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Our Ref: 23261-L01-02
Your Ref: N/A

15 December 2023

Blare Management Pty Ltd
Level 1, 19-23 Hollywood Avenue
Bondi Junction NSW 2022

Attention: **Daniel West** (daniel@blare.com.au)

Dear Daniel

RE: Performance Based Design Statement | Vaucluse Seniors Living | 669-683 Old South Head Road Vaucluse

Background

I confirm your instructions to provide advice in relation to the suitability of the design of achieving compliance with the National Construction Code (NCC) Building Code of Australia (BCA) 2022 by way of a performance solution. Our advice to you is based on these instructions. This report is submitted as part of the Planning Application for the abovementioned development.

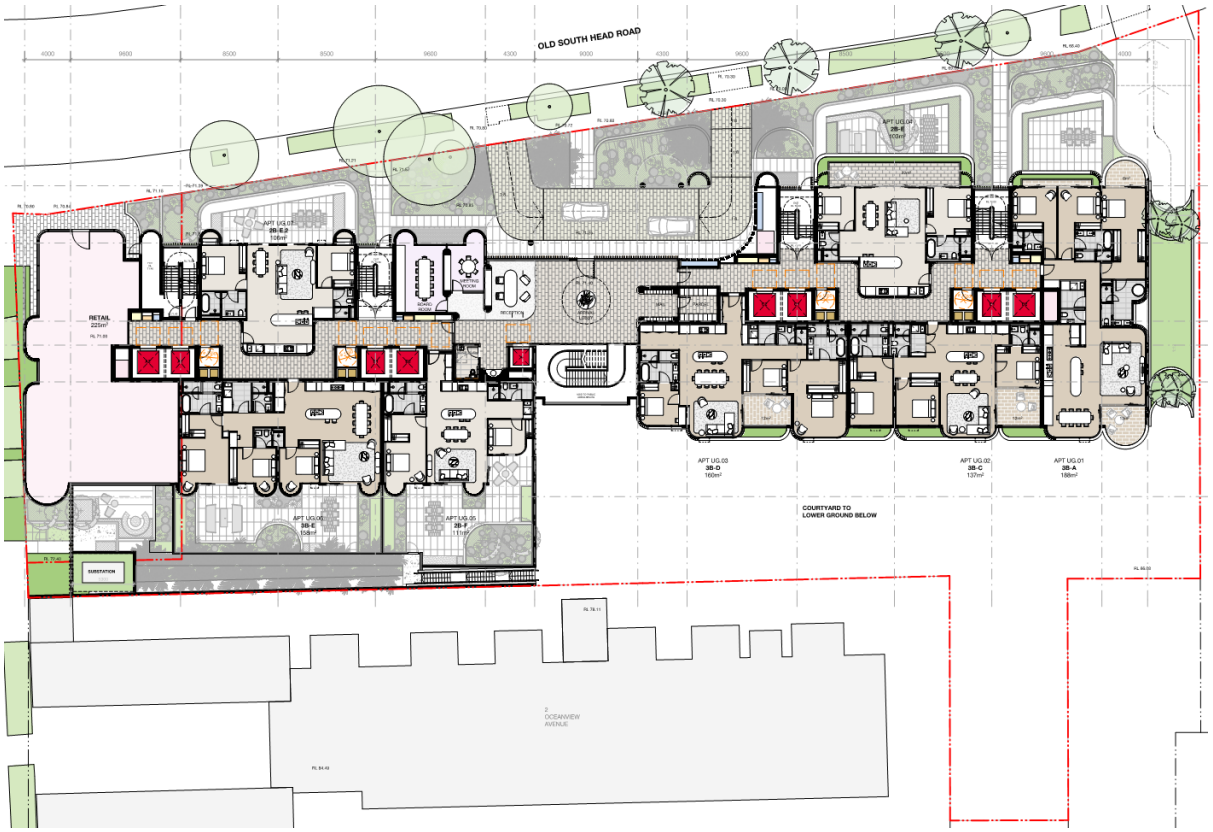

Figure 1:Proposed Ground Upper Floor Plan

Sydney
Suite 1802, Level 18
227 Elizabeth Street
Sydney NSW 2000
PO Box 4788 Forest Lake QLD 4078

Brisbane
Unit 5, Level 1
445 Upper Edward Street
Spring Hill QLD 4000
PO Box 4788, Forest Lake QLD 4078

The proposed building design has been observed to exhibit a number of non-conformances with the prescriptive (Deemed-to-Satisfy) provisions of the NCC BCA. Those non-conformances will be addressed by way of a Performance Solution (as supported Part A0 of the NCC BCA). They include:

- Clause C2D2 and Specification 5 (S5C11), – Fire resistance level of retail and storage parts.
- Clause S5C16(b)(ii) – Fire separation of roof lights from adjoining SOUs.
- Clause C3D8, C4D6 – FRL of separating doors between fire compartments.
- Clause D2D5/D2D6– Travel distances to the nearest and between alternative exits.
- Clause D2D12(3) – Protection of travel paths on discharge from fire isolated exits.

