolated stair, rising and descending stair flights must be physically separated by non-combustible smoke proof construction.	There are no fire isolated stairs or ramps proposed/required.	**Non applicable**
D2.5	**Open Access ramps and balconies** Provides requirements for open Access ramps/balconies which are provided to meet smoke hazard management requirements of BCA E2.2a.	NA - There are no open access ramps or balconies required to be provided for smoke hazard management.	**Non applicable**
D2.6	**Smoke Lobbies** Provides requirements for smoke lobbies (where required by BCA D1.7).	NA- smoke lobbies are not required to be provided under this clause.	**Non applicable**
D2.7	**Installations in the Path of Travel** • Electrical distribution and telecommunications, boards etc. where located in a path of travel to an exit, must be enclosed in non-combustible construction, with openings suitably smoke sealed. • Gas services must not be located in a required exit • Wiring associated with fire, security, lighting may be installed in a fire isolated exit • Access to service shafts (other than for fire services) must not be provided from a fire isolated exit.	Installations do not appear to be affected by the proposed development.	**Non applicable**
D2.8	**Enclosure of Space Below Stairs** Enclosed cupboards must not be installed in fire isolated stairs and if installed under non-fire isolated stairs must be fire separated with 60/60/60 walls & ceilings with self-closing -/60/30 fire doors. Any cages must be at least 50% open to not be considered 'enclosed' and avoid fire rating under this clause.	There are no enclosures below stairs indicated on the current plans.	**Non applicable**
D2.9	**Width of Required Stairways & Ramps** A stair or ramp wider than 2m only counts as 2m for aggregate exit width purposes if there is no dividing handrails.	Informational.	**Informational**
D2.10	**Pedestrian Ramps** • Fire isolated ramps may be used in lieu of fire isolated stairways • Ramps must not exceed a grade of 1:14 where required to be 'accessible', or 1:8 in any other case. • Ramp surface must be slip resistant.	There are no ramps in the subject development subject to this clause.	**Non applicable**
D2.11	**Fire-Isolated Passageways** Fire isolated passageways must generally achieve a FRL consistent with the stair/ramp to which it is connected OR 60/60/60 in any other case.	There are no fire isolated passageways proposed/required.	**Non applicable**
D2.12	**Roof as Open Space** If an exit discharges to the roof of a building, the roof must achieve a FRL of 120/120/120 and not contain any openings/rooflights etc within 3m of the path of travel.	The roof of the building is not relied upon as 'open space'.	**Non applicable**
D2.13	**Goings & Risers** To satisfy BCA D2.13, a stairway must have— • Not more than 18 and not less than 2 risers in each flight	There are no stairs affected by the proposed works.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	• Going/riser/quantity dimensions in accordance with BCA Table D2.13 • Constant riser/going dimensions (variation 5mm between treads and 10mm overall permitted) • Required exits must not contain winders in lieu of a quarter landing (up to 3 winders in a quarter landing are permitted in non-required stairs and in residential SOUs') • Solid treads required where stair exceed 10m in height or 3 storeys • No openings that would allow a 125mm sphere to pass through • Slip resistant treads or nosings • Where consecutive flights contain more than 36 risers in a Class 9b building, the stair must contain a minimum 30 degree change in direction. • Bottom riser may vary when meeting a public road only		
D2.14	**Landings** Landings at least 750mm long must be provided to divide stairs into flights no greater than 18 and be no steeper than 1:50 & be slip resistant as per BCA Table D2.14	Landings not affected by the proposed works.	**Non applicable**
D2.15	**Thresholds** A doorway must generally not contain a step or ramp within the door threshold unless it is leading externally, and the step is no greater than 190mm (except on accessible paths where no step is allowable).	There are 2 x steps within the threshold of the external doorway (of the new storeroom). This issue is proposed to be supported via BCA Performance Solution by MSA at Construction Certificate stage. 	**Performance Solution Proposed** ***(CC Stage)***
D2.16	**Barriers to Prevent Falls** • The following general requirements are applicable • Balustrades to balconies and landings must be not less than 1,000mm in height • Balustrades to the sides of stairs must be not less than 865mm high, measured along the nosing line • Balustrades must not have any openings which would allow a 125mm sphere to pass through • Balustrades serving a floor which is more than 4m above the surface beneath must not incorporate 'climbable elements' in the zone between 150mm and 760mm above the floor • Balustrades are also required to operable windows where the sill height is less than 865mm and it is possible for a person to fall more than 4m.	There are no balustrades proposed/required.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	• Balustrades in fire isolated stairs must comply with BCA Clause D2.16 (g) & (h) (i) (no opening >300mm & where rails are used the rail must not permit a 150mm sphere to pass through the nosing line and the bottom rail, openings between rails not to exceed 460mm)		
D2.17	**Handrails** • A handrail is required to at least one side of every stairway or ramp (and to both sides where the stair has a width of 2m or more) • Handrails must be at a height of not less than 865mm above the stair nosing line (additional handrail at 665-750mm to be provided in primary schools) • The handrail must be continuous between stair flight landings and have no obstructions that will tend to break a hand-hold (except for newel posts, ball type sanctions or the like). • Handrails required to assist people with disabilities must comply with BCA D3.3. • In a required exit, the handrail must comply with Clause 12 of AS1428.1. This typically requires the handrail to have a continuous height to the stair nosing line & around landings, and also incorporate extensions/terminations at the top and bottom as per AS1428.1. • Additional requirements apply to Class 9a and 9c buildings	There are no handrails proposed/required.	**Non applicable**
D2.18	**Fixed Platforms, Walkways, Stairways & Ladders** Informational clause only noting fixed platforms, walkways and ladders for Access can be in accordance with AS1657 to service/plant areas or in low-use areas in a residential SOU. In summary this requires: • Risers (R) of 130mm-225mm • Goings (G) of 215-355mm • Ratio of 2R+G = 540mm-700mm • Minimum 600mm clear width, 1m preferred • Clear overhead height of 2000mm • Landings at top and bottom at least as deep as the stair is wide • Highlighted nosings • Continuous handrail to both sides if stair is >1m in width, at least one handrail if <1m • Guardrailing ≥900mm in height with mid rail at 450mm max spacing or 560mm if no toeboard installed for bottom spacing • Gaps between adjacent guardrails must be between 25mm-50mm	Informational clause only.	**Informational**
D2.19	**Doorways & Doors** • Doors in required exits must not be fitted with roller shutters/tilt up doors (except in Class 6-8 SOUS with a floor area of not more than 200m^2, and where only one exit is required, and the door is held open when in use. • Doors in required exits must not be sliding unless the door leads directly to road/open space (and can be manually opened with force less than 110 N) • Where power operated doors are provided they must open automatically on power failure or fire alarm trip. • Additional requirements apply to Class 9a and 9c buildings.	The design shows general compliance.	**Complies**

