18 October 2018 CPP Project 9973

Macquarie Corporate Holdings Pty. Ltd
Level 6, 50 Martin Place
Sydney NSW 2000

Attn: Holly Rhoades
Project: Martin Place Over Station Development

Dear Ms. Rhoades

This letter addresses the pedestrian-level wind conditions around the proposed Sydney Metro Martin Place Over Station development (OSD) building envelopes in response to the City of Sydney Council's (CoS) comments to the Stage 1 Amending DA submission. This letter refers to the wind tunnel testing conducted for both the Stage 1 Amending DA [1], and the Stage 2 DA for both the North and South Site [2,3].

A submission by CoS on the Stage 1 Amending DA raises concerns about "the lack of side street building setbacks impacting on pedestrian amenity" and states that a "return of 8m x 8m is recommended for each corner for the tower above a nominal 45m podium height" for the South Site envelope. It is noted that the wind tunnel testing was conducted in various setback configurations including side setbacks of 8 m on the Castlereagh Street and Elizabeth Street side for the tower. The results as reported in [1] show that the introduction of 8 m setbacks to these streets does not significantly change the pedestrian level wind conditions when compared to the proposed building envelopes sought under the Stage 1 Amending DA. It is concluded that the zero side street tower setbacks in the Stage 1 Amending DA building envelope for the South Site has a negligible impact on the wind conditions. The cut outs at the tower corners of the South Tower recommended in the CoS submission would be a less significant change to the building massing than the tested 8 m tower setback arrangement to Castlereagh and Elizabeth Streets and hence would not be expected to have any impact on pedestrian wind amenity around the building.

The CoS submission further highlights increased wind speeds at particular locations from the approved concept envelope to the proposed configuration, and notes that "design options that retain the current comfort ratings […] should be considered". This is understood to refer to the detailed shape of the towers. Additional wind tunnel testing of the detailed tower shape has been conducted as part of the detailed Stage 2 DAs for both North Site and South Site [2,3]. The results of this detailed testing indicate that all but two test locations remain in the same comfort category as in the existing configuration or show improved ratings.

Wind conditions at one test location near the north-east corner of the South Tower are stronger than in the existing configuration due to the larger tower footprint. It is noted that the ground level colonnade present in the detailed tower shape minimises the effect of the wider tower footprint compared to the proposed envelope configuration, and the test location exceeds the relevant windspeed threshold by a small margin. The test location on the stairs of the MLC forecourt shows a degradation in comfort category relative to the existing, however it should be noted that the measured threshold wind speed is close to the boundary between two comfort categories in both configurations, and the relative magnitude of the change is minute. As such there is hardly any quantifiable difference in wind conditions between existing configuration and proposed tower shape.

It is highlighted that the requirement of a wind comfort rating suitable for pedestrian standing activities at all entrances to the station is fulfilled in the detailed tower shape as tested, which was identified as a key desirable outcome in the site-specific design guidelines for the development.

In summary, the difference in wind conditions between the approved concept envelope and the Stage 1 Amending DA envelope of the development is insignificant. The conditions are generally considered suitable for the intended use of the space in this section of the city.

I trust this information is of assistance. Please do not hesitate to contact me if you have any questions regarding any aspect of this letter.

Yours sincerely,

Joe Paetzold
Engineering Manager
Cermak Peterka Petersen Pty. Ltd.

cc: Thomas Evans, CPP

REFERENCES

[1] Cermak Peterka Petersen (2018) Wind Tunnel Test for: Martin Place Overstation, *CPP9973_Martin Place Overstation_REP_PW_11R02*, dated 20/07/2018.

[2] Cermak Peterka Petersen (2018) Wind Tunnel Test For: Sydney Metro Martin Place Integrated Station Development North Site, *CPP9973_Martin Place Overstation_North Site_REP_PW_14R01*, dated 20/07/2018.

[3] Cermak Peterka Petersen (2018) Wind Tunnel Test For: Sydney Metro Martin Place Integrated Station Development South Site, *CPP9973_Martin Place Overstation_South Site_REP_PW_15R02*, dated 23/08/2018.