

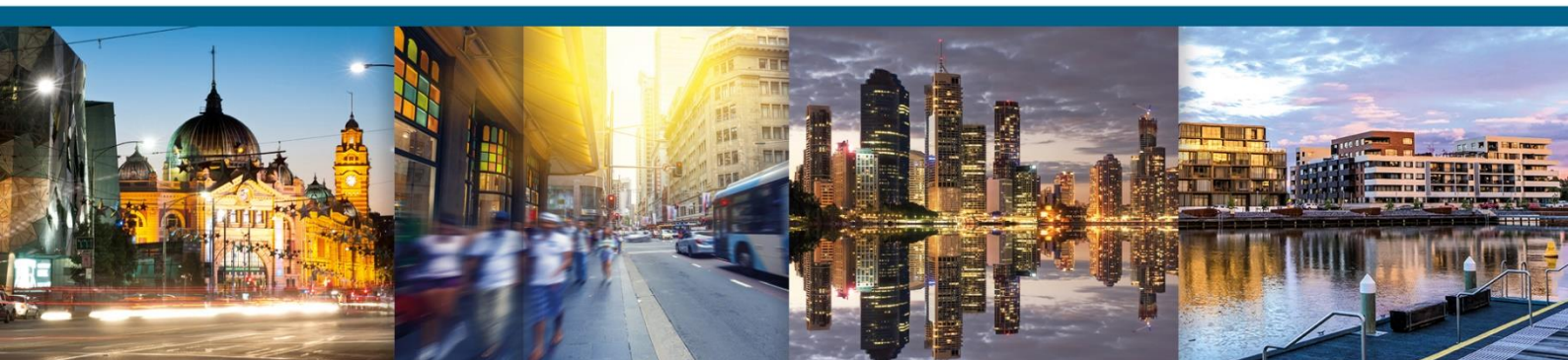


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61 North Steyne, Manly 2022/1815

BCA and Certification Assessment for Development Consent



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Report Revision History

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Revision Number:	2.0
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Verifier:	Andrew Lee



Introduction

This report presents the findings of a preliminary assessment of the proposed new **61 North Steyne, Manly** development of the against the Deemed-to-Satisfy (DtS) provisions of Building Code of Australia (BCA) 2019 Amendment 1.

It has been prepared by building regulations consultants and certifiers Steve Watson and Partners for Lindsay Bennelong.

Purpose

The purpose of this report is to identify issues and omissions in the audited documentation that are required to be addressed to permit the lodgement and approval of an application for a Development Consent under Part 4 of the EP&A Act.

Scope

The scope of this assessment is limited to the design documentation referenced in Appendix A of this report.

Audit Report and Certification Work

This report is provided with strict regard to the conflict of interest requirements in Part 3 the Building and Development Certifiers Act 2018 and Part 4 of the Building and Development Certifiers Regulation 2020, with particular reference to Clause 25(5) of the Regulation.

Hence, the contents of this report, and any associated correspondence, are provided in the context of a preliminary audit of plans and other design documents. The report is intended to identify BCA or regulatory issues required to be addressed in the design to achieve compliance. It may not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification, or to breach any other restriction or limitation imposed under the conflict of interest provisions of the above or any other legislation.



Description of Proposed Development

The proposed works involve a new residential development with associated basement car-parking.

Summary of Construction Determination	
BCA Classification	Basement 2: Class 7a carpark (Architect has confirmed that the B2 Level has storage which is less than 10% of the total floor area of the storey, therefore Class 7b storage N/A). Basement 1: Class 7a Carpark Ground Floor – Class 7a Carpark & Class 2 Residential Level 1 to Roof: Class 2 Residential
Number of storeys contained	Seven (7)
Rise in storeys	Five (5)
Type of construction required	Type A Construction
Effective height	13.43m (Roof RL 18.20m – GL RL 4.77)



Assessment

The following is a summary of an assessment of the proposed design against the relevant Deemed-to-Satisfy provision of the BCA.