BCA Cl.	BCA Requirement	Compliance Comment	Status
D2.20	**Swinging Doors** • Doors gates serving as a required exit for public areas should typically swing in the direction of egress and must generally not impede egress paths. • Doors can swing against the direction of egress if serving building areas less than 200m^2, are the only exit and a hold-open device is provided to the door.	There are no doors in 'required exits' affected.	**Non applicable**
D2.21	**Operation of Latch** • Exit doors and doors in a path of travel to an exit must generally be readily operable without a key from the side that faces a person seeking egress by a single handed downward action or pushing action on a single device which is located between 900mm and 1100mm above the floor. • Some concessions are provided to certain buildings – including doors in a residential SOU, childcare centers, banks, jails, metal health facilities. Doors which open automatically on the activation of a fire trip are also provided with a concession under this clause. • Additional requirements apply to assembly buildings accommodating more than 100 people (which generally requires that panic bars be provided)	Details for door hardware for egress doors and doors in a path of travel to an exit must be provided in the plans, specification or door schedule (at CC stage).	**Can Readily Comply**
D2.22	**Re-entry from Fire isolated exits** Doors in fire isolated exits in Class 9a/9c buildings and buildings with an effective height exceeding 25m must not be locked from the inside of the exit. Some exemptions can be applied where security measures are implemented.	The building does not have an effective height of more than 25m.	**Non applicable**
D2.23	**Signs on Doors** Signage must be provided to fire exit doors.	The doors are not subject to this clause.	**Non applicable**
D2.24	**Protection of openable windows** This clause applies to all windows serving a bedroom in the Class 2/3/4 buildings and in Class 9b buildings. Where the window (serving a floor more than 2m from the surface beneath) has a sill height of less than 1.7m, the openable portion of the window must be fitted with: • A device to restrict the window openings; or • A screen with secure fittings *(refer to Clause D2.24 for requirements)* • Note balustrading may also be required to windows.	There are no class 2-4 or 9b parts proposed subject to this clause.	**Non applicable**
Section E – Services & Equipment			
Part E1 – Fire Fighting Equipment			
E1.3	**Fire Hydrants** Fire hydrant coverage meeting AS2419.1 must be confirmed / provided: • to buildings or new parts that are over 500m^2 in total floor area • to any additional floor area in an existing building that is already provided with hydrant coverage	It is not known whether the building is provided with fire hydrant coverage (as would typically be required for the existing building (as the floor area exceeds 500m^2). As the proposed works see an increase in fire compartment size (and potential fire load), it is recommended that hydrant coverage be confirmed at CC stage. Where fire hydrant coverage is not available a performance solution may need to be considered.	**Design certificate required from others**
E1.4	**Fire Hose Reels** Where the building is provided with an internal fire hydrant system or incorporates a fire compartment with a floor area of more than 500m^2, it must be provided with a fire hose reel system in accordance with BCA E1.4 and AS2441.	Where the floor area of the fire compartment(s) exceeds 500m^2, a fire hose reel (FHR) system would typically be required. As the proposed works see an increase in fire compartment size (and potential fire load), it is recommended that the size of the existing fire compartments be confirmed. Where the floor area exceeds 500m^2, it is recommended that a FHR system be provided as per BCA E1.4 & As2441 OR that the new storeroom be constructed as a separate fire compartment (this could be achieved by providing fire doors between the storeroom and remainder of existing hall.	**Design certificate required from others**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	Note that fire hose reels are not required in a: • Class 2/3/4 building • Class 8 electrical substation • Class 9c building • Class 9b primary or secondary school Classrooms/corridors.		
E1.5	**Sprinklers** A building must be provided with a sprinkler system complying with BCA E1.5, Specification E1.5 and AS2118.1 - where required by BCA Table D1.5. The following buildings typically required sprinkler systems: • Buildings with an effective height of more than 25m • Class 3/9a buildings used as residential aged care • Class 6 buildings with floor area of more than 3,500m^2 or volume of 21,000m^3 • Class 7a (non-open deck) carparks accommodating more than 40 vehicles • Certain Class 9b buildings, large isolated buildings and containing an atrium • Buildings with a floor area of more than 2000m^2 or volume of more than 12,000m^3 and containing an 'excessive hazard'.	A sprinkler system is not required to be provided in the building.	**Non applicable**
E1.6	**Portable Fire Extinguishers** Portable fire extinguishers are required to serve Class A-Class E fire under BCA E1.6 & AS2444. They are not required for Class A fire where fire hose reels are otherwise provided.	Portable fire extinguishers required to be provided throughout in accordance with BCA E1.6 & AS2444. Details and design certification must be provided by the hydraulic/fire services engineer during detailed (construction certificate stage) design.	**Design certificate required from others**
E1.8	**Fire Control Centres** Fire control centres are typically required to buildings >25m in Effective Height or floor area of >18, 000m^2 in accordance with BCA E1.8 & Spec E1.8.	Fire control centre not required in the subject development.	**Non applicable**
E1.9	**Fire Precautions During Construction** Portable fire extinguishers must be provided during construction.	To be noted and complied with during construction planning.	**Informational**
E1.10	**Provision for Special Hazards** Additional PFEs may be required should the building contain special hazards.	There are no special hazards evident.	**Non applicable**
BCA Part E2 – Smoke Hazard Management			
Part E2	**Smoke Hazard Management** Smoke Hazard Management must be provided per Table E2.2a and E2.2b depending on the class, rise in stories and nature of the building design. Class 9b buildings with mechanical air-handling systems that are ducted or exceed 1000l/s must shutdown in the event of smoke detector activation. Smoke detection per AS1670.1 can be required to allow exit / egress doors to unlock in the event of emergency under BCA D2.21.	Smoke hazard management is not required under this clause.	**Non applicable**
E2.3	**Provision for Special Hazards** Suitable additional provision must be made for smoke hazard management where it is considered that the building incorporates a *special hazard*.	There are no special hazards evident.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
Part E3 – Lift Installations			
E3.1	**Lift Installations** Electrical passenger lifts and electrohydraulic passenger lifts must comply with BCA Spec E3.1	There are no lifts in the subject development.	**Non applicable**
Spec E3.1	**Lift Installations Specification** Lifts under E3.1 must be provided with the features included in BCA Specification E3.1 including; • Where exposed to solar radiation, the lift car must have mechanical ventilation at a rate of one air change per minute or mechanical cooling. • Have an alternative power source for ventilation or mechanical cooling in the event of normal power loss that last for at least 2 hours. • Contain an emergency lighting system that automatically activates upon failure of the normal lighting supply and provides at least 20 lux of lighting for 2 hours on the alarm initiation button. • Contain cooling of the lift shaft whilst the lift is in service that will– - ensure that a dry bulb air temperature in the lift shaft does not exceed 40°C - if the cooling is by a ventilation system, be provided with an air change rate determined using a temperature rise of no more than 5K.		
E3.2	**Stretcher Facilities in Lifts** Where serving a level >12m in effective height, the lift must contain a portion within the internal car dimensions that is 2000mm (deep) x 600mm (wide) to allow for stretcher facilities.	There are no lifts in the subject development.	**Non applicable**
E3.3	**Warning Against the Use of Lifts in Fire** A warning sign must be provided near the lift call buttons stating "DO NOT USE LIFTS IF THERE IS A FIRE".	There are no lifts in the subject development.	**Non applicable**
E3.4	**Emergency Lifts** Emergency lifts are typically required to buildings >25m in effective height.	There are no lifts in the subject development.	**Non applicable**
E3.5	**Lift Landings** Access and egress from lift landings must comply with BCA Section D. *Refer to DDA report for full Lift Landing Clearances and requirements for accessibility*	There are no lifts in the subject development.	**Non applicable**
E3.7	**Fire Service Controls** Fire service controls are required to lifts serving >12m in effective height including a fire service recall switch per BCA E3.9 and lift car fire control per BCA E3.10 – see below.	There are no lifts in the subject development.	**Non applicable**
E3.9	**Fire Service Recall Control Switch** Fire service recall controls are required at each lift bank where serving an effective height greater than 12m in accordance with this clause.		
E3.10	**Lift Car Fire Service Drive Control Switch** Lift car fire service control switches must be provided in accordance with this clause where serving an effective height greater than 12m.		

