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Morson Group
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Attention: Ruben Hernandez <ruben@morsongroup.com.au>

FIRE ENGINEERING DA SUPPORTING LETTER

15 August 2024

Project: 171 Weston St & 2-6 Hinemoa St, Panania
Address: 171 Weston Street & 2-6 Hinemoa Street, Panania NSW 2213
Our Ref: 24-076HK83

1. Introduction

This letter has been prepared by i-Fire Engineers for Morson Group to support the Development Application for the proposed residential building is located at 171 Weston Street & 2-6 Hinemoa Street, Panania NSW 2213.

2. Documentation and Drawings

The following architectural drawings prepared by Morson Group (Project No. 21042) have been considered in this letter.

Table 1: Relevant drawings

Title	Drawing Number and Revision	Date
Site Plan	DA09, P5	05/06/2024
Basement Plan	DA11, P6	05/06/2024
Ground Level Plan	DA12, P8	05/06/2024
Level 1 Plan	DA13, P7	05/06/2024
Level 2 and 3 Plan	DA14, P7	05/06/2024
Level 4 Plan	DA15, P8	05/06/2024
Roof Level Plan	DA16, P6	05/06/2024
Weston Building Elevations	DA17, P3	05/06/2024
Hinemoa Building Elevations	DA18, P3	05/06/2024
Section 1	DA19, P4	05/06/2024

Title	Drawing Number and Revision	Date
Section 2	DA20, P5	05/06/2024
Section 3	DA21, P6	05/06/2024
Streetscape Elevations	DA23, P3	05/06/2024

3. Building Characteristics

The proposed residential building is located at 171 Weston Street & 2-6 Hinemoa Street, Panania NSW 2213.

With reference to the provided information on the project, Table 2 below summarises the key relevant building characteristics of the subject building.

Table 2: Key Building Characteristics

Description	Comment
Building Classification & Occupancy	Basement – Carpark (Class 7a) and Storage (7b) Ground to Level 4 – Residential (Class 2) It is noted that the storage areas within the Basement Level shall be less than 10% of the total Basement Level area.
Rise in storeys	5
Type of construction	A
Effective height	Less than 25m (~12.6m)

It is noted that exits for the residential levels are located at the First Floor, AND an external stair is provided at the Second Floor as shown in the southeast elevation.

The streetscape elevations and site plan of the subject building is shown below:



Figure 1: Streetscape Elevation Weston of the building



Figure 2: Streetscape Elevation Hinemoa of the building



Figure 3: Site plan of the development

4. BCA DtS Provisions Departures

Based on the latest architectural drawings and BCA report, the subject building is anticipated to have the following BCA DtS provision departures listed in the table below, which would require to be addressed as fire engineering Performance Solutions:

Item	Description of BCA DtS Provision Departure / Performance Solution
1.	Clause C3D15 To permit the total length of the public corridors to exceed 40m as required by BCA Clause C3D15: - of up to 63m at Ground Level - of up to 43m at Level 1 - of up to 45m at Levels 2 and 3 Relevant Performance Requirements: C1P2 and E2P2
2.	Clause D2D12 To permit two different fire isolated stairs (Stair A and Stair C) to provide a combined egress by way of a shared fire isolated passageway in lieu of separate fire isolated passageway as required by BCA Clause D2D12 Relevant Performance Requirements: D1P5 and E2P2

5. Fire Engineering Review

A preliminary fire engineering review of the subject building has been undertaken by i-Fire Engineers based on the architectural drawings prepared by Morson Group (Project No. 21042).

The intent of the fire engineering review is to provide preliminary opinion on whether it is feasible to undertake a fire engineering assessment to develop Performance Solutions for the above BCA DtS provision departures.

Based on our preliminary review, it is our opinion that the building design should include, but is not limited to the following Trial Fire Safety Design/Measure in the fire engineering strategy (also refer to Appendix A for the proposed fire safety strategy mark-up):

- An automatic fire sprinkler system shall be provided throughout the building (including within the non-fire isolated stairs) in accordance with AS2118.1-2017.

The sprinkler system shall feature fast response sprinkler heads (with an operating temperature of 68°C and a maximum Response Time Index (RTI) of $50(m*s)^{1/2}$) at the basement carpark. It is noted concealed sprinkler heads are permitted in the residential levels.

