

10 September 2024

ESR Australia

Level 12, 135 King Street
NSW Sydney 2000

Attention: Hamish Boots

RE: Fire Engineering Support Letter | 3 Johnston Crescent, Horsley Park NSW

Introduction

The purpose of this statement is to provide confidence to the Consent Authority that prior to the issue of Development Application (DA) Consent for the proposed industrial warehouse development located at 3 Johnston Crescent in Horsley Park NSW, that the design has been formally reviewed by an Accredited Certifier – Fire Safety Engineer.

The proposed development serves as two (2) Class 7b storage and dispatch facilities, each inclusive of Class 7a carparking areas that are located externally and also within the building undercrofts, in addition to the Class 5 office areas. The buildings have been defined by the BCA Consultant Blackett Maguire + Goldsmith to each be large-isolated buildings requiring Type B Construction provisions and having a Rise-In-Storeys of three (3). The development has been reviewed by Affinity Fire Engineering Pty Ltd from an overarching fire safety aspect, and Affinity can confirm that development will incorporate the respective fire safety systems necessary to ensure compliance with the regulatory requirements within NSW.

In providing this letter of support for the DA, Affinity Fire Engineering can confirm that we have reviewed the architectural drawings prepared by Nettleton Tribe Architects (as listed below) and have provided fire safety engineering advice through emails, meetings, design mark-ups and workshops with recommended design changes that have been incorporated into this final set of architectural plans. Through this process, design changes have been incorporated and specific design principles identified relative to fire services design to ensure a suitable level of safety that enables the design to meet the Performance Requirements of the NCC Building Code of Australia 2022 Volume 1 (BCA).

The design is subsequently anticipated to achieve compliance with the BCA in force at the time of the relevant Construction Certificate through a combination of Deemed-to-Satisfy (DtS) Provisions and a fire engineered Performance Solutions.



Architectural Reference Drawings:

- 14092_ DA000 COVER SHEET 4__05.07.2024
- 14092_ DA001 LOCALITY & CONTEXT PLAN 4__05.07.2024
- 14092_ DA011 SITE PLAN 4__05.07.2024
- 14092_ DA012 FLOOR PLANS - BUILDING A 4__05.07.2024
- 14092_ DA013 FLOOR PLANS - BUILDING B 4__05.07.2024
- 14092_ DA014 ROOF PLAN 4__05.07.2024
- 14092_ DA015 OFFICE FLOOR PLANS - BUILDING A 4__05.07.2024
- 14092_ DA016 OFFICE FLOOR PLANS - BUILDING B 4__05.07.2024
- 14092_ DA017 DOCK OFFICE FLOOR PLANS & ELEVATIONS - BUILDING B 4__05.07.2024
- 14092_ DA020 ELEVATIONS - BUILDING A 4__05.07.2024
- 14092_ DA021 ELEVATIONS - BUILDING B 4__05.07.2024
- 14092_ DA025 OFFICE ELEVATIONS - BUILDING A 4__05.07.2024
- 14092_ DA026 OFFICE ELEVATIONS - BUILDING B 4__05.07.2024
- 14092_ DA030 SECTIONS - BUILDING A 4__05.07.2024
- 14092_ DA031 SECTIONS - BUILDING B 4__05.07.2024
- 14092_ DA040 SIGNAGE STRATEGY PLAN 4__05.07.2024
- 14092_ DA041 SIGNAGE DETAILS 4__05.07.2024

Fire Safety Engineering Overview

Based on the above documents and our review and advice provided, Affinity Fire Engineering confirms that the proposed design incorporates features that are intended to meet the Performance Requirements of the BCA through the formal Fire Engineering process.

In particular, the fire safety strategy and fire engineering design shall focus on the following site critical design elements in order to confirm compliance with the Performance Requirements of the BCA:

- ▶ Occupant egress in the event of a fire emergency and the maintenance of tenable conditions for occupant evacuation and fire brigade intervention; and
- ▶ Fire and smoke spread throughout the buildings and its impact on structural stability and occupant evacuation; and
- ▶ Site access and fire services design to facilitate fire brigade intervention.