BCA Cl.	BCA Requirement	Compliance Comment	Status
Part E4 – Visibility in an Emergency, Exit Signs and Warning Systems			
E4.2, E4.4	**Emergency Lighting** Emergency lighting must generally be provided throughout stories greater than 300m^2, and above all required exit stairs and ramps per AS2293.1.	Emergency lighting is not required to be provided in the subject (part of the) building.	**Non applicable**
E4.5, E4.6 & E4.8	**Exit & Directional Signs** Illuminated exit signs is required above all exit doors, stairs and final exit points and where the exit isn't readily apparent, directional exit signage is required per AS2293.1.	Exit signage is not required to be provided in the subject (part of the) building.	**Non applicable**
E4.9	**Sound System & Intercom Systems for Emergency Purposes** A sound system and intercom system for emergency purposes complying where applicable with AS 1670.4 must be installed to buildings with an Effective Height >25m,	A SSISEP is not required to be provided in the subject building.	**Non applicable**
Section F – Health & Amenity			
Part F1 – Damp & Weatherproofing			
F1.1	**Stormwater Drainage** Stormwater drainage must comply with AS3500.3	Any new stormwater drainage to comply. Subject to design certification from drainage engineer.	**Design certificate required from others**
F1.4	**External Above Ground Membranes** Waterproof membranes for external above ground use (balconies, terraces etc) must comply with AS4654 Parts 1&2.	Appears NA to subject works.	**Non applicable**
F1.5	**Roof Coverings** Roof covering must comply with the following: • AS2049 - 2002 *Roof Tiles;* and/or • AS/NZS 2908 - 2000 parts 1 and 2 *Cellulose cement products*; and/or • AS/NZS 1562.2 - 1999 *Design and installation of sheet roof and wall cladding – corrugated fibre-reinforced cement* and/or • AS1562.1 - 1992 *Design and installation of sheet roof and wall cladding –metal* and/or • AS/NZS 4256 - 2012 parts 1, 2, 3 and 5 – *Plastic roof and wall cladding material* • AS1562.3 – 1996 *Design and installation of sheet roof and wall cladding –plastics* and/or • ASTM D3018-90 – 1994 , Class A ashphalt shingles surfaced with mineral granules	Any new roofing material must comply. Subject to detail, plan or spec note.	**To be addressed in BCA Specification**
F1.6	**Sarking** Must comply with AS/NZS4200-1994 Parts 1 & 2.	Any new sarking to comply. Subject to detail, plan or spec note.	**To be addressed in BCA Specification**
F1.7	**Waterproofing in Wet Areas of Buildings** Internal waterproofing to comply with AS3740-2010.	New internal waterproofing to comply. Subject to detail, plan or spec note.	**Non applicable**
F1.9	**Damp-proofing** To comply with AS/NZS 2904-Damproof courses and flashings.	Any new damp-proofing to comply. Subject to detail, plan or spec note.	**To be addressed in BCA Specification**