Section A: General Provisions

The proposed works involve a new residential development with associated basement car-parking. The development includes the following BCA Classes:

- Basement 2: Class 7a,
- Basement 1: Class 7a Carpark
- Ground Floor: Class 7a Carpark & Class 2 Residential
- Level 1 - Roof: Class 2 Residential

Section B: Structure

The structural engineering design of the building will be required to comply with the structural provisions of Part B1 of the BCA.

Section C: Fire Resistance

The building is required to be Type A construction.

Refer to Appendix C for FRL requirement of Type A Construction.

- The car-lift is provided with a roller door at the street & between the garbage room and the lift and the front of the lift between the levels SWP have assumed these will be roller shutters/doors that should achieve the relevant FRL's, unless addressed via fire engineering performance solution.
- Unprotected openings in the external wall are located within 3m of the adjoining boundary.
 - Ground floor garage door
 - Ground floor Unit 01 Master Bed & Bed 2
 - Level 1-3 Unit 02-04 Bed 2
 - Level 4 Unit 05

The non-compliant openings will be addressed via fire engineering performance solution.

The lift landing doors connecting the basement to the roof are required to have a fire rating (ie -60/-) in accordance with C2.10 & Spec C1.1 & C3.10. The Lift doors are also opening to lobby's within the Units on all Levels & the basement and as such are also required to be protected in accordance with C3.11, ie to be protected by -/60/30 self-closing fire doors unless this is addressed via fire engineering performance solution.

The switchroom If it contains a switchboard that sustains emergency equipment is to be separated by construction with an FRL 120/120/120 & self-closing fire door with -/120/30.

All materials used within the external wall system (including insulation and coverings) are required to be non-combustible in accordance with BCA Clause C1.9. Any external attachments, including awning materials and signage, are required to be non-combustible in accordance with BCA Clause C1.14.



Proposed floor coverings and any proposed wall and ceiling lining materials must comply with the fire hazard properties nominated in Specification C1.10a of the BCA.

The building has an effective height of less than 25m. SWP has been advised that the proposed building is to be protected with a sprinkler system complying with AS 2118.1. As a result, the requirement under C2.6 vertical separation between openings (spandrels) in external walls do not apply.

Section D: Access and Egress

The following areas are provided with a single exit in lieu of two (2) required exits in accordance with BCA Clause D1.2.

- Basement 2
- Basement 1.

These non-compliances are proposed to be addressed via fire engineering performance solution.

The travel via the from the car lift Basement 1 & 2 and Ground floor is via the roller shutters which is non-compliant with Clause D2.21 operation of a compliant latch-set. These non-compliances are proposed to be addressed via fire engineering performance solution.

Fire isolated stairs have been provided on all levels, as required by BCA Clause D1.3 and the fire isolated stairs are to be constructed to comply with BCA Clauses D2.2, D2.8 and BCA Specification C1.1.

The following areas have travel distances which exceed allowable deemed-to-satisfy (DTS) in accordance with BCA Clause D1.4.

- Basement 2 – Travel distance of 21m to an exit in lieu of 20m.
- Basement 1 – Travel distance of 21m to an exit in lieu of 20m.

These non-compliances are proposed to be addressed via fire engineering performance solution.

All areas within fire isolated stairs achieve a minimum 1000mm clear in accordance with D1.6.

The travel via the from the car lift Basement 1 & 2 and Ground floor is via the roller shutters which is non-compliant with Clause D2.21 operation of a compliant latch-set. These non-compliances are proposed to be addressed via fire engineering performance solution.

Egress from the car lift on the ground floor has the possibility to be restricted by the flood barrier which is non-compliant with Clause D1.10. This non-compliance is proposed to be addressed via fire engineering performance solution.

A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from:

- a public corridor, public lobby or the like; or
- a sole-occupancy unit occupying all of a storey; or
- a sanitary compartment, airlock or the like.



The residential fire isolated stair discharges into an area that is not open for at least 1/3 of its perimeter, as required by BCA Clause D1.7. These non-compliances are proposed to be addressed via fire engineering performance solution.

Any new electrical meters, distribution boards (telecommunications or electrical) in the path of travel must be contained within a non-combustible enclosure with the doorways fitted with smoke seals in accordance with Clause D2.7 of the BCA.

