

10 February 2026

**Attention: Royce Lucero**

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Meadowbank, NSW, 2114

**Project name:** 88 Waterloo Road, Macquarie Park | SSD-94006708  
**Project address:** 15-21 Cottonwood Crescent, Macquarie Park  
**Document reference:** S24129-SSDA-001-D.docx

## State Significant Development Application (SSD-94006708) | Fire Engineering | Letter of Support

### Cottonwood Development Pty Ltd.

This SSDA Fire Engineering Support Letter has been prepared by Minerva Group (NSW) Pty Ltd to accompany State Significant Development Application (SSDA) and concurrent Rezoning Proposal – SSD-94006708 for a mixed use development identified at 15-21 Cottonwood Crescent, Macquarie Park (the site).

The proposal includes provision for the demolition of existing buildings and construction of a residential development comprising two residential flat buildings above a common basement car park / sleaved podium incorporating residential, car parking, and a retail component within the Waterloo Road frontage and provision of 10% affordable housing.

The legal description of the site is outlined in Table 1 below.

**Table 1 Legal Description of the site**

Property Address	Title Description
15 Cottonwood Crescent, Macquarie Park	SP8144
17 Cottonwood Crescent, Macquarie Park	SP7630
19 Cottonwood Crescent, Macquarie Park	SP7892
21 Cottonwood Crescent, Macquarie Park	SP7984

Note: for the purposes of reporting and branding of the proposal, we will also refer to the site as '88 Waterloo Road, Macquarie Park'.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-94006708).

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This report concludes that the proposed development is suitable, warrants approval, satisfies SEARs Item 4 – Built Form and Urban Design, and our preliminary Fire Engineering analysis confirms that building can meet the functional requirements of the Building Code of Australia with respect to:

- Mitigating fire spread to adjacent structures; and
- Providing for occupant life safety; and
- Facilitating fire brigade intervention

On receipt of SSDA approval, the Design Team will continue to evaluate the design in accordance with the process outlined in BCA Part A2 with respect to liaison with relevant stakeholders and preparation of a Performance Solution Report (by a registered Certifier – Fire Safety) for construction approval.

This statement of support confirms that building design can comply with the relevant Performance Requirements of the Building Code of Australia (BCA), subject to further analysis by the fire engineering team as the design develops.

If there are any queries regarding this report, please do not hesitate to contact the undersigned.

Written by



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Approved by



**Eliot Reeves, Certifier – Fire Safety | BDC 2301**

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## 1. Introduction

### 1.1. Project Description

This report has been prepared in support of a State Significant Development Application (SSDA) and concurrent Rezoning Proposal – SSD-94006708 – at 15-21 Cottonwood Crescent, Macquarie Park (AKA. 88 Waterloo Road).

The application seeks development consent for the redevelopment of the site for a mixed-use development comprising residential accommodation and retail uses.

Specifically, this application seeks approval for the following:

- Demolition of all existing four-storey residential flat buildings on the site
- Site preparation works including:
  - Removal of existing forty-nine (49) trees
  - Excavation of the site to a maximum depth of six (6) basement levels
- Construction of two mixed-use buildings comprising a 60 and 52 storey building respectively, which will accommodate:
  - 858 Residential apartments inclusion 10% affordable housing of the uplift being sought
- Six (6) levels of basement with 733 car parking spaces, bicycle parking services.
  - A four-level commercial podium containing:
    - Retail spaces
    - Four townhouses
    - Residential lobbies
    - Waste Storages
    - Residential and visitor Parking spaces
    - Bicycle Parking spaces
- Communal Open Space and residential amenities on level four (4).
- Rooftop Terrace on Level 52 of Cottonwood Crescent Tower and level 60 of Waterloo Road Tower.

The proposal includes provision to amend Clauses 4.3 and 4.4 of the Ryde Local Environmental Plan 2014 (RLEP2014) by virtue of the concurrent rezoning process. This includes the following amendments:

- Clause 4.3 – Height of Buildings:
  - Amend the current 65m maximum building height to 212m
- Clause 4.4 – FSR:
  - Amend the current FSR of 4.5:1 to 16.8:1

### 1.2. Purpose of this Report

This Fire Engineering SSDA support letter has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 8 October 2025 and issued for the SSDA (SSD-

94006708). Specifically, this report has been prepared to respond to the SEARs requirement and government agency comments issued below.