BCA Cl.	BCA Requirement	Compliance Comment	Status
F1.10	**Damp-proofing of Floors on Ground** To comply with AS2870 – 2011 Residential slabs and footings.	Any new damp-proofing to comply. Subject to detail, plan or spec note.	**To be addressed in BCA Specification**
F1.12	**Sub-Floor Ventilation** Subfloor ventilation openings must be provided to the underside of suspended floors in accordance with this requirement.	NA – there do not appear to be any sub-floor areas affected by the development.	**Non applicable**
F1.13	**Glazed Assemblies** *See BCA B1.4*	All new glazing to comply. Subject to detail, plan or spec note.	**To be addressed in BCA Specification**
Part F2 – Sanitary & Other Facilities			
F2.1	**Facilities in residential buildings** Facilities must be provided to residential buildings as follows: • Class 2, 4 & 9c buildings – kitchen, bath/shower, WC, washbasin & laundry facilities + WC & washbasin for employees where >10 SOU's are provided • Class 3 buildings – bath/shower	There are no residential parts affected.	**Non applicable**
F2.2	**Calculation of number of occupants and fixtures** • Number of occupants to be calculated as per BCA D1.13 • Sanitary facilities to be generally provided assuming a 50:50 male:female split • A unisex accessible sanitary facility can be counted once for each sex	Informational clause only.	**Non applicable**
F2.3	**Facilities for Class 3 to 9 Buildings** Facilities to be provided in accordance with BCA F2.3 and Table F2.3, noting: Separate facilities typically required for males and female Separate facilities required for staff and student in schools Specific kitchen, laundry and bathing facilities required to be provided in Class 9a buildings Specific facilities are required to be provided in child care centres – including junior toilet pans & basins, kitchen facilities, laundry facilities and nappy changing benches.	The existing facilities & numbers of occupants are unaffected by the proposed works.	**Non applicable**
F2.5	**Construction of Sanitary Compartments** Sanitary compartments (except in child care centres) must have doors and partitions to provide privacy. In enclosed sanitary compartments, where the distance between the closet pan and the nearest part of the doorway of an inwards swinging door is less than 1.2m, the door must be fitted with lift off hinges.	As above.	**Non applicable**
F2.6	**Interpretation: Urinals and washbasins** • Urinals may be individual stalls or a length of 600mm in a trough • A closet pan may be used in lieu of a urinal • Washbasins may be single basins or part of a trough provided with a tap	Informational Clause.	**Informational**

