

31 July 2025
Our Ref: 25191-L01c

Wollongong Developments No. 8 Pty Ltd
30a Eva Street
Riverwood NSW 2210

Attention: Charbel Kazzi
Email: charbel@level33.com.au

221-291 CROWN, 216-238 KEIRA & 86-90 BURELLI STREETS, WOLLONGONG FIRE ENGINEERING STATEMENT (FOR DA SUBMISSION)

INTRODUCTION

This Fire Engineering Statement prepared by Innova Services Australia Pty Ltd on behalf of Wollongong Developments No.8 Pty Ltd ('the Applicant') supports a State Significant Development Application (SSDA) for an Infill Affordable Housing Development, SSD-76440958, for the site at 221-291 Crown Street, 216-238 Keira Street and 86-90 Burelli Street, Wollongong (the site).

Specifically, consent is sought for the following development in this SSDA:

- Demolition of existing structures on the site, retention of heritage facades, tree removal and site excavation for new basement.
- Construction of a new mixed-use development consisting of:
 - Four residential towers, ranging from 16 to 38 storeys and comprising 546 apartments including:
 - Approx. 414 market apartments.
 - Approx. 132 affordable apartments.
 - Residential lobbies and podium.
 - Communal open space.
 - A 10-storey commercial office building, an 8-storey hotel comprising 166 rooms, and numerous retail tenancies (including a supermarket) consisting of:
 - 10,009 sqm of commercial GFA.
 - 8,793 sqm of hotel GFA.
 - 3,781 sqm of retail GFA.
 - 1,510 sqm of retail supermarket GFA.
- Car, motorcycle and bicycle parking for residents, workers and visitors across two basement levels, mezzanine, lower ground and levels 1 and 2 including:
 - 774 car parking spaces, including:
 - 547 residential spaces (including accessible spaces).
 - 49 residential visitor spaces.
 - 63 commercial/retail/residential visitor spaces.
 - 25 commercial/retail (staff) spaces.
 - 10 hotel (staff only) spaces.
 - 80 retail (supermarket) spaces.

Sydney | Suite 18.02, 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

- Five (5) loading bays.
- 320 bicycle parking spaces.
- 47 motorcycle parking spaces.
- New public open space including a new public plaza.
- Associated landscaping and public domain works.

This document provides advice with regards to the proposed use of Performance Solutions to address identified departures to the Deemed to Satisfy (DtS) provisions of the National Construction Code 2022 Volume One – Building Code of Australia Class 2 to 9 Buildings (NCC). The purpose of this document is to assist in the design development process and to assist the Consent Authority in the determination of the Development Application (DA).

NCC ASSESSMENT DATA

With reference to the BCA Assessment Report prepared by EBS Consultants (Ref: 19435-BCA-2, dated 21 May 2025), the relevant NCC Assessment Data for the subject development is summarised in Table 1.

Table 1: Relevant NCC Assessment Data

| NCC Reference | NCC Assessment |
|---------------------------------------|---|
| Classification | Class 2 (residential units) Class 3 (hotel rooms) Class 5 (commercial) Class 6 (retail) Class 7a (car parking) Class 7b (storage & bin waste rooms) Class 8 (loading dock) Class 9b (conference and amenities) |
| Rise in Storeys | 41 |
| No. of Levels Contained | 43 |
| Minimum Type of Construction Required | Type A |
| Effective Height | Greater than 50 m (~129.5 m) |
| Maximum Fire Compartment Size | As applicable for Type A construction |