The purpose of this statement is to provide confidence to the Consent Authority that, notwithstanding the existence of DtS non-conformances that a review of the documentation has been undertaken and that the building is considered to be capable of achieving compliance with the Performance Requirements of the National Construction Code (NCC) Building Code of Australia (BCA) Volume 1 2022.

Description

Property Name:	Vaucluse Seniors Living
Property Address:	669 - 683 Old South Head Road Vaucluse NSW
Legal Description:	Lot A & B DP 324744, Lot 2 DP 10314, Lot 1 DP 169310, Lot 4 DP 192614, Lot 1 DP 168877, Lot 1, DP 167942, Lot 1 DP 666626, Lot 2 DP 316716.
Description of works:	Construction of five (5) seniors living facility with basement carparking, ancillary retail, amentities and landscape works.

NCC BCA Volume 1 Classifying Data

For the purpose of determining the applicable DtS Provisions and therefore the bounds for compliance the relevant classifying data is described in Table 1.

Table 1: Relevant NCC/BCA Assessment Data

BCA Reference	BCA Assessment
Classification	Class 2 (residential apartments), Class 6 (retail), Class 7a (carparking), Class 7b (Storage), Class 9b (communal facilities), Class 10a and Class 10b
Rise in Storeys	Five (5)
No. of Levels Contained	Seven (7)
Minimum Type of Construction Required	Type A
Effective Height	13.6 m
Maximum Fire Compartment Size	The following fire compartments have been considered by the NCC/BCA Consultant are within the bounds permitted for Type A construction: ▪ Basement Level 1 & 2 form a single fire compartment, which includes the enclosed driveway up to the lower ground level. Residential SOU on northern end of Lower Ground will be separated by a fire wall from the enclosed driveway part. ▪ Lower Ground: Storage rooms area is a separate fire compartment and communal facilities is a separate fire compartment. Northern SOU and residential lobby are a separate fire compartment. Fire walls will separate fire compartments. ▪ Upper Ground: Residential areas will be separate fire compartments as they are separated by fire walls from the central lobby area. The central lobby area is connected with the communal facilities fire compartment via the non-fire isolated stair. Retail tenancy will be fire separated from the adjoining residential part. Fire walls will separate fire compartments. ▪ Level 1 to 3: Each storey will be a separate fire compartment.

Referenced Documents

The following documents have formed part of this review:

- National Construction Code (NCC) Building Code of Australia (BCA) Volume 1 2022.
- Guide to the Building Code of Australia (NCC Vol. 1) 2019 Amendment 1.
- *NSW Environmental Planning & Assessment Act 1979.*
- *NSW Environmental Planning & Assessment (Development Certification & Fire Safety) Regulation 2021.*
- NCC BCA Assessment Report, prepared by Jensen Hughes (Reference 117899-R02 dated15 December 2023)
- Architectural Plans S12551 prepared by Bates Smart.

Overview of NCC BCA Volume 1 DtS Non-Conformances

Table 2 outlines the NCC BCA DtS non-conformances based on a review undertaken by the project building surveyor and / or design team and through our experience of similar buildings of the size and nature as the subject development. Whilst the list is not exhaustive due to the nature of the design development, where not listed herein the building is otherwise assumed to achieve compliance with relevant DtS provisions and relevant codes, reports and Standards.

Table 2: Proposed NCC/BCA DtS Non-Conformances to be subject to Performance Solutions