BCA Cl.	BCA Requirement	Compliance Comment	Status
BCA Part F3 - Room Heights			
F3.1	**Height of Rooms & Other Spaces** BCA requires that all public habitable areas must be typically: - 2700mm for public areas in a Class 9b building with >100 occupants - 2400mm generally for habitable rooms - 2100mm for non-habitable rooms - 2000mm above stairs and ramps	The design shows general compliance.	**Complies**
BCA Part F4 - Light & Ventilation			
F4.1	**Provision of natural light** Natural light is required to be provided to habitable/sleeping rooms in Class 2, 3, 4 and 9 buildings	Informational Clause.	**Informational**
F4.2	**Methods and extent of natural lighting** Natural light must be provided from: • Windows (with an aggregate light transmitting area of not less than 10% of the floor area of the area which they serve);or • Skylights with an aggregate light transmitting area of not less than 3% of the floor area of the area which they serve; or • A combination of both Windows must typically be setback from the boundary/wall of the building or other building on the allotment: • Generally at least 1m (or 3m for sleeping rooms in a Class 9a building) • 50% of the square room of the height of the wall in which the window ins located. I.e. the higher the wall the greater the setback required. Note in Class 9b childcare centres, at least 50% of the windows must have sill height not greater than 500mm from the floor level.	NA to subject part of building.	**Non applicable**
F4.3	**Natural light borrowed from adjoining room** This clause allows natural light in Class 2-4 buildings to be borrowed from an adjoining room. The room providing the borrowed light must be provided with windows which have a light transmitting area of at least 10% (or skylights with an area or 3%) of the combined floor area of both rooms.	As above.	**Non applicable**
F4.4	**Artificial Light** Artificial lighting is required to all newly created or affected areas in accordance with BCA F4.4 and AS1680.0.	Lighting to AS1680.0 required to all affected areas. Cand be addressed at CC stage.	**To be addressed in BCA Specification**
F4.5	**Ventilation of Rooms** A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have natural light amounting to 5% of the floor area of the room served or mechanical ventilation complying with AS/NZS 1668.2.	Ventilation required to all newly created or affected rooms and spaces in accordance with this clause. The **mechanical consultant** should provide design details and certification confirming compliance with this clause.	**Design certificate required from others**
F4.6	**Natural Ventilation** Natural ventilation must constitute 5% of the floor area of the area serving and open to a suitable outdoor, covered open area or adjacent shared room with suitable natural ventilation openings.	As above.	**Design certificate required from others**