**Table 2 – SEARs Requirements**

SEAR	SEAR description	Report section
4. Built Form and Urban Design	<ul style="list-style-type: none"> <li>• Explain and illustrate the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach.</li> <li>• Demonstrate how the proposed built form (layout, height, bulk, scale, separation, setbacks, interface and articulation) addresses and responds to the context, site characteristics, streetscape and existing and future character of the locality.</li> <li>• Demonstrate how the building design will deliver a high-quality development, including consideration of façade design, articulation, activation, roof design, materials, finishes, colours, any signage and integration of services.</li> <li>• Assess how the development complies with the relevant accessibility requirements.</li> </ul>	Section 3, 4 and 5

### 1.3. The Site

The site is at 15-21 Cottonwood Crescent; Macquarie Park is located within the Ryde Local Government Area (LGA). The site occupies a prominent and highly accessible position within the Macquarie Park precinct, benefitting from dual street frontages to Waterloo Road along the north-eastern boundary and Cottonwood Crescent along the south-eastern boundary. These street interfaces provide strong address, visibility and access opportunities for the proposed development.

The western boundary adjoins Elouera Reserve, providing a high-amenity interface with publicly accessible open space, mature vegetation and a landscaped green corridor. This relationship enhances the site’s environmental quality and outlook and provides opportunities for sensitive integration of the proposed development with the adjoining parkland.

The south-western boundary adjoins existing residential properties at 13 Cottonwood Crescent and 12-14 Lachlan Avenue, which represent the primary low-rise residential interface for the site.

The approximate boundary dimensions are as follows:

- 52.45 metres to Waterloo Road
- 97.35 metres to Cottonwood Crescent
- 50.6 metres to adjoining residential properties
- 100.9 metres to Elouera Reserve

The site is fully serviced, with existing connections to water, sewer, electricity, gas and telecommunications, and is therefore capable of supporting redevelopment without the need for major external servicing upgrades).

