

To Whom it May Concern

Level 5 151 Clarence Street
PO Box 76 Millers Point
Sydney 2000
Australia
t +61 2 9320 9320
d +61 2 9320 9656
f +61 2 9320 9321
neil.mcphail@arup.com
www.arup.com

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Dear Sir/Madam

**Northside Private Hospital
Fire engineering approach in support of the Development Application submission**

This letter considers the fire safety design of the proposed new Northside Private Hospital, and specifically those aspects of the fire safety design that impact upon planning related issues for the building based on drawings provided by Health Projects International on 22nd August 2019.

The Building

The new Gosford Private Hospital will consist of Ground plus 8 levels of patient-care and staff facilities, retail and associated uses, 2 levels of plant (Levels 9 and 10) two levels of basement (B1 and B2) and a lower ground car-park.

A fire engineering review of the conceptual design has been undertaken by Arup on drawings provided by Health Projects International. The development comprises primarily of patient-care and associated non-patient care spaces, over 3 levels of car-park. The building has an effective height of more than 25m.

The building is served by numerous fire isolated exits discharging at the surrounding street levels on Racecourse Road and Faunce Street. The patient care areas and upper portions of the building have between 2 and 3 fire isolated stairs (the building reduces in floor area at Level 6 upwards).

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 developed using performance-based fire engineering to achieve compliance with the Performance Requirements of the BCA. The most significant items that affect the building layout, and hence the DA, are highlighted below.

Performance Based Design

The fire safety strategy for the building relies on adequate and safe egress for occupants with a variety of vertical and horizontal exits and fire or smoke compartmentation to help limit fire and smoke spread throughout the building. The objective of the compartmentation is to facilitate progressive horizontal evacuation and minimise potential for disruption and reduce the likelihood of vertical evacuation.

The following items are proposed to be addressed that could potentially have an impact on the DA application;

- Reduced fire rating requirements of retail tenancies at ground floor;
- Reduced pressure differentials between ground floor and the levels above.
- Protection of glazing to the void connecting ground to Level 1 9pateient care buildings can not have interconnected storeys under the DtS requirements of the BCA;
- Areas of extended travel distances in the car-park levels;
- Extended travel distances to and between exits generally in the patient care areas

Other Performance Solutions may arise as the design develops once the final layouts are arranged but the list above is considered key to the DA application.

Conclusion

At this stage of the design, other than the Performance Solutions identified above, other fire safety aspects of the building appear to comply with the deemed to satisfy provisions of the BCA. As noted it is anticipated that there may be other non-compliances with the DtS Provisions as the design develops, however it is considered that there are no issues that would affect the building layout arising from fire safety and hence no impediments to the relevant consent authority issuing development consent.

Yours faithfully



Neil McPhail
Senior Engineer | Fire Engineering