BCA Cl.	BCA Requirement	Compliance Comment	Status
F4.7	**Ventilation borrowed from adjoining room** Natural ventilation can be borrowed from an adjoining room providing adjacent room is provided ventilating area that is 5% (or 10% in Class 5-9 buildings) of the both the subject room and the adjoining room combined.	Borrowed natural ventilation is not currently relied upon.	**Non applicable**
F4.8	**Restriction of position of water closets and urinals** Generally sanitary compartments must not open directly into: • A kitchen, pantry, public dining area or restaurant • Dormitory in a Class 3 building • Room used for public assembly • Workplace normally occupied by more than 1 person *Note comments in F4.9 below.*	Facilities are not affected buy the proposed works.	**Non applicable**
F4.9	**Airlocks** Airlocks can be used between a sanitary compartment and area described in BCA F4.8 above. In a Class 5-9 building, airlocks must have a floor area of at least 1.1m^2 and be fitted with self-closing doors. Alternatively, the sanitary compartment must be provided with mechanical exhaust and the doorway suitably screened from view.	As above.	**Non applicable**
F4.11	**Carparks** Every storey of a carpark (except open deck) must be provided with mechanical ventilation complying with AS1668.2 or natural ventilation complying with AS1668.4.	There are no carparks subject to this clause.	**Non applicable**
F4.12	**Kitchen Local Exhaust** Commercial kitchens must have exhaust hoods complying with this clause and AS1668.1 & AS1668.2.	NA as there are no commercial kitchens proposed or affected.	**Non applicable**
Part F5 - Sound Transmission & Insulation			
Part F5	**Sound Transmission and Insulation** This part applies to Class 2, 3 & 9c buildings and provides the requirements for sound insulation must be provided between sole occupancy units (and between units and other parts of the building).	NA to subject building.	**Non applicable**
SECTION G **ANCILLARY PROVISIONS**			
Part G1 **Minor Structures & Components**			
G1.3	**Outdoor play spaces** (a) Any outdoor play space in a Class 9b early childhood centre must be enclosed on all sides with a barrier which complies with AS 1926.1. (b) For the purposes of (a), AS 1926.1 is applied as if there is a swimming pool located outside the outdoor play space, so that the barrier restricts children from exiting the premises without the knowledge of staff in the centre. (c) The requirements of (a) do not apply to a wall, including doors and windows, which form part of the Class 9b early childhood centre.	NA The building is not a childcare centre.	**Non applicable**
NSW G1.101	**Provision for cleaning windows** (a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level. (b) A building satisfies (a) where— (i) the windows can be cleaned wholly from within the building; or	This clause does not apply to the subject building.	**Non applicable**

