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TTW

**TaylorThomsonWhitting** 

GL Investment Co Pty Ltd Suite 1501, Level 15 14 Martin Place Sydney NSW 2000

Attention: Jenny Watt

## 161 SUSSEX STREET REDEVELOPMENT ADDITIONAL COMMERCIAL FLOORS STRUCTURAL ENGINEERING STATEMENT

The 161 Sussex Street redevelopment consists of the new Convention Centre and new Tower south of the existing hotel. Two additional commercial floors are proposed to be added to the top half of the Tower. This Statement describes the proposed structure of the new Tower as shown on the amended DA drawings prepared by Cox Richardson ("the hotel/residential Tower").

The site is currently occupied by the existing Four Points hotel. This consists of an 11 storey north wing and 15 storey south wing constructed by Civil & Civic in about 1988.

The Tower is located over the south-bound lanes of the Western Distributor. The approved structure is all reinforced concrete and is separated from the existing hotel by a permanent movement joint. Lateral wind and earthquake loads are resisted by the lift and stair cores acting as shear walls together with the transfer structures between Ground floor and L1 providing frame action in an east-west direction. All of the approved structure has been designed to cater for the proposed additional two commercial floors.

In the original DA the following reports relevant to structure were submitted:

Appendix H – Rail Corridor Impact Assessment

Appendix N – CBD Rail Link Diagram

Appendix Q – Engineering Services Report

In regards to rail (Appendix H & Appendix N) the structure for the hotel/residential Tower will be outside the zone of influence of the Railcorp proposed alignment. There is no change to the principles described in the Rail Corridor Impact Assessment report resulting from the additional two commercial floors in the Tower.

In regards to existing in-ground services (Appendix Q) footings for the approved structure are located to avoid existing services and not impose new surcharge loads. There is no change to the principles described in the Engineering Services Report resulting from the additional two commercial floors in the Tower. The footings for the hotel/residential Tower have been located to avoid existing services and not impose new surcharge loads.

Structural

Civil

Traffic

Facade

Engineers

**TTW Group** 

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Jonathan Miles BE Hons
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M Raddatz

#### Manager Facade

N McClelland BSc BE Hons MBA MIEAust

All structural framing and structural components will be designed and documented to comply with the provisions and applicable Australian Standards from Section B, Part B1 of the Building Code of Australia 2013. The applicable Australian Standards are listed below:

AS 1170.0 - 2002	Structural design actions – General principles
AS 1170.1-2002	Structural design actions – Permanent, imposed and other actions
AS 1170.2 - 2011	Structural design actions – Wind actions
AS 1170.4 - 2007	Structural design actions – Earthquake actions in Australia
AS 3600 - 2009	Concrete Structures
AS 3700 - 2011	Masonry Structures
AS 4100 -1998	Steel Structures

Yours faithfully,

TAYLOR THOMSON WHITTING (NSW) PTY LTD

DAVID CAROLAN Director

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