	BCA DtS Reference	NCC BCA Performance Requirement	BCA Assessment
1.	**C2D2 and Specification 5 (S5C11),**	C1P1 and C1P2	Specification 5 requires the fire resistance level (FRL) in retail and storage parts to be 120 minutes and 180 minutes respectively (for structural adequacy, integrity and insulation as the case requires). The FRL of the retail and storage parts is proposed to be rationalised to 120 minutes for structural adequacy, integrity and insulation (as the case requires)
2.	**S5C16(b)(ii)**	C1P2	S5C16(b)(ii) states that roof lights must not be within 3 m of any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C4D5. It is proposed to permit the lobby skylight to be within 3m of the external walls of the SOUs on Level 1 whereby the external walls and openings will not be protected
3.	**C3D8, C4D6**	C1P1 and C1P2	Specification 5 requires the FRL of elements separating fire compartments as outlined in C3D8 and C4D6 to have a FRL commensurate with the separating building element. A number of doorways between compartments include self-closing (or automatic closing) glazed openings. It is proposed to provide drencher protection to those openings.
4.	**D2D5 / D2D6**	D1P4 and E2P2	Clause D2D5 states the travel distance to the point of choice must not exceed 20 m and to the nearest exit must not exceed 40 m where more than one exit is available. Clause D2D6 states that the travel distance between alternative exits must not exceed 60 m. The following non-conformant travel distances are proposed: ▪ Up to 30 m to a point of choice in the basement carpark and storage areas. ▪ Up to 50 m to an exit ▪ Up to 95 m between alternative exits
5.	**D2D13(3)**	D1P5	Clause D2D12(3) requires the discharge path from fire isolated stairs to be protected where it passes within 6 m of openings in the external wall of the building. The discharge path of Core C & D passes within 6 m of the external wall of the dining room and fire stair Core D.
6.	**E1D2**	E1P3	Clause E1D2 requires the booster assembly to be within sight of the main entrance to the building. The booster assembly is to be located adjacent to the driveway.

Preventative and Protective Measures | Fire Safety Strategy

The fire safety strategy combines the Deemed-to-Satisfy (DtS)provisions with performance-based design to develop fire safety measures that are considered to be appropriate to the function and size of the building. These requirements are not intended to be exhaustive but serve as the first trial design concept. Any fire safety items and details not specifically identified are required to comply fully with the DtS Provisions of the BCA unless otherwise approved.

Table 3: Proposed preventative and protective measures

	Preventative Measure	Description	Compliance Status
Fire Resistance and Compartmentation			
1.	**Non-Combustible building elements**	External walls including the façade covering shall be non-combustible.	DtS
2.	**Perimeter Columns**	Steel columns in the external wall of the main warehouse and ancillary office that are within 18 m of the eastern boundary shall have an ESA/M (means the ratio of exposed surface area to mass per unit length) of not greater than 26 m^2/tonne.	Performance Solution
3.	**Floor, wall and ceiling linings**	Wall, floor and ceiling, and roof and ceiling assemblies shall have conformant fire hazard properties.	DtS
4.	**Fire Separation**	Essential and electrical supply systems within the building shall be separated by fire resisting construction with FRL 120/120/120 (load bearing) or -/120/120 (non-load bearing).	DtS
		Residential storage areas (each room) are to be separated by fire resisting construction with FRL 120/60/60 (load bearing) or -/60/60 (non-load bearing).	Performance Solution
		Fire isolated stairs to be protected shall be separated by fire resisting construction in accordance with Specification 5.	DtS
5.	**Protection of openings and penetrations**	Any opening in a building element of fire resisting construction shall be protected accordingly	DtS
Access and Egress			
6.	**Number of exits**	The building is provided with the correct number of exits.	DtS
7.	**Exit Travel Distances**	No point within the building shall be more than 30 m to an exit or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits shall be 50 m. Distances between alternative exits shall be not more than 95 m.	Performance Solution
8.	**Door hardware**	Hardware, door swing, latch operation and signage shall be in accordance with the prescriptive requirements.	DtS
Services and Equipment			
9.	**Fire Hydrants**	A fire hydrant system fitted with Storz couplings shall be installed. The fire hydrant system shall meet the provisions of AS 2419.1:2021 and the local fire brigade.	DtS
10.	**Fire Hose Reels**	Fire hose reels to serve the building in accordance with AS2441:2005.	DtS
11.	**Sprinklers**	A fire sprinkler system is to protect the building in accordance with AS 2118.1:2017.	DtS