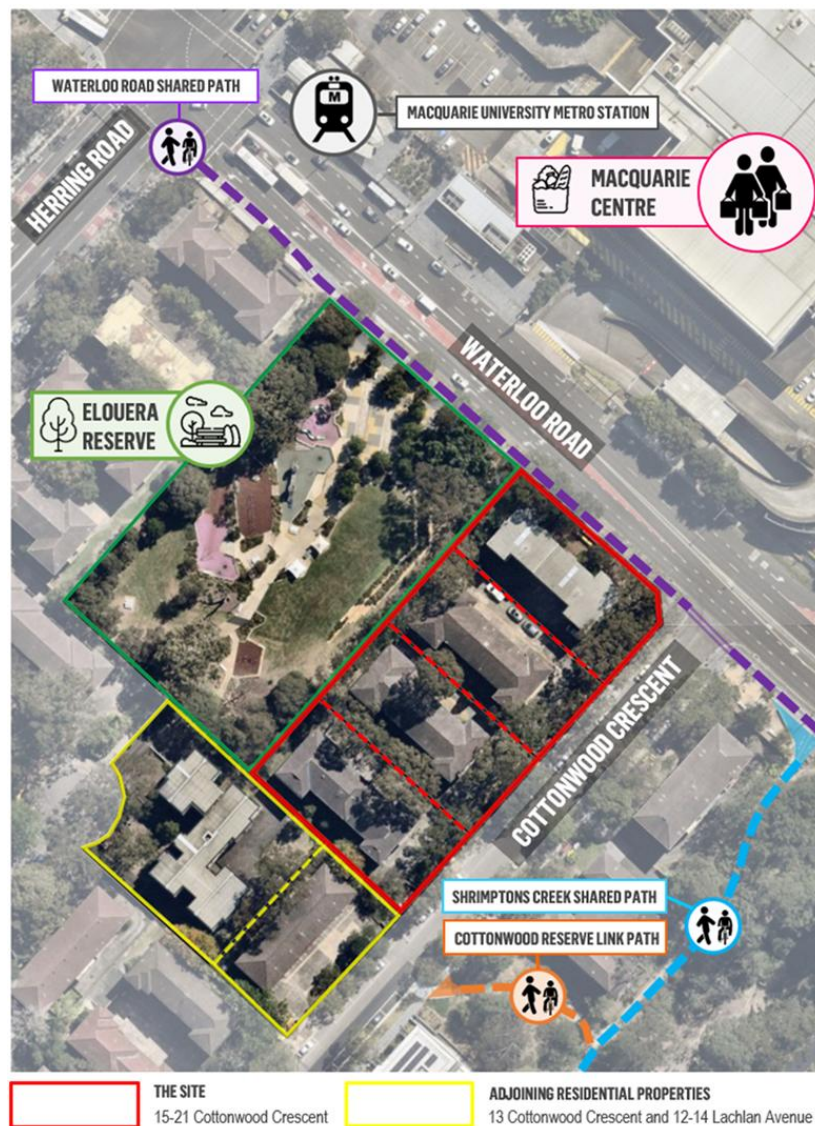


Figure 1 Aerial Photo (Source: Urbis (Nearmap))

## 2. Methodology

The methodology outlined in the International Fire Engineering Guidelines (IFEG) will be adopted for the fire engineering assessment. The IFEG outline the process by which Fire Engineering analysis is undertaken when assessing deviations from the DtS Provision of the BCA. This step-by-step process enables fire safety professionals to undertake a consistent

approach such that the inputs for the Performance Solution are transparent and the outcomes can be understood by the community.

## **2.1. Fire Engineering Brief (FEB)**

In accordance with the IFEG, the fire engineer should prepare a Fire Engineering Brief (FEB) for every project. The FEB must include the objectives, proposed trial designs, methods of analysis, and acceptance criteria for any Performance Solutions proposed.

## **2.2. Fire Engineering Report (FER)**

Upon acceptance of the FEB, the IFEG requires the preparation of a detailed Fire Engineering Report (FER). The FER should contain all relevant design calculations and justifications to demonstrate that the Performance Solutions comply with the Performance Requirements of the BCA. Once stakeholder approval is obtained, the report may be submitted to the PCA Consultant for approval.

### 3. Assessment and Mitigation Measures

#### 3.1. Relevant documentation

Our fire engineering review is based on the following documents:

- BCA ASSESSMENT REPORT (Ref: 25 25-224344\_BCACapStat\_R02, by Philip Chun)
- Architectural Drawings provided by AJC, Rev A, dated 05/02/2026 (Ref: 23024\_DA0000\_TITLE SHEET\_[A])

#### 3.2. Summary of proposed Performance Solutions

The following table outlines the Performance Solutions which will be supported through fire engineering analysis during later stages of the project, as taken from the Philip Chun BCA report (Ref: 25 25-224344\_BCACapStat\_R02, by Philip Chun).

Please note that the proposed fire safety strategies in this table are indicative only and are subject to change depending on further detailed fire engineering analysis. Further explanation of the proposed engineering analysis and detailed design requirements will be provided in the FEB Stage

**Table 3: Summary of proposed Performance Solutions**

BCA Reference	Details of non-compliance
C3D15	<p><b>Smoke Corridors</b></p> <p>In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with S11C2. This is currently not provided in the subject area:</p> <ul style="list-style-type: none"> <li>– Level 1 (Up to 61m length),</li> <li>– Level 2 (Up to 70m length),</li> <li>– Level 3 (Up to 70m length),</li> <li>– Levels 5-9 (Up to 42m length),</li> <li>– Level 10 (Up to 53m length).</li> </ul> <p>Subject to further detailed analysis, smoke corridors could be extended up to 50m as a performance solution with additional smoke &amp; fire doors proposed to be installed inside the public corridor.</p>