The construction of the new stairways including goings, risers and slip resistance classification is to comply with Clause D2.13 of the BCA. Landings at the top and bottom of the stairway is to comply with Clause D2.14 of the BCA. Handrails are to be provided to the new stairs in accordance with Clause D2.17, D3.3 and Clause 11 and 12 of AS1428.1 – 2009.

Compliance for access for people with a disability provisions of Part D3, F2 of the BCA, AS1428.1 – 2009 and the Access to Premises Standards has not been reviewed by SWP, and full compliance review should be undertaken by a suitably qualified access consultant.

Section E: Services and Equipment

The building is required to be served by a fire hydrant system, the hydrant booster has been provided along the Denison Street entrance and full compliance in accordance with Clause E1.3 of the BCA and AS 2419.1 – 2005 will be required prior to the issue of a construction certificate. At present a substation has not been detailed on the drawings. If a substation is required, the location of the substation in relation to the hydrant booster is to be considered (ie needs to be greater than 10m).

The building is required to be served by fire hose reels complying with Clause E1.4 of the BCA and AS 2441 – 2005. Confirm fire hose reel coverage to the car lift, the waste room storage area, area adjacent the main switch room & basement car park levels to E1.4 & AS2441-2005 unless addressed via fire engineering performance solution.

The building is required to be protected by a sprinkler system. The client has advised that a sprinkler system complying with AS 2118.1 will be provided throughout the development including the basement car-parking levels. The location of the sprinkler valve/room is to be confirmed to ensure it has direct egress to a road or open space. Confirmation to be provided by the hydraulic consultant and detailed on the relevant drawings

The building will require portable fire extinguishers complying with Clause E1.6 of the BCA and AS 2444 – 2001.

Automatic fire detection and alarm system in accordance with AS1670.1 and AS3786 is required to be installed. Interconnected smoke alarms within residential areas and sole occupancy units. Common area detection for general occupant warning are also required. Carpark exhausts needs to comply with Clause 5.5 of AS/NZ 1668.1 – 2015.



The proposed passenger lift will be required to be one of types identified in Table E3.6a, subject to the limitations on use specified in the Table. The lift also is required to incorporate the accessible features in accordance with Table E3.6b of the BCA.

Buildings greater than 12m in effective height require a lift sized to accommodate a stretcher of 2m x 0.6m x 1.4m high. The lift must serve every level to which lift access is provided.

The building will require emergency lighting in accordance with Clauses E4.2 & E4.4 of the BCA and AS 2293.1 – 2018.

The building will require exit signage in accordance with Clauses E4.5, E4.6 & E4.8 of the BCA and AS 2293.1 – 2018

Section F: Health and Amenity

Minimum ceiling heights are to be 2.4m except where 2.1m is permitted in corridors, passageways, bathrooms, sanitary compartments, storerooms or the like.

Artificial lighting is required to all rooms that are frequently occupied, all accessible spaces, all corridors and circulation spaces and path of egress in accordance with AS/NZS 1680.0 – 2009.

Ventilation will be required to all rooms occupied by a person for any purpose by means of natural ventilation complying with Clause F4.6 of the BCA or mechanical ventilation/air-conditioning complying with AS 1668.2 –2012.

Facilities for residential buildings to comply with Clause F2.1.

Section G: Ancillary Provisions

Not applicable.

Section J: Energy Efficiency

The buildings are to be designed to achieve compliance with the relevant provisions of Part J1 to J8 respectively.

Key compliance items include:

- Roof and ceiling construction will be required to achieve compliance with Clause J1.3;
- External wall and glazing construction will be required to achieve compliance with Clause J1.5;
- Building sealing will be required to windows and doors in accordance with the relevant sections Part J3;
- Air-conditioning and mechanical ventilation systems will need to be designed in accordance with the relevant sections of Part J5;
- Artificial lighting and power will need to be designed in accordance with the relevant sections of Part J6;



- Heated water supply system for food preparation and sanitary facilities to be designed and installed in accordance with Part B2 of the Plumbing Code of Australia; and
- Facilities for energy monitoring in accordance with Clause J8.3.

