

16 November 2022

Russel Strahle
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Dear Russel,

**Re: 1 Butler Road, Hurstville
BCA Compliance Capability Report**

Reference is made to our engagement to undertake an assessment of the proposed S4.55(8) submission drawings and the existing BCA Compliance Capability Report prepared by Vic Lilli & Partners Consulting dated 31 August 2017.

When reviewing the existing BCA Compliance Capability Report, it is noted that this has been based upon the Building Code of Australia 2016 and its adopted standards, whereas the current applicable Building Code of Australia is the 2019 Amendment 1 Edition and its applicable standards. The basis of the assessment within the existing BCA Compliance Capability Report would generally be the same when compared to the latest edition of the BCA when considering the new referenced standards and any applicable DTS Clauses throughout which have changed.

The building description as detailed within the existing BCA Compliance Capability Report would still be applicable to the current S4.55(8) submission drawings and the BCA 2019 Amendment 1.

When reviewing through the proposed S4.55(8) submission drawings and the existing BCA Compliance Capability Report, it is considered that that several items will need to be addressed as a result of the updated BCA and/or changes being made to the plans. It is noted that the following considerations shall be given to the plans to ensure compliance is maintained at the CC stage:

1. Non-combustibility is a greater consideration under the latest revision of the BCA in accordance with Clause C19 and C1.14. This required external walls, fire rated walls and attachments to walls to be non-combustible and suitably testing. Compliance would be readily available at CC stage pending materials being detailed and test reports provided.

Timber battens are noted on the plans and will need to be replaced with a non-combustible product. Furthermore, the use of any in situ formwork containing combustible elements proposed to be used as an external wall element, common walls, the flooring and floor framing of lift pits, services riser shafts or non-loadbearing internal walls required to be fire resisting are prohibited unless addressed via a Fire Engineered Performance Solution.

2. Throughout the storeys, it is noted that the lift shaft will open directly into the sole occupancy units and will have implications under BCA Clause C3.11 and F5.5 for compliance. This item will need to be addressed within a proposed Fire Engineering Report and additional detailed for confirmation provided from the Acoustics Consultant
3. The fire isolated stairways throughout the building are required to comply with BCA Clause D2.17 which requires compliance with Clause 12 of AS1428.1-2009. To comply with this Clause, it is required

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that an offset riser is provided at the base of each stair flight to ensure a consistent handrail height is maintained. This is provided to the fire stairs serving the basement storeys but not continued to the residential portion, detailed will need to be provided as the design development to ensure compliance.

4. The discharge from each of the Fire Stairs on the Ground Floor is noted as a Performance Solution within the existing BCA Compliance Capability Report. However, one of the stairways does not have an egress doorway detailed and would need to be added to the plans to ensure compliance but this may be addressed at CC stage.
5. Openings located within proximity to a boundary are required to be protected in accordance with BCA Clause. Each of the openings are generally located a suitable distance from the boundary except for the Ground Floor, there is a portion of the Ground Floor provided with gates that will need to be suitable protected.

Furthermore, the external blade wall to the western elevation will need to be increased on the Ground Floor to connect with the front boundary to remove the need to address the opening formed between the slabs to create the driveway entry.

6. Egress doors throughout the building are required to swing in the direction of egress, this has generally been detailed to each of the final discharge doors; however, the Ground Floor retail tenancy does not swing in the direction of egress and would need to be modified during the detailed design to ensure compliance.

Additionally, Unit 102 is found to have its door swinging into the corridor and would be considered to have an impact on egress between exits. It would be recommended that this door is adjusted to swing inwards to allow for suitable egress and may be addressed as the design progresses.

7. Due to the effective height of the building, it is required that each part of the building is provided with access to two (2) exits. It is considered that the Ground Floor Residential Lobby and the Carpark entry are only provided with a single exit and will need to be addressed within the future Fire Engineering Report.
8. The car lift is considered to be a lift that connects more than 2 storeys and therefore will be required to have a door of at least -/60/-. This will need to be confirmed as part of the detailed design, otherwise this may be included within any future Fire Engineering Report.
9. The latest revision of the BCA makes allowance for concession with relation to the location of the hydrant booster within proximity to the building under Clause E1.3, therefore comments on protection detailed within the existing report are no longer applicable. However, the location of the pump room is not via a fire isolated exit and will need be detailed to ensure compliance with AS2419.1.
10. The external walls of the Class 2 portion of building will need to be constructed in accordance with Part G6 of the BCA. This is a new inclusion within the BCA2019 and will need to be addressed.
11. The roof top portions of the building will need to be constructed in accordance with Part G6 of the BCA. This is a new inclusion within the BCA2019 and will need to be addressed.
12. Within the recent edition of the BCA, due to a lack of DTS Clause being provided to comply with FP1.4 it is required to seek a Performance Solution to demonstrate that the construction of the external walls is such that they will prevent the penetration of water that could cause unhealthy or dangerous conditions or loss of amenity to occupants and undue dampness or deterioration of building elements.
13. Accessibility has not been addressed or reviewed within the existing BCA Compliance Capability Report; however, it is noted that there is a lack of access being provided throughout the storeys due to no turning spaces being provided at the end of the corridors and latchside clearance not being provided in accordance with AS1428.1-2009 throughout the accessways. Additionally, details will need to be provided during the detailed design to accommodate access throughout the building or reliance will need to be provided on an Access Report.

