

6 August 2021

Enquiries: Etienne Jordaan
Etienne.Jordaan@stantec.com
Project No: 301350239

Kate Bimson
Pymble Ladies' College
Avon Road
Pymble NSW 2073

Dear Kate

RE: Pymble Ladies College Grey House Precinct – DA Letter
Avon Road, Pymble, NSW 2073

This letter relates to the Fire Safety design aspects of the proposed PLC Grey House Precinct development of a multi-purpose Education, Sports, Recreation and Performing Arts school building located at Avon Road, Pymble NSW 2073, and specifically to those Fire Safety design aspects that impact on planning and correspondingly on Development Approval issues.

The proposed development consists of the construction of a new home for Junior School Years 5 and 6, Out of School Hours Care, Dance, Health Services and an Early Learning Centre.

A Fire Engineering review of the preliminary design has been undertaken by Stantec based on the following:

- SSDA Drawings - Pymble Ladies College Grey House Precinct – 26 July 2021 prepared by BVN.
- BCA Assessment Report Revision 1 prepared by Steve Watson & Partners dated 30 July 2021.

The Fire Safety design of the building 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 are to be refined through performance-based Fire Engineering to achieve compliance with the Performance Requirements of the BCA.

Summary of Performance Solutions

Below is a descriptive list of the identified Performance Solutions based on the current advice from the project BCA Consultant for the development and the proposed Fire Engineering strategy.

Table 1: Anticipated Performance Solutions

Item	Non-Compliance	Description	Strategy/Comment
1	Separation of external walls and associated openings (C3.2, C3.3)	The brick veneer construction of the western external wall of the adjoining building to the east (Junior School) does not achieve an FRL 60/60/60 in accordance with C3.3 & the roof extends over the outdoor covered area adjoining the switchboard cupboard to the Junior school and creates an opening that is not protected in accordance with C3.4.	Performance Solution can be developed to permit this design without drenchers. Preliminary radiant heat analysis has shown that fire spread would be adequately limited.
2	Reduced Egress Widths (D1.6)	The eastern fire stair reduces the aggregate egress width by 250mm where the handrail extension occurs on each landing. Total aggregate egress width of 2750 mm in lieu of the required 3000 mm, but only when passing handrail extension.	Based on the provision of smoke compartments, an additional non-required central stairway and the fact that doorways into fire stairs present a similar restriction, a Performance Solution could justify the minor reduction.
3	Doorway from a room opening directly into a fire-isolated stair (D1.7)	To permit doorways from classrooms that open directly into stairways that are required to be fire-isolated.	A Performance Solution could be developed given the classroom spaces are not separate individual classrooms but rather a single combined space that is open in nature so that occupants can easily find the stair and also not be obstructed by needing to go through a separated classroom.
4	Hydrant booster Location (E1.3)	The location of the fire hydrant booster is not within sight of the main entry to the building contrary to AS2419-2005	A Performance Solution can be developed given the existing nature of the site with multiple buildings. Adequate signage and blockplans can further assist the fire brigade with wayfinding.
5	Omission of Fire hose reels (E1.4)	FHR's are not located in the ELC Childcare & the Wellness Centre parts of the building.	Given the similarities in fire load and fire hazards in comparison to classrooms, a Performance Solution could justify the use of portable fire extinguishers in lieu of fire hose reels.

Item	Non-Compliance	Description	Strategy/Comment
6	Atrium construction (G3.1 to G3.8)	The building is required to comply with the requirements for Atrium Construction part G3 as the central stair void through the building is connecting Level 1 to Level 4 which forms an atrium well i.e., connects 4 stories & this does not get the concession as noted in Clause G3.1.	Due to the open and low hazard nature of the atrium space, the typical hazards associate with atriums are not applicable in this case and hence the omission of atrium requirements could be justified via a Performance Solution. The Performance Solution will rely on smoke separation between the atrium space and the rest of the building to reduce any risk of early smoke spread during an evacuation.

Conclusion

Based on our review of the project drawings, it is concluded that the building would be able to comply with the Performance Requirements of the BCA without major changes to the current design.

Please do not hesitate to contact the undersigned if you have any queries.

Yours sincerely,



Etienne Jordaan

Stantec

Certifier – Fire Safety – Registration No: BDC3185 (NSW – Fire Safety)

Stantec Australia Pty Ltd