BCA Cl.	BCA Requirement	Compliance Comment	Status
	(ii) provision is made for the cleaning of the windows by a method complying with the Work Health and Safety Act 2011 and regulations made under that Act.		
Part G6 – Occupiable Outdoor Area			
Part G6	**Occupiable Outdoor Area - Definition** *Occupiable outdoor area* means a space on a roof, balcony or similar part of a building— (a) that is open to the sky; and (b) to which access is provided, other than access only for maintenance; and (c) that is not open space or directly connected with open space. *Note: An occupiable outdoor area is not a storey for the purposes of Schedule 3 of the NCC/BCA and therefore is not included in the determination of rise in storeys. It is considered a storey for the purposes of other parts detailed below.*	Informational Clause	**Informational**
G6.2	**Fire Hazard Properties – Occupiable Outdoor Area** Any lining in an occupiable outdoor area must meet the Fire Hazard Properties requirements of BCA Clause & Specification C1.10 as if it were an internal lining but need not meet the following: (i) Average specific extinction area. (ii) Smoke-Developed Index. (iii) Smoke development rate. (iv) Smoke growth rate index ($SMOGRA_{RC}$).	Informational Clause	**Informational**
G6.3	**Fire Separation – Occupiable Outdoor Areas** For the purposes of the Deemed-to-Satisfy Provisions of C2.7, C2.8 and C2.9, a reference to a storey includes an occupiable outdoor area, however a fire wall cannot be used to separate an occupiable outdoor area into different fire compartments. That is, where an occupiable outdoor area has a different classification to the area adjacent or above/below it, it must have any building elements meet the higher FRL of any other classification on the same storey, or have a fire rated floor separating any other classification above or below.	Informational clause.	**Informational**
G6.4	**Provision for Escape – Occupiable Outdoor Areas** Must comply with the egress requirements contained in BCA Part D1 "Provision for Escape".	These areas have been specifically considered under BCA Part D1 earlier in this report.	**Informational**
G6.5	**Construction of Exits – Occupiable Outdoor Areas** Must comply with the exit requirements contained in BCA Part D2 "Construction of Exits".	These areas have been specifically considered under BCA Part D2 earlier in this report.	**Informational**
G6.6	**Fire Fighting Equipment – Occupiable Outdoor Areas** For the purposes of BCA Part E1 "Fire Fighting Equipment", occupiable outdoor area is considered a storey so may be required to be provided with fire hydrant, fire hose reel, sprinkler, portable fire extinguisher &/or fire control rooms should BCA Part E1 ordinarily require it based on floor area of a storey or otherwise. See below.	These areas have been specifically considered under BCA Part E1 earlier in this report.	**Informational**
G6.7	**Lift Installations – Occupiable Outdoor Areas** For the purposes of Part G3 "Lift Installations", a reference to a storey includes an occupiable outdoor area.	Noted, informational	**Informational**
G6.8	**Visibility in an emergency, exit signs and warning systems – Occupiable Outdoor Areas** For the purposes of the Deemed-to-Satisfy Provisions of Part E4, a reference to a storey includes an occupiable outdoor area.	Noted, informational	**Informational**

BCA Cl.	BCA Requirement	Compliance Comment	Status
G6.9	**Light & Ventilation – Occupiable Outdoor Areas** A reference to a room in the following BCA Clauses includes an occupiable outdoor area. • F4.4 Artificial lighting • F4.8 Restriction on location of sanitary compartments • F4.9 Airlocks	Noted, informational	**Informational**
Section J – Energy Efficiency			
Section J	**Energy Efficiency** *BCA Section J* New works must comply with the Energy Efficiency requirements of Section J, including: Part J1 - Building Fabric Part J2 - Glazing Part J3 - Building Sealing Part J5 – Air-conditioning & Ventilation Systems Part J6 - Artificial Lighting and Power Part J7 - Hot Water Supply Part J8 – Access for Maintenance	Any new development works must comply with BCA Section J for Energy Efficiency. The design should be reviewed & certified by a suitably qualified Energy Efficiency Consultant during the detailed (construction certificate stage) design.	**Design certificate required from others**

7.0 Conclusion

This report assesses the **DA Level Design** for the proposed **Proposed new storeroom at South Curl Curl SLSC** against the requirements of the National Construction Code (NCC) / Building Code of Australia (BCA).

