

23 February 2024

FAO: Andrew Neill

TSA
2/54 Tamar Street
Ballina
NSW 2478

Reference: 60724174_LTR_001-A

Dear Andrew

RE: FIRE ENGINEERING LETTER OF SUPPORT PROPOSED BATHURST HOSPITAL REDEVELOPMENT

1.0 Introduction

This Fire Safety Letter of Support has been prepared by AECOM Australia Pty Ltd on behalf of Health Infrastructure for the redevelopment of the Bathurst Hospital at 361-365 Howick Street, Bathurst.

The site is located at 361-365 Howick Street, Bathurst, in the Bathurst Local Government Area. It is occupied by Bathurst Health Service, a Level C referral facility in the Western NSW Local Health District.

This letter accompanies a State Significant Development Application that seeks approval for the construction and operation of a new-build expansion, refurbishment and repurposing works to the existing Bathurst Health Service main hospital building. Proposed works will include:

- A new-build, multi-storey health services building expansion toward Mitre St (including 1 plant level) to include overnight inpatient accommodation and non-admitted care services and a new hospital front-of house and entrance
- A new-build, two-storey expansion to the Emergency department and Operating Theatres (plus 1 plant level)
- A new-build, single-storey expansion to the existing Cancer Service building – Daffodil Cottage
- Refurbishment and repurposing to areas of the existing hospital
- Site establishment, demolition of some existing structure, cut and fill and remediation works
- Vehicular circulation and car parking improvements
- Tree removal
- Landscape works
- Alteration and amplification of existing hospital plant and services infrastructure
- For a detailed project description, refer to the Environmental Impact Statement prepared by Ethos Urban.

Item	SEARS Requirement	Relevant Section of Report
1.	<i>Provide a report detailing compliance with Fire & Rescue NSW Fire Safety Guidelines, Position Statements (available at https://www.fire.nsw.gov.au/page.php?id=9145), and any other relevant requirements. Please contact Fire & Rescue NSW at firesafety@fire.nsw.gov.au for details of the applicable requirements.</i>	Section 2.0

2.0 Proposed Fire Engineering Process

The Fire Engineering Process for the Bathurst Hospital Redevelopment (BHR) will follow the process defined in the Australian Fire Engineering Guidelines (AFEG) and be in-line with FRNSW position statements and guidelines. This process will consist of the development of a Fire Engineering Brief Questionnaire (FEBQ), Fire Engineering Report (FER) and fire engineering inspections to support the Occupation Certificate.

The FEBQ and FER will support the performance-based design of BHR by addressing the Performance Requirements of the National Construction Code (NCC), Building Code of Australia (BCA), Volume One. The development of the fire engineering performance solutions will be developed in line with the items identified in the BCA assessment report prepared by the BCA Consultant. The anticipated performance solutions are identified in Table 1.

The Performance Solutions will be developed through stakeholder consultation, including Fire and Rescue NSW which will involve agreement through the FEBQ process and compliance with Fire Safety Guidelines and Position Statements of FRNSW.

Table 1: Overview of Proposed Performance Solutions

No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
1.	Separation of storeys (C2D2 / Spec. 5) [C1P2, C1P3]	<ol style="list-style-type: none"> a. To account for modern construction methods anticipated to be used it is proposed to allow for smoke separation at the gap between the slab edge and external wall where fire separation would be required to meet the BCA DtS provisions. b. To account for the modern construction methods at the junction of the internal fire walls meeting the external walls of the building.
2.	Patient care compartment area (C3D6) [C1P3]	<p>The BCA provisions limit the area of smoke compartments to 500 m² in ward areas. Due to the building layout required to undertake clinical operations, the following smoke compartments within ward areas in the main hospital building exceed those limits:</p> <p>Level 01:</p> <ul style="list-style-type: none"> • 0.1.B – 520 m² in lieu of 500 m² <p>Level 02:</p> <ul style="list-style-type: none"> • 02.2.A – 520 m² in lieu of 500 m² <p>Level 03:</p> <ul style="list-style-type: none"> • 03.4.B – 510 m² in lieu of 500 m² • 03.5.A – 510 m² in lieu of 500 m²

No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
3.	Exposure between buildings (C4D3, C4D5) [C1P2]	Openings within the external walls of the Daffodil Cottage and main building will be within 3 to 6 m of each other without appropriate protection.
4.	Separation of external wall and associated openings in different fire compartments. (C4D4) [C1P2, C1P8]	Where an internal fire rated wall intersects at the junction of an external wall, the external walls of the different fire compartments and any associated openings that are exposed to one another are required to be protected in accordance with Clause C4D4.
5.	Direction of swing of smoke/fire doors (D3D25 / Spec 11) [D1P2, D1P4]	As the egress strategy will rely on the use of horizontal exits, some of the doors comprising the horizontal exits will serve occupants escaping in both directions. As a result, a technical non-compliance occurs as a number of fire safety doors located in fire and smoke walls will swing in the direction of egress for occupants in one compartment, but will not swing in the direction of egress for occupants from the other compartment. The exact locations and swing directions of the doors will be further developed in later design stages.

