



09 March 2016

CPP Project 8366

Wanda
c/- Peddle Thorp & Walker
Level 13, 9 Castlereagh Street
Sydney
NSW 2000

Attn: Mr. Andres Caceres

Project: Sydney One - Tower B

Dear Mr. Caceres,

Please find herein an assessment of several wind related considerations on the proposed Sydney One - Tower B development. This opinion based assessment follows on from the results of wind tunnel testing of the proposed development presented in the report "CPP8366_Sydney One_REP_PW_R02", dated 20 October 2016.

Water feature

It is understood that concerns were raised with regards to potential spray from the planned still water feature on the north-eastern corner of the proposed development, Figure 1. Cross-sectional details of the water feature, and the intended operational conditions would be required to fully comment, but it is assumed that the feature consists of a raised pool of water, which spills over the north, east, and west perimeter edges into a lower drainage zone. It is understood that the maximum depth of the water in the pool is 200 mm, the maximum height of the water fall over the edge is 600 mm, and the depth of flow at the crest is significantly less than 10 mm. With such a shallow depth of water the speed of flow would be expected to be minimal. A seating area is intended immediately west of the water feature. The wind tunnel test results show that the location is generally suitable for pedestrian standing activities, and exceeds the wind speed associated with the pedestrian sitting criterion approximately 10% of the time, Figure 2. The directional wind speeds at this location, Figure 2(R), indicate that the location is exposed to strong winds from the north quadrant, which would result in accelerated winds around the north-east building corner. Based on these results, spray water is primarily of concern to the eastern side of the water feature, particularly with wind accelerating along the higher north wall of the feature breaking up the slow-moving shallow flow and transporting the smaller particles with the flow. Depending on the geometry of the feature and the flow rate, during strong winds the intended 300 mm wide drainage perimeter zone around the feature may be insufficient.

The north-east corner of the water feature is expected to be the most critical point in which the wind is most likely to pick up water droplets and transpose them laterally. A moderate wind speed of 5 m/s from the north-west quadrant would be expected to be sufficient to wet an area of approximately 1 m to the south-east of the corner. These wind conditions would be exceeded approximately 7% of the time according to data from the Sydney Airport Bureau of Meteorology anemometer. To reduce the risk of spray, it would be recommended to prevent the water from flowing over this corner. Simple detailing of this edge to minimise

the risk of wind-driven spray will be developed during detailed design.

