



City of Yarra

9 June 2022

Ref: 30N-22-0203-TNT-35464-0

333 Bridge Road, Richmond, VIC 3121

Dear eServices,

PPE22-0103 1-9 Doonside St, Richmond

This peer review of MEL Consultants "*Environmental Wind Speed Measurements on a Wind Tunnel Model of Doonside Precinct, Richmond*" (Report: 162-20-WT-ENV-02) and "*Victoria Gardens-River Boulevard Precinct Built form Changes to Lots 9 and 10 Environmental Wind Consideration*" (Letter: 162-20-DE-EWC-02), dated March 2022, is based on Vipac's experience as a wind engineering consultancy. No wind tunnel studies have been undertaken to support this review.

Vipac has reviewed the wind tunnel test report and the architectural drawings provided (see Attachment). Our comments are as follows:

- i. The wind tunnel test assessment was based on the design drawings provided on 9 February 2022.
- ii. The wind tunnel test was setup with a minimum 400m radius proximity model at a 1:400 scale and the approach Terrain Category 3 was used. Vipac has no issues with this and finds it sufficient.
- iii. Vipac has no issues with the methodology, wind sampling technique and environmental wind criteria.
- iv. There were 60 locations tested in total, with 5 locations on the communal terraces and 1 at the roof carpark.
 - a. Vipac recommends more locations on communal terraces located on level 3 and Level 7 (Building 6), Level 5 (between Buildings 3 & 5) should also be assessed.
- v. The findings from the report can be summarised as follows:
 - a. With the proposed development, all pedestrian pathways in the public realm measured wind speeds within the walking and safety criterion. Vipac has no issues with this.
 - b. Entrances into the proposed developments measured wind speeds within the recommended standing comfort criterion. Vipac has no issues with this.
 - c. The Communal terraces on the podium outdoor recreational areas measured wind speeds within the recommended standing comfort criterion. Locations 51, 52, 53 and 56 meet the more stringent sitting comfort criterion.
 - i. Vipac has no issues with this, however more wind data should be provided to assess the wind condition on the high-level communal terraces; Level 3 and Level 7 (Building 6), Level 5 (between Buildings 3 and 5). As such we recommend that the MEL Consultants report be updated to include wind analysis/advice on these areas.
 - d. The report did not provide commentary on the expected wind conditions on the individual terraces up the height of the buildings and whether they are expected to meet the recommended wind comfort criterion. Vipac recommends that the MEL Consultants report be updated to include wind analysis/advice on the private terraces.
- vi. As of part of planning scheme amendment to River Boulevard, some changes to the built forms were proposed. MEL consultant assessed that the new approved Lots 9 and 10 Buildings provide more shielding on the west and southwest sides of the development. MEL consultant is working with the

design team to address any wind effects at this early massing stage. Vipac has no issues with this at this stage.

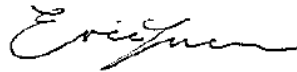
In conclusion, the MEL Consultants "*Environmental Wind Speed Measurements on a Wind Tunnel Model of Doonside Precinct, Richmond*" and "*Victoria Gardens-River Boulevard Precinct Built form Changes to Lots 9 and 10 Environmental Wind Consideration*" used the proper analysis and methodology to analyse the wind effects on the pedestrian level surrounding the proposed development and on some selected outdoor recreational areas in detail. The report found that the proposed design would have an acceptable wind environment within the recommended wind comfort criteria. However, some clarifications should be sought from MEL Consultants regarding the high-level communal terraces and individual terraces up the height of the buildings. The wind tunnel report complied with the City of Yarra plan permit conditions for wind report in PPE22/0103.

Yours sincerely,

Vipac Engineers & Scientists Ltd



Farzin Ghanadi
Consulting Engineer



Eric Yuen
Wind Group Leader

ATTACHMENTS

Victoria Gardens Doonside Precinct. (28 March 2022). *1-9 Doonside St, Richmond (Architectural Drawings)*

S. Chi & M. Eaddy. (March 2022). *Environmental Wind Speed Measurements on a Wind Tunnel Model of Doonside Precinct, Richmond*. MEL Consultants.

City of Yarra, (24 May 2022). PPE22/0103