REFERENCED DRAWINGS

Table 2: List of Referenced Architectural Drawings

| Drawing No. | Issue | Title | Received Date |
|-------------|-------|---------------------|---------------|
| DA0000 | A | Cover Page | 11-04-2025 |
| DA1002 | A | Site Plan | 11-04-2025 |
| DA2000 | A | Basement 02 | 11-04-2025 |
| DA2001 | A | Basement 01 | 11-04-2025 |
| DA2002 | A | Mezzanine Level | 11-04-2025 |
| DA2003 | A | Lower Ground Plan | 11-04-2025 |
| DA2004 | A | Ground Floor Plan | 11-04-2025 |
| DA2005 | A | Level 1 Plan | 11-04-2025 |
| DA2006 | A | Level 2 Plan | 11-04-2025 |
| DA2007 | A | Level 3 Plan | 11-04-2025 |
| DA2008 | A | Level 4 Plan | 11-04-2025 |
| DA2009 | A | Level 5 Plan | 11-04-2025 |
| DA2010 | A | Level 6 Plan | 11-04-2025 |
| DA2011 | A | Level 7 Plan | 11-04-2025 |
| DA2012 | A | Level 8 Plan | 11-04-2025 |
| DA2013 | A | Level 9 Plan | 11-04-2025 |
| DA2014 | A | Level 10 Plan | 11-04-2025 |
| DA2015 | A | Level 11 – 15 Plan | 11-04-2025 |
| DA2016 | A | Level 16 Plan | 11-04-2025 |
| DA2017 | A | Level 17 Plan | 11-04-2025 |
| DA2018 | A | Level 18-23 Plan | 11-04-2025 |
| DA2019 | A | Level 24 Plan | 11-04-2025 |
| DA2020 | A | Level 25 Plan | 11-04-2025 |
| DA2021 | A | Level 26 – 29 Plan | 11-04-2025 |
| DA2022 | A | Level 30 Plan | 11-04-2025 |
| DA2023 | A | Level 31-36 Plan | 11-04-2025 |
| DA2024 | A | Level 37 Plan | 11-04-2025 |
| DA2025 | A | Level 38 Plan | 11-04-2025 |
| DA2026 | A | Roof Level Plan | 11-04-2025 |
| DA3000 | A | Street Elevation 01 | 11-04-2025 |
| DA3001 | A | Street Elevation 02 | 11-04-2025 |
| DA3002 | A | Street Elevation 03 | 11-04-2025 |
| DA3003 | A | Street Elevation 04 | 11-04-2025 |
| DA3015 | A | Section 01 | 11-04-2025 |
| DA3016 | A | Section 02 | 11-04-2025 |
| DA3017 | A | Section 03 | 11-04-2025 |

ACHIEVING COMPLIANCE WITH THE NCC

Compliance with the NCC is achieved by satisfying the Performance Requirements. Clause A2G1(2) of the NCC states that the Performance Requirements can be satisfied by one of the following:

- (a) Performance Solution.*
- (b) Deemed-to-Satisfy Solution.*
- (c) A combination of (a) and (b).*

Clause A2G2(1) of the NCC states that a Performance Solution is achieved by demonstrating:

- (a) compliance with all relevant Performance Requirements; or*
- (b) the solution is at least equivalent to the Deemed-to-Satisfy Provisions.*

Clause A2G2(2) of the NCC states that a Performance Solution must be shown to comply with the relevant Performance Requirements through one or a combination of the following Assessment Methods:

- (a) Evidence of suitability in accordance with Part A5 that shows the use of a material, product, plumbing and drainage product, form of construction or design meets the relevant Performance Requirements.*
- (b) A Verification Method including the following -*
 - (i) the Verification Methods in the NCC.*
 - (ii) Other Verification Methods, accepted by the appropriate authority that show compliance with the relevant Performance Requirements.*
- (c) Expert judgment.*
- (d) Comparison with the Deemed-to-Satisfy Provisions.*

Clause A2G2(3) of the NCC states Where a Performance Requirement is satisfied entirely by a Performance Solution, in order to comply with (1) the following method must be used to determine the Performance Requirement or Performance Requirements:

- (a) Identify the relevant Performance Requirements from the Section or Part to which the Performance Solution applies.*
- (b) Identify Performance Requirements from other Sections or Parts that are relevant to any aspects of the Performance Solution proposed or that are affected by the application of the Performance Solution.*

Clause A2G2(4) of the NCC states Where a Performance Solution is proposed to be satisfied by a Performance Solution, the following steps must be undertaken:

- (a) Prepare a performance-based design brief in consultation with relevant stakeholders.*
- (b) Carry out analysis, using one or more of the Assessment Methods listed in (2), as proposed by the performance-based design brief.*
- (c) Evaluate results from (b) against the acceptance criteria in the performance-based design brief.*
- (d) Prepare a final report that includes-*
 - (i) All Performance Requirements and/or Deemed-to-Satisfy Provisions identified through A2G2(3) or A2.4(3) as applicable; and*
 - (ii) Identification of all Assessment Methods used; and*
 - (iii) Details of step (a) to (c); and*
 - (iv) Confirmation that the Performance Requirement has been met; and*
 - (v) Details of conditions or limitations, if any exist regarding the Performance Solution.*

IDENTIFIED DEPARTURES TO DTS PROVISIONS OF NCC

With reference to the BCA Assessment Report prepared by EBS Consultants (Ref: 19435-BCA-2, dated 21 May 2025), it is noted that Performance Solutions are proposed to be developed to address departures to the following DtS provisions of the NCC:

1. *Fire-resisting construction (reduced FRL to Class 6 retail tenancies) – NCC Specification 5*
2. *Fire-resisting construction (reduced FRL to Class 7b storage areas) – NCC Specification 5*
3. *Fire-resisting construction (reduced FRL to Class 8 loading dock) – NCC Specification 5*
4. *Public corridors in Class 2 buildings (corridors > 40 m) – NCC Clause C3D15*
5. *Protection of openings in external walls (exposure to boundaries) – NCC Clause C4D3*
6. *Separation between adjacent buildings (exposure between buildings) – NCC Clause C4D4*
7. *Enclosure of shafts (no fire rating to base of garbage chute shafts) – NCC Specification 5 (S5C8)*
8. *Exit travel distances (basement levels) – NCC Clause D2D5*
9. *Exit travel distances (residential levels) – NCC Clause D2D5*
10. *Distance between alternative exits (basement levels) – NCC Clause D2D6*
11. *Distance between alternative exits (residential levels) – NCC Clause D2D6*
12. *Distance between alternative exits (discharge of exits not far apart as practicable) – NCC Clause D2D6*
13. *Travel via fire-isolated exits (discharge into common corridors) – NCC Clause D2D12*
14. *Travel via fire-isolated exits (discharge into external covered areas < 1/3 open) – NCC Clause D2D12*
15. *Travel via fire-isolated exits (exposure to path of travel) – NCC Clause D2D12*
16. *Travel via fire-isolated exits (more than 2 doorways into fire-isolated passageway) – NCC Clause D2D12*
17. *Roof as open space (exposure to path of travel) – NCC Clause D3D13*
18. *Fire hydrants (location of fire brigade booster assembly) – NCC Clause E1D2*

In addition to the above, it is likely that Performance Solutions will be required to be documented to address departures to the following DtS provisions of the NCC:

1. *Fire-resisting construction (slab set-down to wet areas in residential units) – NCC Specification 5*
2. *Fire-resisting construction (fire seal to perimeter slab edges) – NCC Specification 5*
3. *Fire hose reels (omission from small fire rated rooms) – NCC Clause E1D3*
4. *Smoke hazard management (use of jet fans in car parking areas) – NCC Clause E2D2*
5. *Smoke hazard management (rationalisation to zone smoke control provisions) – NCC Clause E2D6*
6. *Fire sprinkler systems (omission of sprinklers from main switch rooms) – NCC Specification 17*

Note: At this stage of the design, the identified departures to the DtS provisions of the NCC are not exhaustive, and additional departures resulting in the development of additional Performance Solutions may arise through the detailed design process.

REQUIRED FIRE SAFETY SYSTEMS

The following fire safety systems will be required to be installed throughout the subject development:

- Fire hydrants – NCC Clause E1D2, AS 2419.1-2021
- Fire hose reels – NCC Clause E1D3, AS 2441-2005
- Fire sprinklers – NCC Specification 17, AS 2118.1-2017, AS 2118.6-2012
- Portable fire extinguishers – NCC Clause E1D14, AS 2444-2001
- Automatic smoke detection and alarm system – NCC Specification 20, AS 1670.1-2018
- Stair pressurization systems – NCC Clause E2D4, AS 1668.1-2015
- Emergency lighting and exit signs – NCC Clauses E4D2, E4D4, E4D5 & E4D8, AS/NZS 2293.1-2018
- Emergency lifts – NCC Clause E3D5
- Emergency warning and intercom systems – NCC Clause E4D9, AS 1670.1-2018

Note: The above list may change or vary during the detailed design process and / or as a result of the future Fire Engineering Assessment and liaison with Fire & Rescue NSW.

CONCLUSION

Innova Services Australia Pty Ltd has reviewed the proposed design and the identified departures to the DTS provisions of the NCC and advise that Performance Solutions can be developed that will be capable of demonstrating compliance with the relevant Performance Requirements of the NCC.

The Fire Engineering process will require liaison with relevant stakeholders during the detailed design process, including Fire & Rescue NSW (FRNSW).

Should you require any additional information with regards to the above please do not hesitate to contact the undersigned.

Yours Faithfully

Innova Services Australia Pty Ltd

A handwritten signature in black ink, appearing to read "Jason Powell".

Jason Powell

Director

Certifier – Fire Safety (BDC0801)
MIEAust, CPEng, NER