BCA Reference	Details of non-compliance
D2D5, D2D6	<p><b>Travel Distance</b></p> <p>The following travel distance non-compliances have been identified:</p> <p><u>Northern Tower Levels</u></p> <ul style="list-style-type: none"> <li>– Levels 4 to 60: Travel to a point of choice is 13m in lieu of 6m</li> <li>– Levels 1 to 3: Travel to a point of choice is 11m in lieu of 6m</li> </ul> <p><u>Southern Tower Levels</u></p> <ul style="list-style-type: none"> <li>– Levels 51 to 52: Travel to a point of choice is 13m in lieu of 6m</li> <li>– Levels 11 to 50: Travel to a point of choice is up to 14m in lieu of 6m</li> <li>– Levels 4 to 10: Travel to a point of choice is 16.5m in lieu of 6m</li> </ul> <p><u>Levels 3 &amp; 2:</u></p> <ul style="list-style-type: none"> <li>– Carpark travel to a point of choice is 22m in lieu of 20m.</li> <li>– North tower residential travel to a point of choice is 11m in lieu of 6m.</li> </ul> <p><u>Level 1</u></p> <ul style="list-style-type: none"> <li>– Residential travel to a point of choice is 11m in lieu of 6m</li> <li>– Carpark travel to a point of choice is 22m in lieu of 20m.</li> </ul> <p><u>Lower Ground</u></p> <ul style="list-style-type: none"> <li>– Carpark fan room and retail 2 corridor in carpark travel to a point of choice is 29m in lieu of 20m.</li> <li>– Carpark fan room and retail 2 corridor in carpark travel to a single exit up to 49m in lieu of 40m.</li> </ul> <p><u>Basement Levels 1 to 6</u></p> <ul style="list-style-type: none"> <li>– Travel to a point of choice is up to 26m in lieu of 20m at east and west ends.</li> </ul> <p>It is proposed to permit non-compliant distance of travel to a point of choice and to an exit subject to further detailed analysis.</p>
D2D6	<p><b>Distance Between Alternative Exits</b></p> <p>The following travel distance Between Alternative Exits non-compliances have been identified:</p> <p><u>Basement Levels 1 to 6</u></p> <ul style="list-style-type: none"> <li>– The distance between alternative exits is up to 73m in lieu of 60m.</li> </ul> <p>It is proposed to permit non-compliant distance of travel between alternative exits subject to further detailed analysis.</p>
D2D6(b)	<p><b>Distance Between Alternative Exits</b></p> <p>According to the deemed-to-satisfy provisions of the BCA, exits cannot be less than 9m apart. The following locations have alternative exits less than 9m apart:</p> <ul style="list-style-type: none"> <li>– All tower fire stair travel distance between alternative exits is 8m in lieu of 9m</li> </ul>

BCA Reference	Details of non-compliance
D2D12	<p><b>Exit Discharge – Protection of Occupants</b></p> <p>Where a path of travel from the point of discharge of a fire-isolated exit necessitates passing within 6 m of any part of an external wall of the same building. This occurs in the following locations:</p> <ul style="list-style-type: none"> <li>– Fire stairs discharge at the same location not located as far as practical given they are located next to each other</li> </ul> <p>Note: Subject to further detailed analysis</p>
E1D2	<p><b>Fire hydrants</b></p> <p>A performance solution will be provided to support the location of the fire hydrant booster which will likely not comply with AS 2419.1-2021 due to multiple entrances of the building.</p>
E2D3	<p><b>Performance-based Smoke Hazard Management</b></p> <p>A performance solution can be provided to support the omit the zone smoke control requirement for the above Ground Floor retail areas.</p>
E2D4	<p><b>Performance-based air volumes to a stair pressurisation system</b></p> <p>A performance solution can be provided to support performance-based air volumes to a stair pressurisation system serving the fire-isolated stair on carpark levels, subject to mechanical engineer's further input.</p>
E3D5	<p><b>Emergency lifts</b></p> <p>A performance solution can be provided to support emergency lift non-compliances in relation to the proposed lift:</p> <ul style="list-style-type: none"> <li>– No emergency lift shall be provided on basement level 6.</li> </ul>

### 3.3. Summary of Preliminary Assessment and Mitigation Measures

A breakdown of the current non-compliances to be addressed by way of a Fire Engineered Performance Solution has been detailed in the table below. The preliminary engineering analysis has been carried out here to demonstrate that the building design can meet the Performance Requirements of the BCA.

Please note that the proposed fire safety strategies in this table are indicative only and are subject to change depending on further detailed fire engineering analysis. Further explanation of the proposed engineering analysis and detailed design requirements will be provided in the FEB Stage.

