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12.12.22

Enquiries: Sebastian Roache
Project No: 29212

Built Construction
Level 4 / 185 Clarence Street
Sydney NSW 2000

Attention: Jamel Sadiki

Dear Jamel

RE: Sandstone – Lands Building – MOD18 Fire Engineering Statement

This letter relates to the fire safety strategy of the redevelopment of the Department of Lands Building located at 23-39 Bridge Street, Sydney, NSW 2000. Specifically, this letter relates to the proposed MOD18 changes and the impact on the existing fire safety strategy.

The Department of Lands Building is a heritage listed building with significant historical and cultural value to the city of Sydney. The project plans to convert the building from state government offices to hotel and retail. Conserving the building heritage whilst designing to the latest building standards presented a significant challenge.

Fire safety engineering is identified as a key avenue in providing Performance Solutions to the building to demonstrate compliance with the relevant Performance Requirements of the BCA. The following Fire Engineering Report was prepared by Stantec:

- Fire Engineering Report: FE-RE-FER-29212-Lands Rev 006 issued on the 25th of November 2022.

Performance Solution 1: Rationalisation of FRLs, justifies the Fire Resistance Levels (FRLs) to the Class 5, 6, 7b and Class 9b areas of the building. This solution includes the rationalisation of FRLs serving Class 6 areas from 180/180/180 to 90/90/90 minutes, and Class 9b areas from 120/120/120 to 60/60/60 minutes. Furthermore, the solution permits the FRL of the floor system to be achieved from the underside only in lieu of being from both sides.

The fire rating for the ceilings was originally intended to be achieved through the provision of intumescent paint applied to the underside of the ceilings and any exposed structural steel beams/elements. However, based on the fire test failures, a revised ceiling design has been proposed using fire rated plasterboard ceilings to achieve the required rationalised FRLs.

The following documentation has been reviewed: MOD18 Architectural Documentation Issue 12 dated 14th of December 2022, provided by Hassell. The document outlines the location and design of the ceilings serving the development as part of the MOD18 changes. It is noted that the existing heritage lath and plaster ceilings are to be demolished and replaced with new fire rated plasterboard ceilings. The existing cornices are intended to be salvaged in three rooms nominated and replicated in other areas.

It is noted that the alternate ceiling design proposes for 60 min FRL to be achieved with 2x13mm fire-rated plasterboard layers (CSR 6026 or equivalent), and 90 min FRL to be achieved with 2x16mm fire-rated plasterboard layers (CSR 6134 or equivalent) in accordance with the manufacturer's requirements.

Subject to further assessment that demonstrates that all departures from the tested system, including the cornices (both salvaged and replica), will not impact the fire resistance of the ceiling, it is considered that the proposed MOD18 design achieves the required performance as per the fire safety strategy outlined within Fire Engineering Report: FE-RE-FER-29212-Lands Rev 006 issued on the 25th of November 2022.

Adopting the alternative ceiling design in accordance with MOD18 will require an update of the Fire Engineering Report to reflect the change in the design. It is noted that the updated assessment will be subject to stakeholder's review and acceptance, including consultation with Fire Rescue New South Wales (FRNSW).

Should you have any further queries please do not hesitate to contact us.

Yours sincerely

Stantec Australia Pty Ltd

Jason Toh