The Class 2 parts of the development are required to have a registered BASIX Certificate listing all specific requirements to achieve compliance.



Conclusion

This report documents a preliminary audit of the proposed design against the BCA and the relevant legislative requirements for the issue of a Development Consent Approval.

We confirm the proposed design, as shown on the drawings referenced in Appendix A, is capable of achieving compliance with the BCA. The proposed design will therefore be capable of being approved under a Development Consent Approval, subject to the provision of further details regarding performance-based solutions and other documentation necessary to satisfy the relevant legislative requirements.



Appendix A – Referenced Documentation

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

Drawing No.	Title	Rev	Date	Drawn By
A0.00	Cover Sheet	A	28.10.2022	Platform architects
A0.01	Site Analysis	A	28.10.2022	Platform architects
A0.02	Demolition Plan	A	28.10.2022	Platform architects
A0.03	Excavation Plan	A	28.10.2022	Platform architects
A1.02	Basement 2 Plan	A	28.10.2022	Platform architects
A1.01	Basement 1 Plan	A	28.10.2022	Platform architects
A1.03	Ground Plan	A	28.10.2022	Platform architects
A1.04	Levels 1-3	A	28.10.2022	Platform architects
A1.05	Level 4	A	28.10.2022	Platform architects
A1.06	Roof Level	A	28.10.2022	Platform architects
A2.01	North Elevation	A	28.10.2022	Platform architects
A2.02	East Elevation	A	28.10.2022	Platform architects
A2.03	West Elevation	A	28.10.2022	Platform architects
A2.04	South Elevation	A	28.10.2022	Platform architects
A2.01	Roof Level	A	28.10.2022	Platform architects
A3.01	Section A-A	A	28.10.2022	Platform architects
A3.02	Section B-B	A	28.10.2022	Platform architects
A4.01	Material Schedule	A	28.10.2022	Platform architects
A4.02	Streetscape View	A	28.10.2022	Platform architects
A4.03	Perspective View 1	A	28.10.2022	Platform architects
A4.04	Perspective View 2	A	28.10.2022	Platform architects
A4.05	Perspective View 3	A	28.10.2022	Platform architects



Appendix B – Schedule of proposed statutory Fire Safety Measures

Measure	Standard of Performance
Access Panels, Doors And Hoppers To Fire Resisting Shafts	BCA2019 Amendment 1 Clause C3.13 and tested prototypes (AS 1530.4 – 2014)
Automatic Fail Safe Devices	Scheduled devices release upon trip of smoke detection, fire detection and sprinkler activation in accordance with BCA2019 Amendment 1 Clause D2.21.
Automatic Fire Detection And Alarm System (<i>Smoke Detection System</i>)	BCA2019 Amendment 1 Clause 4 of Specification E2.2a and AS 1670.1 – 2018
Automatic Fire Detection And Alarm System (<i>Smoke Alarm System</i>)	BCA2019 Amendment 1 Clause 3 of Specification E2.2a and AS 3786 – 2014
Automatic Fire Suppression Systems (<i>Sprinklers</i>)	BCA2019 Amendment 1 Specification E1.5 and AS 2118.1 – 2017, AS2118.6-2012
Building Occupant Warning System	BCA2019 Amendment 1 Clause 7 of Specification E2.2a and AS 1670.1 – 2018
Emergency Lighting	BCA2019 Amendment 1 Clause E4.2, E4.4 and AS/NZS 2293.1 – 2018
Exit Signs	BCA2019 Amendment 1 Clause E4.5, NSW E4.6, E4.7, E4.8 and AS/NZS 2293.1 – 2018
Fire Alarm Monitoring System	BCA2019 Amendment 1 Clause 8 of Specification E2.2a and AS 1670.3 – 2018
Fire Dampers	BCA2019 Amendment 1 Clause C3.15 and AS 1668.1 – 2015 (AS 1682.1 – 2015 and AS 1682.2 – 2015)
Fire Doors	BCA2019 Amendment 1 Specification C3.4 and AS/NZS 1905.1 – 2015
Fire Hydrants Systems	BCA2019 Amendment 1 Clause E1.3 and AS 2419.1 – 2005
Fire Seals Protecting Opening In Fire Resisting Components Of The Building	BCA2019 Amendment 1 Clause C3.15, Specification C3.15, AS 1530.4 – 2014, AS 4072.1 – 2005 and installed in accordance with the tested prototype.
Hose Reel System	BCA2019 Amendment 1 Clause E1.4 and AS 2441 – 2005
Lightweight Construction	BCA2019 Amendment 1 Specifications C1.8, Clause A2.3 and AS 1530.4 – 2014
Mechanical Air Handling System (<i>Carpark Mechanical Ventilation System</i>)	BCA2019 Amendment 1 Table E2.2a, Clause 5.5 of AS/NZ 1668.1 – 2015 and fans with metal blades suitable for operation at normal temperature may be used and the electrical power and control cabling need not be fire rated