Subject to compliance with the recommendations of this report, the development can readily comply with the relevant requirements of the BCA. Recommendations have been identified as follows:

- Significant BCA matters, being those with the ability to affect the design have been included in the Executive Summary.
- A BCA Compliance Schedule suitable for the current level of design is also contained in in Table 6.0 of this report.

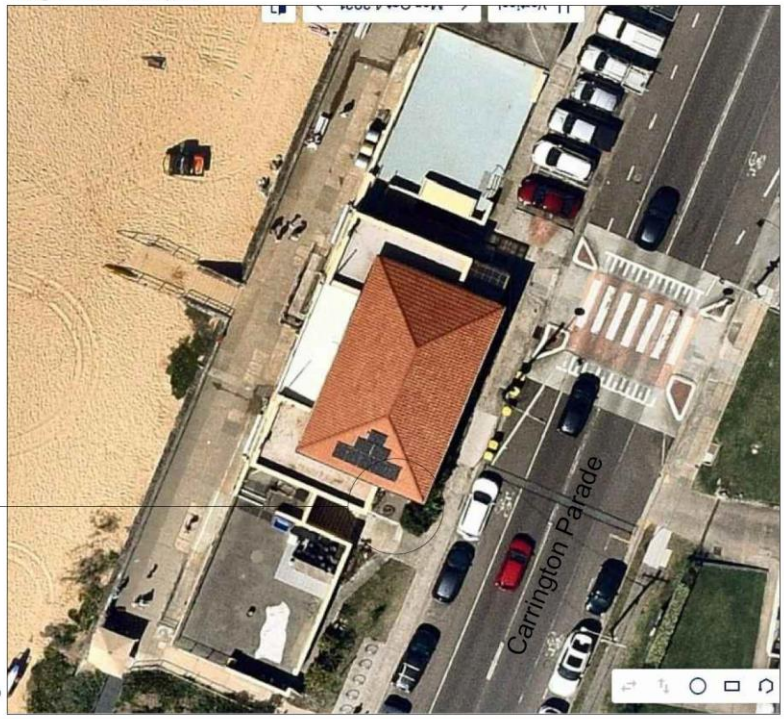
Attachment A – Summary of Fire Resistance Levels

The following is a summary of the required fire resistance levels of typical buildings elements. Refer to BCA Specification C1.1 for full details.

Element	FRL & Comment
Floor	As per Tables 3, 4 & 5 of BCA Spec C1.1 Note requirements for non-combustibility of certain elements.
Loadbearing Walls/Columns	
Roof	
Internal Footbridge Loadbearing Walls & Internal Columns	
External walls & Associated Columns	
Service Risers	Where service penetrations are contained within a shaft (and not protected against the spread of fire where penetrating the fire rated floor), the shaft must achieve an FRL of no less than 30/30/30 to comply with BCA C3.12.
Separation of Equipment	Where provided, emergency generators, boilers, batteries and lift motor rooms and equipment otherwise specified in BCA Clause C2.12 are required to be fire separated by 120/120/120 construction.
Main Electrical Switchrooms, ISMSBs, SSERs	Where provided, 120/120/120 FRL
Comms Rooms	Where provided, there is no specific FRL required for Comms rooms, but they must be suitably smoke sealed in accordance with BCA Clause D2.7 “Installations in the Path of Travel”.
Rooms Under Stairs	Where provided, Enclosed rooms under stairs must be provided with 60/60/60 walls and ceilings with -/60/30 self-closing doors.
Service Penetrations	All service openings through fire/smoke rated construction must also be fire or smoke rated as appropriate per BCA C3.15 and BCA D2.7.

DEVELOPMENT APPLICATION
South Curl Curl SLSC - proposed new store room
Drawing schedule / location plan

Dwg D00C - Drawing register , location aerial photo
Dwg D01C - Floor plan
Dwg D02C - Plan , section , elevations and photos existing building
Dwg D03C - Roof plan
Dwg D04C - Site plan



the site

location photo

Rev	Description	Date
A	draft development application	Oct 2022
B	draft development application	Oct 2022
C	development application	Nov 2022

Project:
South Curl Curl SLSC storeroom

northern beaches council

Prepared by:
Building Assets-Planning Delivery NBC

Drawing title:
Drawing register, location aerial photo

Date: Nov 2022
Dwg. no: DA00
Drawn: MS
Checked: BK
Scale: A.S.
Issue no: C