**Table 4: Summary of Preliminary Assessment Method and Proposed Mitigation Measures**

Ref.	Description	Relevant DtS Clauses	Performance Requirement	Analysis Strategy	Preliminary Assessment and proposed mitigation measures
1.	Smoke Corridors	C3D15	E2P2, C1P2	Qualitative	A qualitative analysis will demonstrate that the proposed design incorporates adequate mitigating measures in relation to the fire life safety risk inside the public corridor on residential levels. Additional smoke seals to each SOU door and the sprinkler system provided will prevent the corridor from becoming an avenue for smoke spread and influencing other occupants seeking egress. Additional fire door will be provided to further split the public corridor into multiple fire/smoke rated sections.
2.	Travel Distance	D2D5, D2D6	D1P4, E2P2	Qualitative & Quantitative	A qualitative and quantitative analysis will demonstrate that the occupants on these levels with extended travel distances will be afforded at least the same opportunity to safely escape as occupants exposed to similar risks in a DtS compliant building. detection system with reduced spacing shall be provided as part of the fire safety measure.
3.	Distance Between Alternative Exits	D2D6	D1P4, E2P2	Qualitative & Quantitative	A qualitative and quantitative egress analysis will demonstrate that the risk that occupants would not be able to safely reach

Ref.	Description	Relevant DtS Clauses	Performance Requirement	Analysis Strategy	Preliminary Assessment and proposed mitigation measures
					an exit would be at least the same as that afforded by the DtS Provisions. Detection system with reduced spacing shall be provided as part of the fire safety measure.
4.	Distance Between Alternative Exits	D2D6(b)	D1P4, E2P2	Qualitative	A qualitative egress analysis will demonstrate that the risk associate with the alternative exits less than 9m apart would be at least the same as that afforded by the DtS Provisions. Detection system with reduced spacing shall be provided as part of the fire safety measure.
5.	Exit Discharge – Protection of Occupants	D2D12	D1P4, D1P5, E2P2	Qualitative	A qualitative analysis will demonstrate that occupants are capable of egress from the building during an emergency based on the use of the proposed exit arrangement. The exit discharge point will be protected. Additional building management measures and warning signage shall be provided around the discharge point to ensure this discharge point is maintained clear.
6.	Fire hydrants	E1D2	E1P3, E1P4	Qualitative	A qualitative analysis will demonstrate that fire hydrant booster assembly is in a practical location that shall be clear and accessible to the attending Fire & Rescue for their use. Additional wayfinding signage shall be provided.
7.	Performance-based Smoke Hazard Management	E2D3	E2P2	Qualitative	A qualitative analysis will demonstrate that the intent of the BCA is met in that smoke spread via leakage paths to and between Class 6 and the other parts of the building is mitigated appropriate to the risk. The result of this being that occupants can safely evacuate, and firefighters can undertake their intervention activities as required.
8.	Performance-based air volumes to a stair	E2D4	E2P2	Qualitative & Quantitative	A qualitative and quantitative analysis will demonstrate that in the event of a fire in the carpark, the proposed stair

Ref.	Description	Relevant DtS Clauses	Performance Requirement	Analysis Strategy	Preliminary Assessment and proposed mitigation measures
	pressurisation system				pressurisation systems would be able to prevent the spread of smoke into the fire stairs.
9.	Emergency lifts	E3D5	E3P2	Qualitative	A qualitative analysis will demonstrate that the proposed design can achieve a level of fire safety and access to occupants with reduced mobility and emergency services personnel at least equivalent to that in a DtS compliant case.

## 4. Conclusion

The fire safety design will generally satisfy the Performance Requirements of the Building Code of Australia by complying with the Deemed-to-Satisfy Provisions. There are some aspects of the design that will require the use of Performance-Based fire engineering to achieve compliance with the relevant Performance Requirements of the BCA.

Subject to approval from the Principal Certifying Authority and relevant stakeholders, the proposed Performance Solutions outlined in Table 3 above will be demonstrated as meeting the Performance Requirements of the BCA during later phases of the design process without any significant amendments to the existing design being submitted for SSDA.

This document is for the purposes of supporting the proposed design for SSDA. It shall not be used for Construction Documentation and compliance with the Performance Requirements of the BCA will need to be verified through a formal fire engineering assessment by a Certifier – Fire Safety during later stages of the design process.