The remainder of the information and assessment included within the existing BCA Compliance Capability Report would be applicable to the development and will need to be considered during the detailed design.

In addition to the above, the referenced standards applicable to the Essential Fire Safety Measures within the building will be updated as per new standards and applicable BCA references. Refer to Annexure B for an updated list of Essential Fire Safety Measures.

The plans assessed were developed to a standard suitable for submission as a development application and do not contain all the details necessary to allow a CC to be issued. As such, this assessment was limited to the major items of the BCA with the view of identifying any items that may result in a modified development consent being required, or additional key items that need to be included in the design.

The architectural design documentation as referred to in report has been assessed against the applicable provisions of the Building Code of Australia, (BCA) and it is considered that such documentation complies or is capable of complying with that Code, pending the items raised above being addressed and the existing BCA Compliance Capability Report within the detailed design with the addition of Fire Engineering being sought to allow for Performance Solutions being addressed as required.

If you require any further information or explanation of the above, please do not hesitate to contact the undersigned.

Yours faithfully,



Benjamin Long
Senior Building Regulations Consultant
BCA Logic Pty Ltd

Annexure A – Design Documentation

This report has been based on the following design documentation.

Table 1. Architectural Plans

Architectural Plans Prepared by Allen Jack + Cottier			
Drawing Number	Revision	Date	Title
DA2101	D	22.09.2022	Basement 3 Floor Plan
DA2102	G	22.09.2022	Basement 1 & 2 Floor Plan
DA2103	M	22.09.2022	Ground Floor & Level1 Floor Plan
DA2104	K	22.09.2022	Level 2 & 3 Floor Plan
DA2105	K	22.09.2022	Level 4 (L5 - L11 Sim) & Roof Plan
DA3101	H	22.09.2022	Elevations & Finishes West & North
DA3102	D	22.09.2022	Elevations & Finishes East & South
DA3201	D	22.09.2022	Sections

Annexure B - Essential Services

The following fire safety measures are required to be installed in the building. The following table may be required to be updated as the design develops and options for compliance are confirmed.

Table 2. Essential Fire Safety Measures

Item	Essential Fire and Other Safety Measures	Standard of Performance
Fire Resistance (Floors – Walls – Doors – Shafts)		
1.	Access Panels & doors/hoppers (fire rated)	BCA2019 C3.13 (Openings in Shafts) BCA2019 Spec C3.4 AS 1905.1:2015 (Fire Resistant Doorsets)
2.	Construction Joints	BCA2019 C1.1, Spec C1.1 BCA2019 C3.16 AS 1530.4:2014 & AS 4072.1:2005
3.	Fire doors	BCA2019 C2.12 (Separation of Equipment) BCA2019 C2.13 (Electricity Supply Systems) BCA2019 C3.4 (Acceptable methods of Protection) BCA2019 C3.5 (Doors in Fire Walls) BCA2019 C3.8 (Openings in Fire Isolated Exits) BCA2019 C3.10 (Opening in Fire Isolated Lift Shafts) AS1735.11- 1986 BCA2019 C3.11 (Bounding Construction) BCA2019 C3.13 (Opening in Shafts) Spec C3.4 AS1905.1: 2015
4.	Fire seals protecting openings in fire resisting components of the building	BCA2019 C3.15 (Openings for service installations) BCA2019 Spec C3.15 AS1530.4:2014 & AS4072.1-2005
5.	Lightweight construction	BCA2019 C1.1, Spec. C1.1 BCA2019 C1.8, Spec C1.8 AS1530.4:2014
General		

Item	Essential Fire and Other Safety Measures	Standard of Performance
6.	Fire control centres > Fire Control Centre ○ 300mm of street	BCA2019 E1.8, Spec E1.8 (Fire Control Centres)
7.	Portable fire extinguishers	BCA2019 E1.6 AS 2444–2001
8.	Automatic fail safe devices	BCA2019 D2.22 (Re-entry from fire-isolated stairs)
9.	Swing of Exit Doors	D2.20 (Swinging Doors)
10.	Warning & operational signs	BCA2019 D2.23 (Signs on Fire Doors) BCA2019 D3.6 (Braille Exit Signs) (Note: E4.5 (Exit Signs)) BCA2019 E3.3 (Lift Signs)
Lifts		
11.	Access to Lift Pits > Located at lowest level or if >3m provided through an access door	BCA2019 D1.17 (Access to Lift Pits) 'DANGER LIFT WELL – ENTRY OF UNAUTHORISED PERSONS PROHIBITED – KEEP CLEAR AT ALL TIMES'
12.	Emergency lifts	BCA2019 E3.4 AS 1735.1:2003 (Appendix A) or AS 1735.2:2001
13.	Stretcher Lifts including > Fire Service Controls > Recall Operation > Drive control switch	BCA2019 E3.2 BCA2019 E3.7 (Fire Service Controls) BCA2019 E3.9 (Fire Service Recall Operation Switch) BCA2019 E3.10 (Lift Car Fire Service drive control switch) BCA2019 Spec E3.1 AS 1735.11:1986 (Fire rated landing doors)
Electrical Services		
14.	Automatic fire detection & alarm: > Clause 3 – AS 3786:2014 Smoke Alarm systems powered from consumer mains to all residential SOU's, and spaced, interlinked to AS 1670.1:2018 to all common areas connected to a BOWS @ 85dB(A).	BCA2019 E2.2 , NSW Table Spec E2.2a - Clause 3 (Smoke alarm system) Spec E2.2a - Clause 4 (Smoke detection system) Spec E2.2a - Clause 5 (Combined smoke alarm and smoke detection system)