Measure	Standard of Performance
Portable Fire Extinguishers	BCA2019 Amendment 1 Clause E1.6 and AS 2444 – 2001
Smoke Detectors And Heat Detectors <i>(Detectors For The Automatic Closing Operation Of Fire Doors To Fire Isolated Exits)</i>	BCA2019 Amendment 1 Clause C3.8 and AS 1670.1 – 2018
Warning And Operational Signs	BCA2019 Amendment 1 Clauses D1.17, D2.23, E3.3, and Specifications D1.12, E1.8
Fire Engineering Report	TBA



Appendix C – Fire-resistance levels

The below table contains fire-resistance levels (FRL) required under Specification C1.1 of the BCA.

Type A Construction: FRL of Building Elements				
Building element	Class of building - FRL: (in minutes)			
	Structural adequacy/Integrity/Insulation			
	2, 3 or 4 part	5, 9 or 7a	6	7b or 8
EXTERNAL WALL (including any column and other building element incorporated within it) or other external building element, where the distance from any fire-source feature to which it is exposed is-				
For loadbearing parts-				
less than 1.5m	90/90/90	120/120/120	180/180/180	240/240/240
1.5 TO LESS THAN 3 M	90/60/60	120/ 90/ 90	180/180/120	240/240/180
3 OR MORE	90/60/30	120/ 60/ 30	180/120/90	240/180/ 90
For non-loadbearing parts-				
less than 1.5 m	-/90/90	- /120/120	- /180/180	- /240/240
1.5 TO LESS THAN 3 M	-/60/60	- / 90/ 90	- /180/120	- /240/180
3 m or more	- / - / -	- / - / -	- / - / -	- / - / -
EXTERNAL COLUMN not incorporated in an external wall-				
For loadbearing columns	90/ - / -	120/ - / -	180/ - / -	240/ - / -
For non-loadbearing columns	- / - / -	- / - / -	- / - / -	- / - / -
COMMON WALLS and FIRE WALLS	90/90/90	120/120/120	180/180/180	240/240/240
INTERNAL WALLS-				
Fire-resisting lift and stair shafts-				
Loadbearing	90/90/90	120/120/120	180/120/120	240/120/120
Non-loadbearing	- /90/90	- /120/120	- /120/120	- /120/120
Bounding public corridors, public lobbies and the like-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Between or bounding sole-occupancy units-				
Loadbearing	90/90/90	120/ - / -	180/ - / -	240/ - / -
Non-loadbearing	- /60/60	- / - / -	- / - / -	- / - / -
Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of Combustion-				
Loadbearing	90/90/90	120/ 90/ 90	180/120/120	240/120/120
Non-loadbearing	- /90/90	- / 90/ 90	- /120/120	- /120/120
OTHER LOADBEARING INTERNAL WALLS, INTERNAL BEAMS, TRUSSES AND COLUMNS				
	90/ - / -	120/ - / -	180/ - / -	240/ - / -
FLOORS	90/90/90	120/120/120	180/180/180	240/240/240
ROOFS	90/60/30	120/ 60/ 30	180/60/30	240/ 90/ 60