

Your ref SSD-10340/Reflectivity
Our ref 272427-00/JK
File ref

ARUP

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Dear Christine

Response to Request for Additional Information - Reflectivity Statement Fort Street Public School, Section 4.55(2) Modification Application (SSD-10340)

Introduction

This statement has been prepared by Arup to support an application to modify Development Consent SSD-10340 in accordance with Section 4.55 (2) of the Environmental Planning and Assessment Act 1979 (EP&A Act). SSD-10340 relates to the approved Fort Street Public School redevelopment located at 51a Hickson Road, Barangaroo, NSW.

Following submission of the Response to Request for Additional Information and amended Section 4.55(2) scheme on 13 October 2021, the Department of Planning, Industry and Environment (DPIE) has requested that School Infrastructure NSW (SI NSW) provide an updated Reflectivity statement considering the proposed glazed parapets that are part of the amended Section 4.55(2) scheme. This statement is prepared in response to this request.

The amended scheme, as detailed in the Response to Request for Additional Information, proposes a number of changes to the design of Building J. The proposed changes to Building J as part of the amended scheme include the following items altering the extent of reflective glass surfaces on the building:

- Removal of the enclosed walls and roof to Level 3, replaced with a glazed balustrade on the southern, eastern and western perimeter.
- Removal of the enclosed rooftop link bridge between Building J and the MET Building, and replacement with a glazed balustrade.

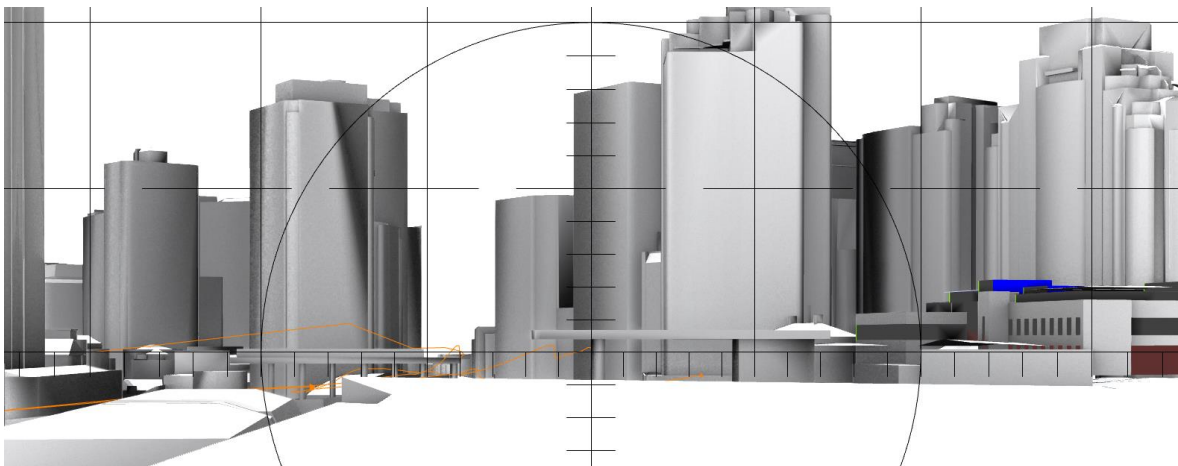
Reflectivity Impact

The reflectivity study titled “Fort Street Primary School – Reflectivity Statement” (Rev. 4 dated 16 February 2021), prepared by Arup to support the originally submitted S4.55(2) Modification Application, assessed impact of potential reflections off the building facades on pedestrians and road traffic participants. It found that these would not exceed limits of acceptability according to the Hassall methodology adopted in the study, as long as normal external reflectivity of glazing and cladding elements is kept within a limit of 20%.

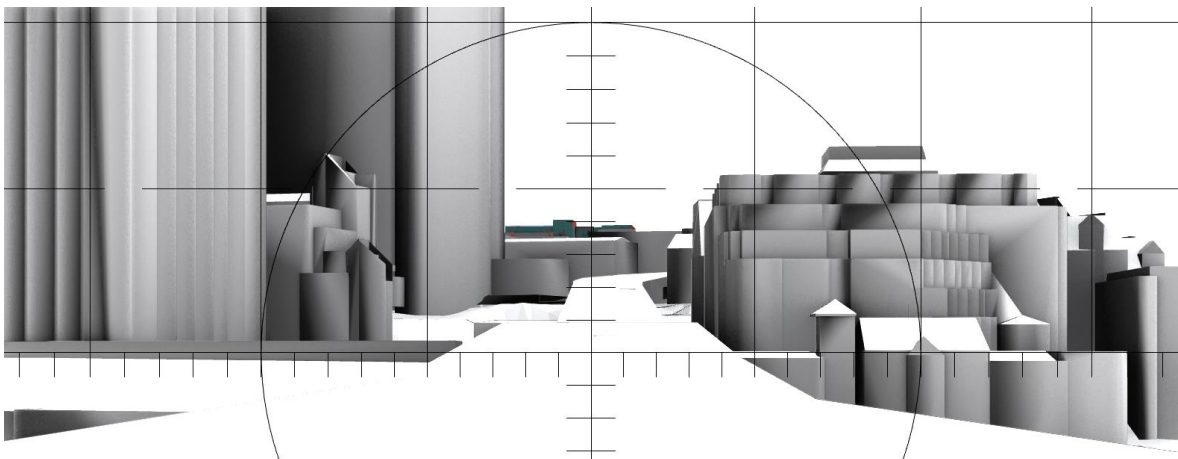
Arup has reviewed the proposed changes in simulation based on a 3d computer geometry model of the project provided by FJMT Architects 2/11/2021.

The modifications to the proposed building as contained in the modification application are within the scope of the original report. Changes to elements of the façade that have a bearing on the effect of reflections are limited predominantly to a change in horizontal extent of glazing where enclosed walls are replaced by glazed parapet. We make the following observations:

- Approach from north via Western Distributor / Cahill Expressway and Upper Fort St – there are no added reflections that alter the qualitative outcome. Reflections are still only visible well away from the driving direction and remain well below the Hassall threshold.



- Approach from east via Cahill Expressway, Alfred St or Essex St – the added glazing is only visible from Cahill Expressway at a large distance from the site as it is obscured by trees and buildings on Cumberland St at closer proximity. Sun reflections are not visible from these more distant locations as incoming sun from the east is blocked by taller buildings of the Central Business District.



- View from west – there is no direct view leading up to the site from roads in close proximity to the west. View from across the Harbour such as from Darling St in Balmain and Darling Island Road in Pyrmont is not directly towards site, and any visible reflections are well below the Hassall threshold. Visual angle of any reflections received further afield would also be small and only reflect parts of the sun disk.

Conclusion

On basis of the above considerations, Arup is of the opinion that the amended Section 4.55(2) scheme for the Fort Street Public School development, including the added glazed balustrades, will not result in unacceptable glare impact of reflections off the façade, and that the conclusions of the reflectivity study for the originally submitted S4.55(2) Modification Application as referenced above remain valid, as long as the normal specular reflectivity of glazing, façade materials and balustrades is kept within the 20% allowable limit set by the City of Sydney DCP.

Yours sincerely



Jorg Kramer
Senior Consultant

cc Matthew Finn, Arup