Memorandum

ARUP

То	Gertjan Groen	Date 12 October 2015
Copies	Craig Leech	Reference number
From	Christoph Gruenaug	File reference
Subject	Response to JLL DA review Issue 23: Tower A building maintenance, BMU and potential for falling debris	

Dear Gertjan,

We have reviewed the Kerry Hill Architect's drawings of the Wanda One Sydney – Tower A, proposals SSD 2015_7101 (City Reference D/2015/1049) and amending DA 2015_882) in specific reference to "Issue 23: Tower A building maintenance, BMU and potential for falling debris" raised by JLL on behalf of Lend Lease Development Pty Ltd. The impact to the safety and security of the Jacksons on George premises is a valid one and needs to be addressed.

The preliminary design of the BMU system has the BMU cradle operating within 1500mm of the tower façade. The preliminary design of the system requires a BMU cradle of nominal dimensions: 3000mm plan width, 800mm plan depth and 1200mm height in elevation. For clarity the width of the cradle is measured parallel to the façade, and the depth of the cradle is measured perpendicular to the façade. Code requirements stipulate that the cradle must be within 600mm of the façade at all times, however typically it will be within 300mm. This cradle drop zone is well within the Sydney One boundary (see Figure 1). Figure 35 of the JLL submission incorrectly assumes that the spacing planning for the BMU resting position at the roof was indicative of the BMU cradle.

Under the WHS Act and Regulations designers and owners have a responsibility to provide solutions that comply with the requirements of the Act. Furthermore all Sydney One façade access systems shall be assessed in terms of the suitability and safety of the method to both future occupants and the surrounding area. This assessment includes undertaking appropriate 'Safety in Design' processes to inform design decisions. This assessment also includes risk assessment and risk mitigation methods as outlined by WorkCover. All necessary risk mitigation methods will be clearly outlined in the operation and maintenance manual provided by the façade access subcontractor.

Appropriate risk mitigation measures may include items such as:

- avoid operation of the BMU during peak periods;
- all tools and additional items taken into the BMU cradle must have sufficient methods of fall restraint such as lanyards;
- exclusion zones to be set up in areas adjacent to the planned BMU drop positions;
- cradle to be of a fully enclosed design, i.e. grating/perforation of cradle material will not be permitted;
- all BMU operators to be provided with appropriate working at heights training;
- all risk mitigation methods to be communicated to Jacksons on George building management for inclusion in appropriate operation procedures at the adjacent property; and
- all BMU operators to be provided with a site specific induction by Sydney One building

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management to address the above items.

Figure 1: BMU drop zone and cradle drop position

A typical sidewalk closure during a cleaning operation requires a 4000mm plan width for a distance of 2000mm from the building face. This allowance is entirely within the Sydney One property and thus the danger and inconvenience to the adjacent property is no worse than this public way.

Based on the above outlined items we offer the following detailed response to the JLL recommendations:

- 1. We do not believe that this situation presents an abnormal risk nor special considerations beyond that addressed in the existing design regulations;
- 2. No comment provided.
- 3. We believe that detailed design of the BMU can feasibly ensure that the BMU does not protrude past the property line and thus approval from the adjacent landowner, as suggested, would not normally be required; and
- 4. The risk mitigation methods described above reasonably address this concern.

Regards

Christoph Gruenaug

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