Item	Essential Fire and Other Safety Measures	Standard of Performance
	> Clause 4 – AS 1670.1:2018 system throughout the building/part connected to a BOWS @ 100dB(A) Note: if there is a SSISEP or EWIS applies different dB(A) i.e. At bedheads not SOU doors.	Spec E2.2a – Clause 6 (Smoke detection for smoke control systems) Spec E2.2a - Clause 7 (BOWS) Spec E2.2a - Clause 8 (System Monitoring) AS 3786:2014 (Amdt 1-4) AS 1670.1:2018 (Fire) – Section 4 and 5 (Detectors) AS 1670.1:2018 (Fire) – Section 7 (Smoke Control) AS 1670.3:2018 (Fire Alarm Monitoring) AS 1670.4:2018 (EWIS)
15.	Emergency lighting	BCA2019 E4.2, E4.4 AS/NZS 2293.1:2018
16.	Exit signs	BCA2019 E4.5 (Exit Signs) BCA2019 E4.6 (Direction Signs) BCA2019 E4.7 (Residential Concession) BCA2019 E4.8 (Design and Operation - Exits) AS/NZS 2293.1:2018
17.	Smoke detectors & heat detectors > Air Pressurisation System.	BCA2019 E2.2, Spec E2.2a AS 1668.1:2015
18.	Emergency warning and intercom systems for Emergency Purposes (SSISEP)	BCA2019 E4.9 AS 1670.4:2018 (EWIS)
19.	System Monitoring	BCA2019 E2.2 , Table E2.2a, Spec E2.2a AS 1670.3:2018 Monitoring Required for any: > Any Sprinkler System
Hydraulic Services		
20.	Automatic fire suppression systems > General Sprinklers	BCA2019 E1.5 BCA2019 E1.5a AS 2118.1:2017 (Sprinklers)
21.	Fire hydrant systems > NSW Storz Couplings	BCA2019 E1.3 BCA2019 C2.12 (Separation of Equipment)

Item	Essential Fire and Other Safety Measures	Standard of Performance
	> Ring Main required (LIB, >25m) > On-site water storage (>25m)	AS 2419.1:2005 FRNSW Technical Sheet D15/45534.V9 issued 10.01.19, 'Compatible Hose Connections'
22.	Hose reel systems	BCA2019 E1.4 AS 2441:2005
Mechanical Services		
23.	Fire dampers	BCA2019 E2.2, Spec E2.2a, BCA2019 C3.15 AS 1668.1:2015 (Amdt 1) AS 1682.1:2015 & AS 1682.2:2015
24.	1. Mechanical air handling systems 2. Mechanical ventilation to carpark. 3. Fire Isolated Exit Pressurisation System	BCA2019 E2.2, Table E2.2a, Table E2.2b Spec E2.2a, Spec E2.2b AS 1668.1:2015 (Amdt 1) Note: 5.5.3 Override control To enable manual control by attending emergency services personnel, fans that are not required to shut down on initiation of fire mode in the car park shall be provided with a control switch at the designated building entry point. Note: Signage should be located at the car park entry indicating the location of the control switches.
25.	Smoke dampers	BCA2019 C2.5 and Spec C2.5 BCA2019 E2.2, Spec E2.2a Spec G3.8 AS 1668.1:2015 (Amdt 1), AS 1682.1:2015 & AS 1682.2:2015
Notes: (An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one <i>fire compartment</i> to another <i>fire compartment</i> or operates in a manner that may unduly contribute to the spread of smoke from one <i>fire compartment</i> to another <i>fire compartment</i> must— (i) ((be designed and installed to operate as a smoke control system in accordance with AS 1668.1:2015; or (ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and		

Item	Essential Fire and Other Safety Measures	Standard of Performance
	(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with clause 7.5 of AS 1670.1:2018; and for the purposes of this provision, each <i>sole-occupancy unit</i> in a Class 2 or 3 building is treated as a separate <i>fire compartment</i>. Miscellaneous air-handling systems covered by Sections 5 and 6 of AS 1668.1:2015 serving more than one <i>fire compartment</i> (other than a carpark ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard. A smoke detection system must be installed in accordance with Clause 5 of Specification E2.2a to operate AS 1668.1:2015 systems that are provided for zone smoke control and automatic air pressurisation for fire-isolated exits.	
26.	Future Fire Engineering Report (FER)	

Liability limited by a scheme approved under Professional Standards Legislation.