No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
6.	<p>Extended travel distance to, and between, exits</p> <p>(D2D4, D2D5)</p> <p>[D1P4, E2P2]</p>	<p>The BCA DtS provisions limit travel distances in patient care areas to 12 m to a point of choice and 30 m to an exit. In non-patient care areas, the travel distance limits are 20 m to a point of choice and 40 m to an exit. The following extended travel distances are proposed in the building:</p> <p><u>Non-patient care areas:</u></p> <p>Level 01:</p> <ul style="list-style-type: none"> • Carpark – Up to 52 m between to an exit in lieu of 40 m. • Carpark – Up to 30 m to a point of choice in lieu 20 m. <p>Level 04:</p> <ul style="list-style-type: none"> • Rooftop Plant area – Up to 30 m to a point of choice in lieu of 20 m. • Rooftop Plant area – Up to 50 m to an exit in lieu of 40 m. <p><u>Patient care areas:</u></p> <p>Level 01:</p> <ul style="list-style-type: none"> • 01.1.A – Up to 16 m to a point of choice in lieu of 12 m. • 01.2.A – Up to 33 m to an exit in lieu of 30 m. <p>Level 02:</p> <ul style="list-style-type: none"> • 02.1.A / 02.1.B – Up to 33 m to an exit in lieu of 30 m. • 02.2.A – Up to 36 m to an exit in lieu of 30 m. • EX 02.12.A – Up to 17 m to a point of choice in lieu of 12 m. • EX 02.11.A – Up to 15 m to a point of choice in lieu of 12 m. • EX 02.11.A – Up to 32 m to an exit in lieu of 30 m. • EX 02.10.A – Up to 32 m to an exit in lieu of 30 m. <p>Level 03:</p> <ul style="list-style-type: none"> • 03.2.A / 03.2.B – Up to 13 m to a point of choice in lieu of 12 m. • 03.2.A / 03.2.B – Up to 40 m to an exit in lieu of 30 m. • 03.1.A / 03.1.B – Up to 14 m to a point of choice in lieu of 12 m. • 03.1.A / 03.1.B – Up to 34 m to an exit in lieu of 30 m. • 03.4.A – Up to 16 m to a point of choice in lieu of 12 m. • 03.10.A – Up to 16 m to a point of choice in lieu of 12 m.

No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
7.	Discharge of fire-isolated exits (D2D12) [D1P4, D1P5]	It is proposed to permit discharge from a fire-isolated stair to a point which is >15 m from an open space, and within a space enclosed for more than 2/3 of its perimeter.
8.	Travel by non-fire isolated stairs (D2D14) [D1P4, D1P5]	It is proposed to permit the stair serving the operating theatre extension on Level 03 to not to be fire-isolated.
9.	Horizontal exits (D2D16) [D1P4]	The egress strategy for this building relies on the use of horizontal exits. A technical non-compliance occurs in some instances where the path of travel from a fire compartment to the exit necessitates egress through an adjoining compartment which does not provide direct access to a fire isolated stairway or exit discharging directly to open space. The locations of this non-compliance will be identified as the design develops and documented in the FER.
10.	Sliding doors in patient care areas (D3D24) [D1P2, D1P4]	A doorway in a patient care area of a Class 9a health-care building must not be fitted with a sliding door unless: <ul style="list-style-type: none"> a. it leads directly to a road or open space; and b. the door is able to be opened manually under a force of not more than 110 N. It is proposed to install sliding doors to rooms in patient care areas that do not lead directly to road or open space. The exact locations of the doors will be further developed in later design stages.
11.	Operation of door latches (D3D26) [D1P4]	Anti-ligature hardware is proposed within the mental health areas. The doors to these rooms are proposed to only open if an alarm is tripped within the individual room. In all other instances, the doors will remain closed on general fire trip and occupants will be reliant on staff assisted and controlled evacuation. Due to new testing criteria introduced under the 2014 revision of AS 1530.4, most (if not all) suppliers of fire doors now rely on an intumescent bolt mechanism to lock the door set into place.

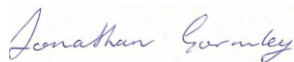
No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
12.	Fire hydrant provisions (E1D2) [E1P3]	It is proposed to permit the following variations to DtS hydrant provisions: <ul style="list-style-type: none"> • The existing fire hydrant and sprinkler booster assemblies to not be located within sight of the main entry. • To permit secure access to fire hydrant within mental health facilities. • To permit additional on floor hydrants (likely).
13.	Omission of fire hose reels (E1D3) [E1P1]	It is proposed to permit the omission of fire hose reel coverage from certain electrical rooms.
14.	Secure access in mental health areas (E1D2, E1D3, E1D14) [E1P1, E1P2, E1P3]	It is proposed to permit the following variations to DtS provisions in the mental health areas within the building: <ul style="list-style-type: none"> • To permit secure access to fire hose reels within mental health facilities. • MCPs will be secured to prevent unauthorised access by the Mental Health patients and will be positioned within cupboards. • Portable fire extinguishers to be secured within cabinets in a manner not permitted by AS 2444 – 2001 within mental health areas.
15.	Continuation of mechanical system operation serving isolation rooms in fire mode (E2D3 / C3D6) [E2P2, C1P3]	It is proposed to omit fire and smoke dampers from ducts that serve isolation rooms as the mechanical systems serving these rooms would require to continue running in fire mode.
16.	Omission of sprinklers (E2D11) [E1P4]	It is proposed to permit the omission of sprinklers from certain electrical rooms.

No	BCA DtS Clause [Performance Requirements]	Description of non-compliance
17.	Omission of speakers next to wards (E4D9) [E4P3]	Speakers will not be provided in wards (adjacent to bed areas) to minimise the trauma in these areas. They are also proposed to be omitted from operating theatres. All other areas of the building will have speakers as recommended by the BCA.

3.0 Conclusion

This letter has outlined how the fire engineering process will address the Fire Safety Item in the SEARS relating to the Bathurst Hospital Redevelopment State Significant Development Application. It is the opinion of AECOM that the fire related DtS departures within the design, that have been outlined in this report, can be resolved with Performance Solutions to show compliance with the relevant Performance Requirements of the NCC and FRNSW's guidelines and position statements.

Yours faithfully



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