



PRE-CONSTRUCTION CERTIFICATE BCA 2019 REVIEW FOR DA SUBMISSION

Horizon Lee Wharf 5 45 Honeysuckle Drive, Newcastle, NSW

Prepared for: Horizon Newcastle Pty Ltd
Project No.: 19-023
Date: 7 May 2019
Issue: DA1

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Report Revision History

Issue	Date	Prepared by	Accreditation #	Signed
DA1	07.05.2019	Antony Ridgway	BPB 0344	

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1.0 Introduction and Documentation

Introduction

This report contains a design philosophy review concerning the capability of the design to meet Building Code of Australia requirements. This review has found that the fundamental design is capable of meeting the requirements of BCA 2019. The design will be further developed so that resolution of all relevant BCA provisions will be possible prior to the issue of a Construction Certificate.

Documentation

This report is based on the review of the following documents:

- i. Building Code of Australia 2019
- ii. Guide to the Building Code of Australia 2019
- iii. Environmental Planning & Assessment Act 1979
- iv. Environmental Planning & Assessment Regulation 2000
- v. Architectural drawings prepared by hill thalis & CKDS Architecture as follows:

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Drawing No.	Revision
DA-101	G
DA-102	H
DA-103	F
DA-104	G
DA-105	F
DA-106	F
DA-301	B
DA-302	B
DA-303	B
DA-304	B
DA-401	C
DA-402	A
DA-403	A

2.0 Building Characteristics

BCA Classification:	Basement Levels 1 & 2 – class 7a carpark (storage less than 10%) Ground floor – class 2 residential (includes ancillary areas such as gym, mailroom, bike storage); class 6 commercial and retail Levels 1 to 8 – class 2 residential
Rise in Storeys:	9
Floor Area:	Basement 2 – 3,540m ² Basement 1 – 3,540m ² Ground floor – 1,711m ² Level 1 – 2,078m ² Level 2 – 2,078m ² Level 3 – 2,078m ² Level 4 – 2,078m ² Level 5 – 2,078m ² Level 6 – 2,078m ² Level 7 – 1,541m ² Level 8 – 404m ² Total – 23,204m²
Type of Construction:	Type A
Effective height:	25.95m Note 1: The three towers are connected via a basement carpark, and the effective height of 25.95m applies to the entire building. Note 2: The Middle Tower and East Tower would both have effective heights of 22.55m if they were separate buildings (which they are not).
Climate zone:	5
Conditioned spaces:	All residential and commercial / retail units
No. of Residential Units:	110

3.0 BCA Section C – Fire resistance

- i. The building must be constructed in accordance with the requirements for Type A construction, and the fire rating requirements of BCA Spec C1.1, clause 3 and Table 3.
- ii. Spandrel separation between storeys is not required under C2.6 due to the provision of a sprinkler system throughout the building.
- iii. Separation of different classifications on the ground floor must comply with the requirements of C2.7, C2.8 & C3.3.

4.0 BCA Section D – Access and Egress

- i. Based on an effective height exceeding 25m, a minimum of 2 exits is required from every storey. The Middle Tower and East Tower will be provided with only one exit which will be addressed by a performance solution prepared by a fire engineer. All remaining parts of the building comply.
- ii. Exit travel distances either comply with D1.4 and D1.5, or are capable of being addressed by a performance solution prepared by a fire engineer (i.e. 47m to the nearest exit and 85m between alternative exits in the basement carpark levels; and 4.6m between alternative exits in the West residential tower).
- iii. Aggregate egress width complies for the estimated populations and available exits.
- iv. The discharge from all fire-isolated exits to open space and the public road is capable of complying with D1.7.
- v. An accessible pathway is provided from the property boundary to each of the three main entrances, as well as between the main entrances across the ground floor / podium level, and to the entrance door of all residential SOUs and common areas.
- vi. Accessible car parking for the commercial use will be required in accordance with Table D3.5.

5.0 BCA Section E – Services and Equipment

- i. Hydrant coverage is required in accordance with E1.3 & AS2419.1-2005.
- ii. Hose reel coverage is required to the carpark levels and commercial / retail tenancies only in accordance with E1.4 & AS2441-2005.
- iii. A sprinkler system is required throughout the whole building in accordance with E1.5, Spec E1.5 and AS 2118.1-2017. For a combined sprinkler and fire hydrant system: AS 2118.6-2012.
- iv. Portable fire extinguishers are required in accordance with Table E1.6 and AS2444-2001.
- v. A fire control centre in accordance with Spec E1.8 is required.
- vi. The residential parts must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a.
- vii. An emergency warning system in accordance with AS 1670.4-2018 must be provided throughout.
- viii. Fire-isolated stairways serving the West Tower must be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1-2015. A smoke detection system must be installed in accordance with Clause 5 of Specification E2.2a to operate AS/NZS 1668.1 systems that are provided for automatic air pressurisation for fire-isolated exits.

- ix. Where the carpark areas are provided with a mechanical ventilation system in accordance with AS 1668.2, they must comply with Clause 5.5 of AS/NZS 1668.1.
- x. The class 6 parts must be provided with a zone pressurisation system. Alternatively this will be addressed by a performance solution prepared by a fire engineer.
- xi. All lifts must be emergency lifts. Alternatively, for the lifts serving the Middle and East Towers, this will be addressed by a performance solution prepared by a fire engineer.
- xii. Emergency lighting and exit signage is required throughout in accordance with Part E4 & AS2293.1-2005.
- xiii. Portable fire extinguishers are required in accordance with Table E1.6.

6.0 BCA Section F – Health and Amenity

- i. The sanitary facilities proposed for the residential parts complies with F2.1.
- ii. Sanitary facilities for the commercial / retail spaces on the ground floor must comply with F2.3 and Table F2.3.
- iii. Natural light must be provided to all habitable rooms of the class 2 residential units in accordance with F4.1, F4.2 & F4.3 – plans capable of complying.
- iv. Artificial lighting and ventilation throughout the building must be provided in accordance with the specific use of each area.
- v. Sound rating must be provided to the residential units in accordance with Part F5.

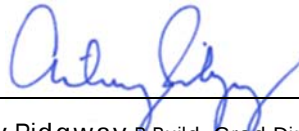
7.0 BCA Section J – Energy Efficiency

- i. Climate zone 5.
- ii. Section J applies to all parts of the building, except that the BASIX certificate supplements the class 2 residential parts.

8.0 Conclusion

We have assessed the referenced architectural documentation with respect to the Building Code of Australia 2019. The design is at a point where the inherent BCA philosophies have been checked and development consent can be sought. The finer details with respect to BCA 2019 compliance can be finalised prior to the issue of a Construction Certificate.

Signed: _____



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Date: 7 May 2019

Issue: DA1