- An automatic smoke detection and alarm system in compliance with Specification 20 shall be provided to the Class 2 areas of the building (i.e. combined smoke alarm and smoke detection system in accordance with Clause 5 of BCA Specification 20 (S20C5)).

One additional thermal detector shall be provided in each residential unit of the building. The activation from any of these thermal detectors shall activate the general alarm in the buildings.

A minimum sound pressure level of 75dBA (with all door closed) shall be achieved at each bedhead within each SOU the building.

For the purpose of providing early alarm warning to occupants in the residential units, the activation of these thermal detectors is not required to call out fire brigade.

The activation of the automatic smoke detection and alarm system in common areas and public areas etc. (areas other than SOUs) shall also activate the fire alarm in each SOU throughout the buildings.

- Hot and medium temperature smoke seals (capable of resisting smoke up to 200°C for 30 minutes) shall be provided to all sides of each SOU door connecting to the public corridors at Ground, Levels 1 to 3.

The medium temperature smoke seals shall achieve a leakage rate of not more than 5m³/hr at 10Pa when tested in accordance with AS 1530.7-2007.

- The discharge door of Stair C shall have an FRL of -/60/30 with medium temperature smoke seals on all sides.

The medium temperature smoke seals (capable of resisting smoke up to 200°C for 30 minutes) shall achieve a leakage rate of not more than 5m³/hr at 10Pa when tested in accordance with AS 1530.7-2007.

- Signs shall be provided within the shared fire isolated passageway at Ground Level.

The sign needs to be installed no less than 1.2m above the floor level and no higher than 1.6m above the floor level. The signs shall be visible to persons using the shared fire isolated passageway. Signs must be in capital letters not less than 25mm high in a colour contrasting with the background and state –

“EXIT AT THIS LEVEL.”

Additional illuminated directional exit signs (running man with an arrow on both sides of the sign) shall be installed within the shared fire isolated passageway at Ground Level.

These fire safety measures must be an Essential Fire Safety Measure and shall be listed in the proposed Fire Safety Schedule (which then be listed in the Annual Fire Safety Statement) to ensure this measure is enforced in the future.

The proposed fire safety strategy mark-ups are documented in Appendix A.

It should be noted that the Trial Fire Safety Design/Measures for the proposed Performance Solutions are to be confirmed during the Fire Engineering Brief (FEB), Fire Engineering Report (FER) as part of the Construction Certificate application process, subject to the approval from the approving authorities. Relevant stakeholders will be also required to provide review comments on or acceptance of our proposed fire safety strategy.

Based on our past experience and to the best of our knowledge, it is our opinion that the above BCA DtS departures can be addressed as Performance Solutions to demonstrate compliance with the relevant Performance Requirements of the BCA. It should be noted that the Performance Solutions will also need to submit to the approving authorities for approval.

6. Conclusion

Specific details of design for the building and services (i.e. the Required Fire Safety Measures) from the Performance Solutions for the above DtS departures will be detailed after a comprehensive fire engineering assessment is completed. The Performance Solutions will be developed as part of the on-going design and development process.

Please contact the undersigned if you require any further information or would like to discuss any aspect of this letter.

