



i-Fire Engineers Pty Ltd

ABN: 11 604 384 198
W: www.i-fire.com.au

Brisbane Office
Toowong Business Hub
PO Box 968
Toowong DC QLD 4066

Sydney Office
PO Box K874
Haymarket NSW 1240

M: +61 450 188 189
E: kevin.yu@i-fire.com.au

M: +61 451 001 328
E: daniel.ho@i-fire.com.au

Morson Group
Level 1, 263 George Street
Sydney NSW 2000

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

FIRE ENGINEERING SUPPORTING LETTER

02 August 2023

Re: Fire Engineering Consultancy Services
Project: 16-20 Burrawong Cres & 28 Macarthur Rd, Elderslie
Address: 16-20 Burrawong Crescent & 28 Macarthur Road, Elderslie NSW 2570
Our Ref: 22-116VO76

1. Introduction

This letter has been prepared by i-Fire Engineers for Morson Group to support the Development Application for the proposed residential development to be located at 16-20 Burrawong Crescent & 28 Macarthur Road, Elderslie NSW 2570.

2. Documentation and Drawings

The following drawings prepared by Morson Group (Project No. 21039) have been considered in this letter.

Table 1: Relevant drawings

Title	Drawing Number and Revision	Date
Site Plan	DA08 Issue P10	03.05.2023
Ground Level	DA10 Issue P12	03.05.2023
Level 1	DA11 Issue P14	10.05.2023
Roof Level	DA12 Issue P12	10.05.2023
Macarthur Building Facades	DA13 Issue P14	29.05.2023
Burrawong Building Facades	DA14 Issue P20	29.05.2023
Cross Section 1	DA15 Issue P10	03.05.2023
Long Section 1	DA16 Issue P10	03.05.2023

3. Building Characteristics

The proposed residential development is to be located at 16-20 Burrawong Crescent & 28 Macarthur Road, Elderslie NSW 2570.

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

Table 2: Key Building Characteristics

Description	Comment
Building Classification & Occupancy	Ground Level – Residential (Class 2) Level 1 – Residential (Class 2)
Rise in storeys	2
Type of construction	B
Effective height	Less than 12m (~4.5m)

4. BCA DtS Provisions Departure

Based on the latest architectural drawings, the proposed residential development is anticipated to have the following BCA DtS provision departure listed in the table below, which would require to be addressed as fire engineering Performance Solution:

Item	Description of BCA DtS Provision Departure / Performance Solution
1	BCA Clause D1.4 To permit extended travel distances to an exit of up to 13m at Level 1 (in lieu of BCA DtS 6m). The proposed Performance Solution will demonstrate compliance with Performance Requirements DP4 and EP2.2.

5. Fire Engineering Review

A preliminary fire engineering review of the proposed residential development has been undertaken by i-Fire Engineers based on the architectural drawing prepared by Morson Group.

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 Solution for the above BCA DtS provision departure.

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):

- 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 door connecting to the public corridors at Level 1. The medium smoke seals shall achieve a leakage rate not more than 5m³/hr at 10Pa when tested in accordance with AS1530.7-2007.
- As required by BCA Clause E2.2, an automatic smoke detection and alarm system in compliance with Specification E2.2a shall be provided to the Class 2 areas in this building.

One additional thermal detector shall be provided in each residential unit at Ground and Level 1. The activation from any of these thermal detectors shall activate the general alarm in the building.

A minimum sound pressure level of 75dBA (with all doors closed) shall be achieved at each bedhead in the residential units at Level 1.

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 in this Performance Solution.

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 all residential units.

The thermal detector locations (the red dots) on the mark-ups are indicative only and shall be confirmed by the fire service engineer/consultant.

The proposed fire safety strategy mark-up is documented in Appendix A.

It should be noted that the Trial Fire Safety Design/Measure for the proposed Performance Solution is to be confirmed during the Fire Engineering Brief (FEB) and Fire Engineering Report (FER) 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 departure can be addressed as Performance Solution to demonstrate compliance with the relevant Performance Requirements of the BCA. It should be noted that the Performance Solution 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 Solution for the above DtS departure will be detailed after a comprehensive fire engineering assessment is completed. The Performance Solution 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,



Daniel Ho
ME(Fire) BE(Civil Hons)
Director / Accredited Certifier Fire Safety - BDC 2348
i-Fire Engineers Pty Ltd
M: 0451 001 328
daniel.ho@i-fire.com.au

Appendix A – Proposed fire safety strategy mark-up

Ground Level



Level 1