	Preventative Measure	Description	Compliance Status
12.	**Wall wetting sprinklers**	Glazed doorsets between fire separated parts are to be protected with one of the following: ▪ Self-closing or automatic closing -/120/30 fire doors; or ▪ 6 mm toughened glazing complying with AS 1288:2006; and i) Be protected on the retail/non-residential side with wall-wetting sprinklers connected to the hydrant system that are fit for purpose and except where documented herein shall be installed in accordance with: (1) AS 2118.1:2021and the manufacturer's specification or (2) Be special application Window Sprinklers e.g. Tyco Model WS or Reliable WP Series type heads installed accordance with the manufacturer's specification; and ii) The drencher/wall wetting sprinklers shall incorporate a labelled system isolating valve, secured in the open position by a padlocked chain with signage. The signage shall state the following: **FIRE SERVICE VALVE** **CLOSE ONLY TO ISOLATE WALL-WETTING SPRINKLERS** iii) Coverage shall not be impeded by any mullions and transoms; and iv) The fire water demand shall be calculated on the greater of either the hydrant and wall wetting sprinkler demand or the hydrant and the sprinkler system; and ▪ Where the operation of the selected protection device is automatic closing, its operation must be initiated by a smoke detector, or any other detector deemed suitable in accordance with AS 1670.1 located on each side of the fire wall not more than 1.5 m horizontal distance from the opening.	Performance Solution
13.	**Portable Fire Extinguishers**	Fire extinguishers provided throughout the building in accordance with AS 2444:2001.	DtS
14.	**Smoke Detection and Warning**	A smoke detection system is to be provided throughout the building generally in accordance with AS 1670.1:2018. The detection system shall be designed to provide protection to: ▪ public/common areas. ▪ retail areas ▪ carpark circulation areas ▪ storage rooms.	Performance Solution
15.	**Smoke Hazard Management**	Non-required air handling devices are to shutdown on general fire alarm.	DtS
16.	**Emergency Lighting and signage**	Emergency lighting and exit signage provided throughout the building in accordance with AS2293.1:2018.	DtS
Administrative Controls			
17.	**Maintenance of Essential Safety Measures**	Periodic maintenance of the essential safety measures to be undertaken in accordance with all relevant statutory and regulatory requirements. Maintenance of fire systems to be undertaken in accordance with AS 1851	DtS

	Preventative Measure	Description	Compliance Status

18.	**Alternative Power Generation and Supply / EV charging**	Where electric vehicle (EV) charging stations are proposed to be installed the following requirements shall apply.
		▪ Only Regulatory Compliance Marked (RCM) chargers shall be installed within the carpark.
		▪ Charger installation shall be in accordance with AS 3000-2018 and the recommendations for EV chargers.
		▪ The FDCIE panel shall be provided with the facility to manually shut down the supply to the EV charging station/s via the use of an I/O module at the EV charging station/s switchboard.
		  ▪ There shall be a designated zone display at the FDCIE panel to provide for this function along with the dedicated LED indication providing the true status.
		  ▪ The I/O module shall be connected to an analogue addressable loop installed in accordance with the requirements for transmission paths under AS 1670.1:2018.
		  ▪ Upon activation of a general fire alarm condition within the building OR the sprinkler system within the basement carpark, the supply to the EV charging station/s shall shut down.
		▪ A block plan shall be installed at the main FDCIE and hydrant booster assembly (where applicable) in accordance with AS 2419.1:2021. The block plan shall indicate:
		  ▪ where electric vehicle charging points are located,
		  ▪ the number of electric vehicle charging stations,
		  ▪ where points to isolate power to the electric vehicle chargers are located,
		  ▪ procedures to be undertaken in the event of a fire to isolate power to the electric vehicle chargers, including who to contact to arrange this.
		  ▪ The contact details of a suitably qualified electrician who is on call to respond to isolate power in the event of an emergency.
		▪ Adjacent to the above block plan, and on or adjacent to all sprinkler and hydrant block plans, shall be clear signage indicating the presence of electric vehicle chargers and any other hazards.
		▪ Signage shall be:
		  ▪ provided at the entry points to the carpark indicating the presence of electric vehicle charging stations
		  ▪ constructed of all-weather fade resistant material with red lettering not less than 25mm high with a contrasting-coloured background.
		  ▪ Listed as an Essential Fire Safety Measure on the Fire Safety Schedule.
			Performance Solution

19.	**Emergency Management**	An emergency management plan (EMP) shall be prepared in accordance with AS 3745:2010.	Performance Solution

Endorsement

An assessment of the development application has been undertaken by a Certifier – Fire Safety.

The assessment indicates that the design is capable of complying with the relevant Performance Requirements of the NCC BCA. Compliance with the Performance Requirements may be achieved via either, or a combination of the following approaches:

- Some aspects of the design may become DtS by way of design development
- A performance solution may indicate comparison of the design with the BCA DtS provisions
- A performance solution may indicate direct compliance with the Performance Requirements.

It is considered that the preparation of any Performance Solution and corresponding preventative measures that are likely to be documented therein are unlikely to result in inconsistency of the detailed construction plans and specifications with the Development Consent.

We trust this is sufficient for your needs at this time. Should you require any additional information with please do not hesitate to contact Trent De Maria via email trent@innovaservices.com.au or on 0424 590 503.

Yours faithfully
Innova Services Australia Pty Ltd

Trent De Maria
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