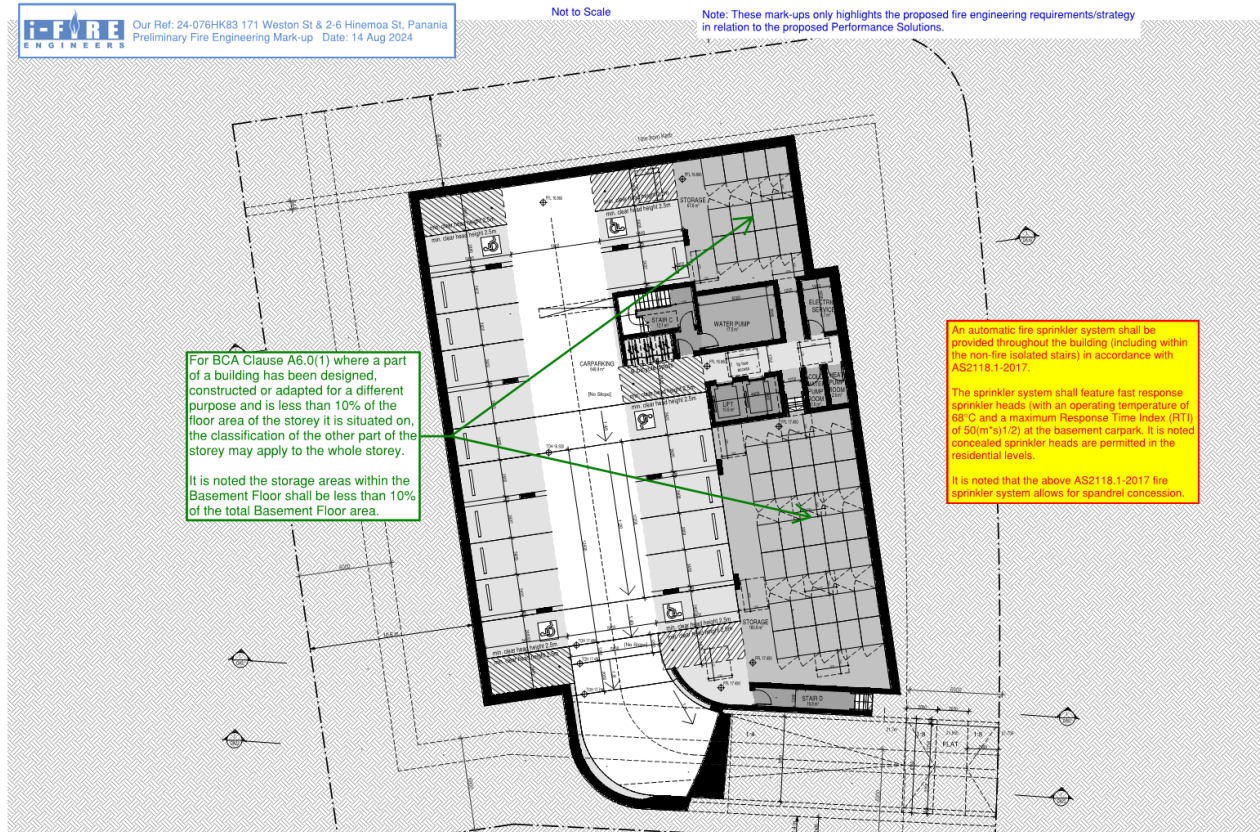
Yours faithfully,



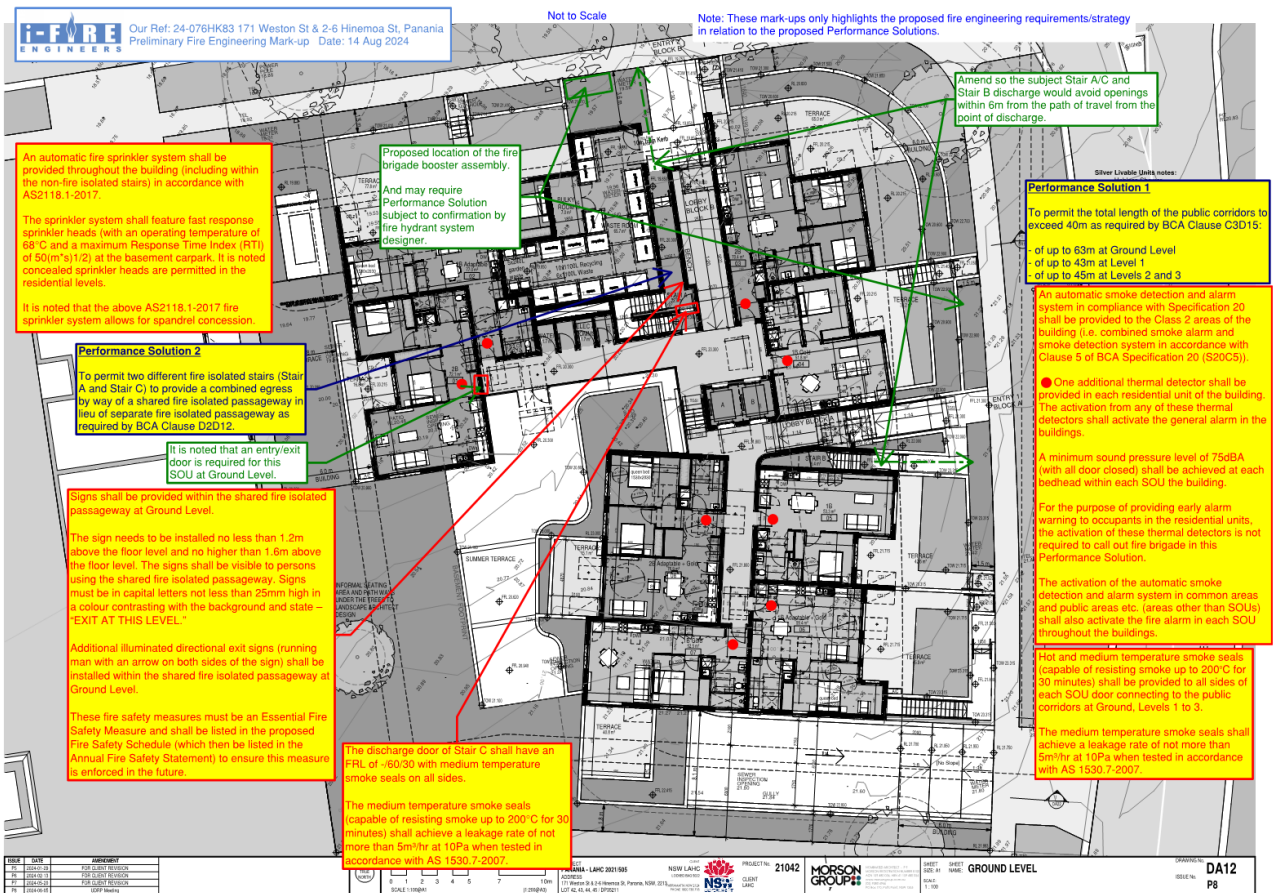
