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# ARUP

To Whom It May Concern

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Dear Sir / Madam

## **Trinity Grammar School Summer Hill Campus – The Renewal Project Fire Engineering**

This letter considers the fire safety design of the renewal project for Trinity Grammar School located in Summer Hill, and specifically those aspects of the fire safety design that impact upon planning and hence SSDA issues for the building.

### **The Renewal Project**

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The existing Summer Hill campus of Trinity Grammar School comprises multiple buildings constructed over the course of several decades from the 1970s onwards. The proposed renewal project aims to transform the campus and strive for stronger connectivity throughout the site, better transitions through the campus, improvement on the vertical circulation throughout the spaces and identification of the hearts of the school.

The Renewal Project for Trinity Grammar School encompasses both minor and major refurbishment works to various buildings as well as new build works. The school comprises primarily teaching spaces, however, also contains The Assembly Hall (used for school functions), various sports and arts spaces and the Arrow Building which is a series of mostly external walkways connecting the buildings.

The fire safety design of the project will generally satisfy the Performance Requirements of the Building Code of Australia (BCA) by complying with the Deemed-to-Satisfy (DtS) Provisions. However, there are some aspects of the design that will be developed using performance-based fire engineering to meet the Performance Requirements. The most significant of these that affect the building layout, and hence the SSDA, are highlighted below.

### **Performance Based Design**

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The fire safety strategy for the project focuses on a design that encourages quick and effective egress with multiple choices of exit paths. The new and existing portions of the

campus are to be fire separated from each other, to avoid new works having an adverse impact on the existing buildings, to maintain compartment sizes under the relevant BCA limit, and to limit fire and smoke spread accordingly.

The buildings are connected via the new Arrow Building which is a series of connecting walkways throughout the campus. These walkways create a feeling of indoor / outdoor space, encourage smoke venting and create varied egress paths for occupants. Fire safety systems will be included as part of the fire engineering strategy including detection and warning systems and sprinklers throughout the majority of spaces to limit fire and smoke spread, reduce risk for occupants and fire fighters, and reduced any loss in the event of a fire.

The fire strategy has been developed with consideration of the existing site constraints. The concept design achieves the architectural intent and practical use of the building whilst providing safety for occupants in the event of a fire, and assisting with fire brigade intervention.

This approach has allowed for the rationalisation of the following items listed below, which are non-compliances with the DtS Provisions as a result of this proposed development. The following items are proposed to be addressed via fire engineering Performance Solutions:

- Areas of extended travel distance;
- Non-fire isolated required stairs connect > 2 storeys;
- Omission of sprinklers from the Arrow Building walkways; and
- Rationalisation of separation between compartments.

Additional minor non-compliances may arise as the design develops, however none that are foreseen to impact on the SSDA submission.

Based on our preliminary review of the architectural drawings issued by PMDL dated November 2019, it is considered that Performance Solutions addressing the non-compliances above will be feasible and compliance with the Performance Requirements of the BCA can be demonstrated.

## Conclusion

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At this stage of the design, other fire safety aspects of the buildings appear to largely comply with the Deemed to Satisfy provisions of the BCA. It is anticipated that there may be additional non-compliances with the DtS Provisions as the design develop, however it is considered that there are no issues that would affect the buildings' layout arising from fire safety and hence no impediments to the relevant consent authority issuing development consent.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'M. Foley', with a long horizontal flourish extending to the right.

Marianne Foley  
Principal

cc Sarah Higginson – Arup  
Geoffrey Tai - Arup