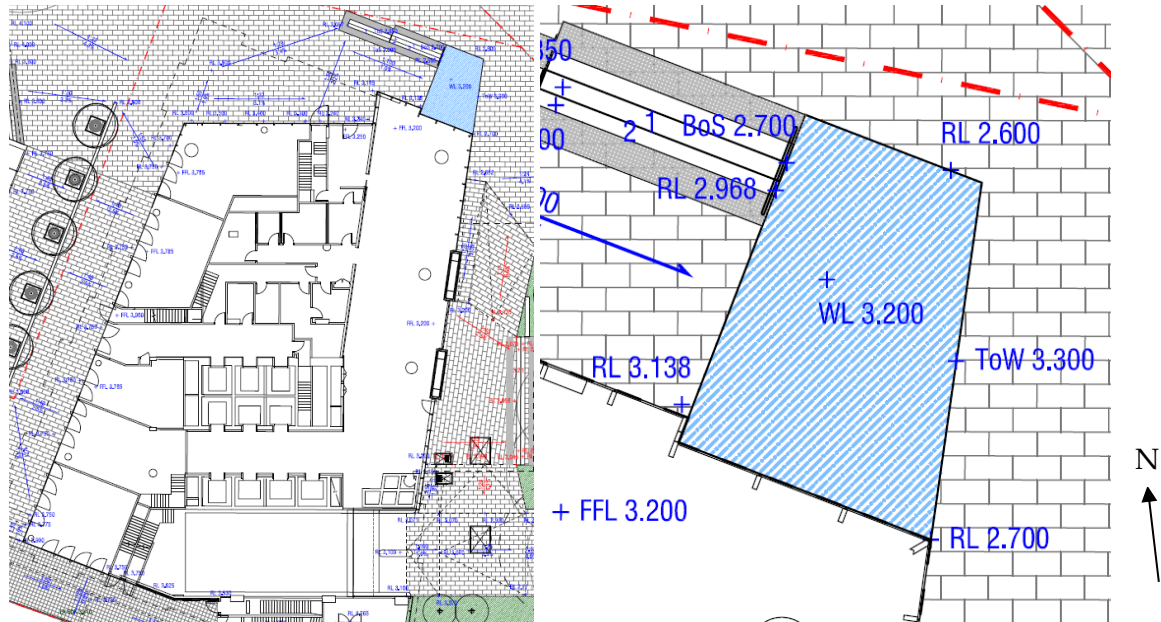


Figure 1: Location of the proposed still water feature (Wanda, 2017)

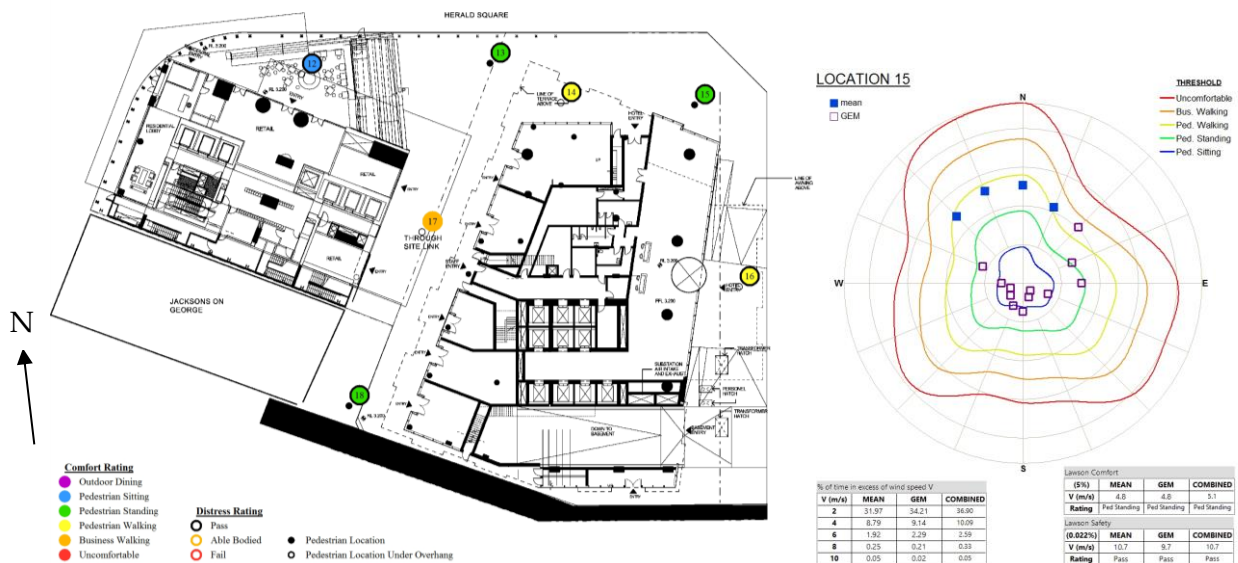


Figure 2: Pedestrian wind speed measurement locations around the proposed development with comfort/distress ratings (L), directional wind speed results for Location 15 (R)


South eastern building corner – impact on Rugby Place

It is understood that a concern regarding the impact of Sydney One – Tower B on the amenity in Rugby Place south of the tower was raised, and a proposal was made for additional single level retail space to the south of the car park ramp on the south-east corner of the building.

In relation to the wind amenity, the suggested retail extension would have a minimal impact on the wind conditions in the laneway, as the flow here is largely dictated by the pressure differential across the laneway, and the massing of the surrounding buildings.

We trust this technical report provides sufficient information. Please contact the undersigned if you would like to discuss, or require any additional information.

Yours sincerely,



Joe Paetzold
Project Engineer
Cermak Peterka Petersen Pty. Ltd.

cc: Graeme Wood, CPP