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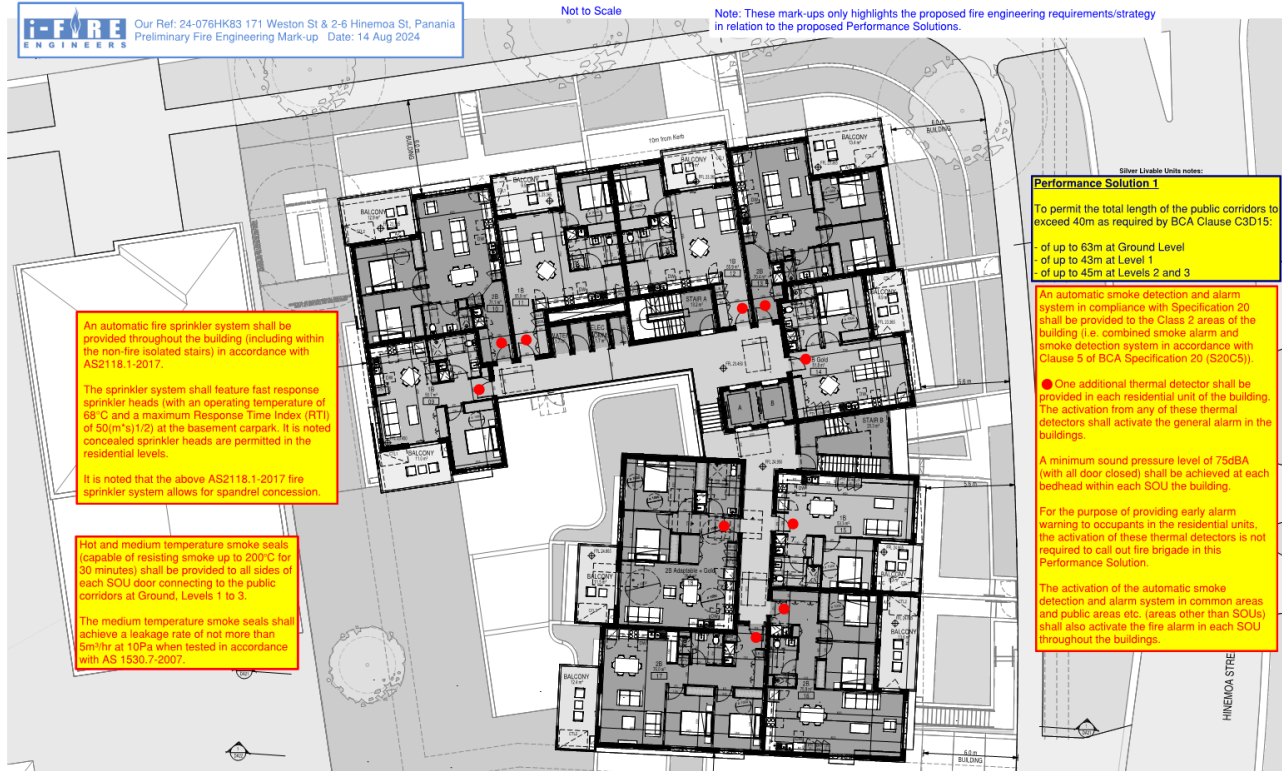
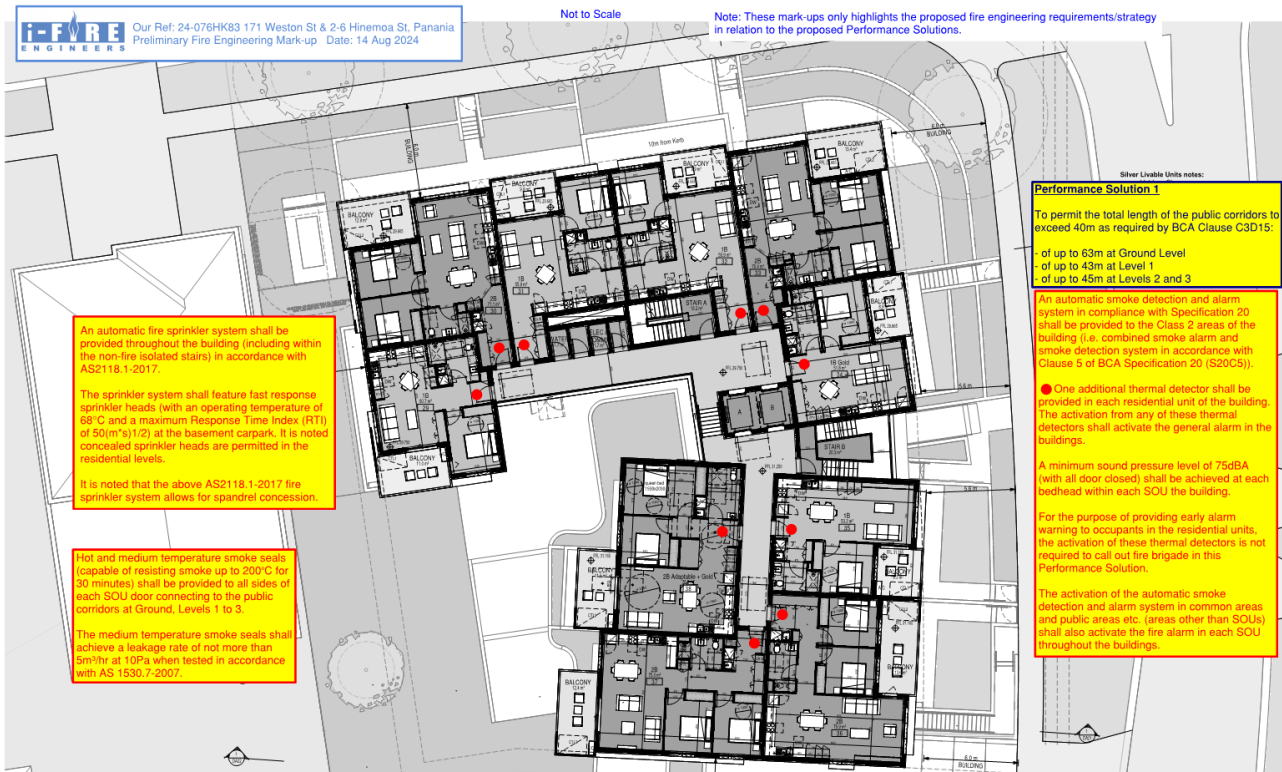
Appendix A – Proposed fire safety strategy mark-up

Basement



Ground



Level 1**Levels 2 to 3**

Level 4