The Performance Solution Report which shall be prepared as part of the applicable Construction Certificate application shall address the following non-compliances with the BCA Deemed-to-Satisfy (DtS) provisions; noting that where not listed below all other parts of the design relative to fire safety are expected to achieve compliance with the BCA DtS Provisions:



- ▶ Rationalise the emergency vehicular access around each building which is in parts greater than 18m from the structure, reduced to less than 6m at pinch-points, discontinuous at the western end of the two dispatch hardstands and/or has security gates and boom gates crossing over the roadway - BCA Clauses C3D4 and C3D5.
 - Addressing Performance Requirement(s) C1P9.
- ▶ Assessment of egress provisions to a point of choice, to the nearest exit and between alternative exits. This will be completed in conjunction with rationalised smoke hazard management requirements in the buildings where the analysis will demonstrate safe occupant evacuation and fire brigade intervention – BCA Clauses D2D5, D2D6 and E2D3.
 - Addressing Performance Requirement(s) D1P4 and E2P2.
- ▶ Rationalising the travel distances where the egress route is via the non-fire-isolated stairs within the offices and exceeds a total travel distance of 80m – BCA Clauses D2D14.
 - Addressing Performance Requirement(s) D1P4 and E2P2.
- ▶ Assess aspects of the fire hydrant design where the system does not fully comply with AS2419.1:2021; examples of areas of non-compliance include the presence of internal hydrants greater than 4m from an exit, allowing two hose lengths for the hydrants beneath the dispatch awnings having a depth greater than 3m, and assessment of Appendix C due to each building exceeding 108,000m³ in volume – BCA Clause E1D2.
 - Addressing Performance Requirement(s) E1P3.
- ▶ Assess the location of the hydrant and sprinkler boosting equipment situated in locations that do not conform with the relevant Australian Standards - BCA Clause E1D2, E1D4, AS2118.1:2017, AS2419.1:2021.
 - Addressing Performance Requirement(s) E1P3 and E1P4.
- ▶ Assess the adoption of 50m fire hose reels in order to achieve coverage of the warehouse (in lieu of 36m long hose reels) – BCA Clauses E1D3.
 - Addressing Performance Requirement(s) E1P1.
- ▶ Omission of smoke exhaust from the main office, dock offices, carpark and the undercroft carparking areas – BCA Clause E2D10.
 - Addressing Performance Requirement(s) E2P2.

Vehicular Perimeter Access Review

As noted above, the fire engineered Performance Solution will be developed ahead of the relevant construction certificate and subject to FRNSW approval through the Fire Authority referral pathway detailed within the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021. The Performance Solution will specifically address variations from the prescriptive Deemed-to-Satisfy (DtS) provisions of the BCA; noting that a performance Solution is permitted within Section 10.2.6 of the FRNSW Fire Safety Guideline "Access for fire brigade vehicles and firefighters [1].

1 NSW Government, Fire + Rescue NSW Fire Safety Branch Community Safety Directorate, "Fire Safety Guideline - Access For Fire Brigade Vehicles and Firefighters" version 05.01, issued 17/11/2020.



The emergency vehicle perimeter access provisions rely upon the public road on three (3) sides, with only the southern sides of each building utilising internal roads within the allotment. This design principle is in accordance with the provisions of the Building Code of Australia (BCA) and FRNSW Fire Safety Guideline.

Furthermore, utilising the public road around the northern side of the building results in the vehicular access road exceeding the BCA limitation of 18m from the northern building. The design with this set-back still, however, facilitates fire-fighter operations and enables fire-fighting water to be applied to the structure. Direct building access is afforded through provision of pedestrian pathways linking Johnston Crescent to the building main entry points along the northern façade.

Based on these specific design features Affinity Fire Engineering subsequently confirm that the design meets the Fire + Rescue NSW requirements and is capable of compliance with the Performance Requirements of the BCA.

Conclusion

The subject design for the new industrial warehouse development is considered by Affinity Fire Engineering Pty Ltd to not compromise the expected fire safety strategy, fire brigade intervention or conformance with the building regulations. Hence, Affinity Fire Engineering anticipates that the fire safety engineering assessment to be conducted as part of the Construction Certificate stage is feasible of achieving compliance with the Performance Requirements of the BCA while also ensuring the design meets the applicable Guideline requirements of Fire + Rescue NSW.

It is noted that this document should not be used for Construction Documentation as the formal fire engineering process and assessment is required to be completed prior to issue of the relevant Construction Certificate.

We trust that the above information is sufficient for the Consent Authority's needs with respect to fire safety design and compliance with the relevant building regulations in this regard. Should any further information be required for a determination to be made please contact the undersigned on 02 9194 0590.

Yours faithfully,

Thomas Newton

Director – Affinity Fire Engineering Pty Ltd

Certifier - Fire Safety Engineer (BDC 3149)

E: tnewton@affinity-eng.com

P: (02) 9194 0590

M: 0488 016 699