

429 ALBERT STREET, BRUNSWICK

ENVIRONMENTAL WIND ASSESSMENT

**By
M. Eaddy**

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Report 26005A-DE-EWA03

**429 ALBERT STREET, BRUNSWICK
ENVIRONMENTAL WIND ASSESSMENT**

MEL CONSULTANTS REPORT NO:

26005A-DE-EWA03

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3	10 th June 2026	Revised Drawings

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1. INTRODUCTION

The proposed development at 429 Albert Road, Brunswick, will be a 12 level (41.88m) apartment development on a site highlighted in Figure 1.

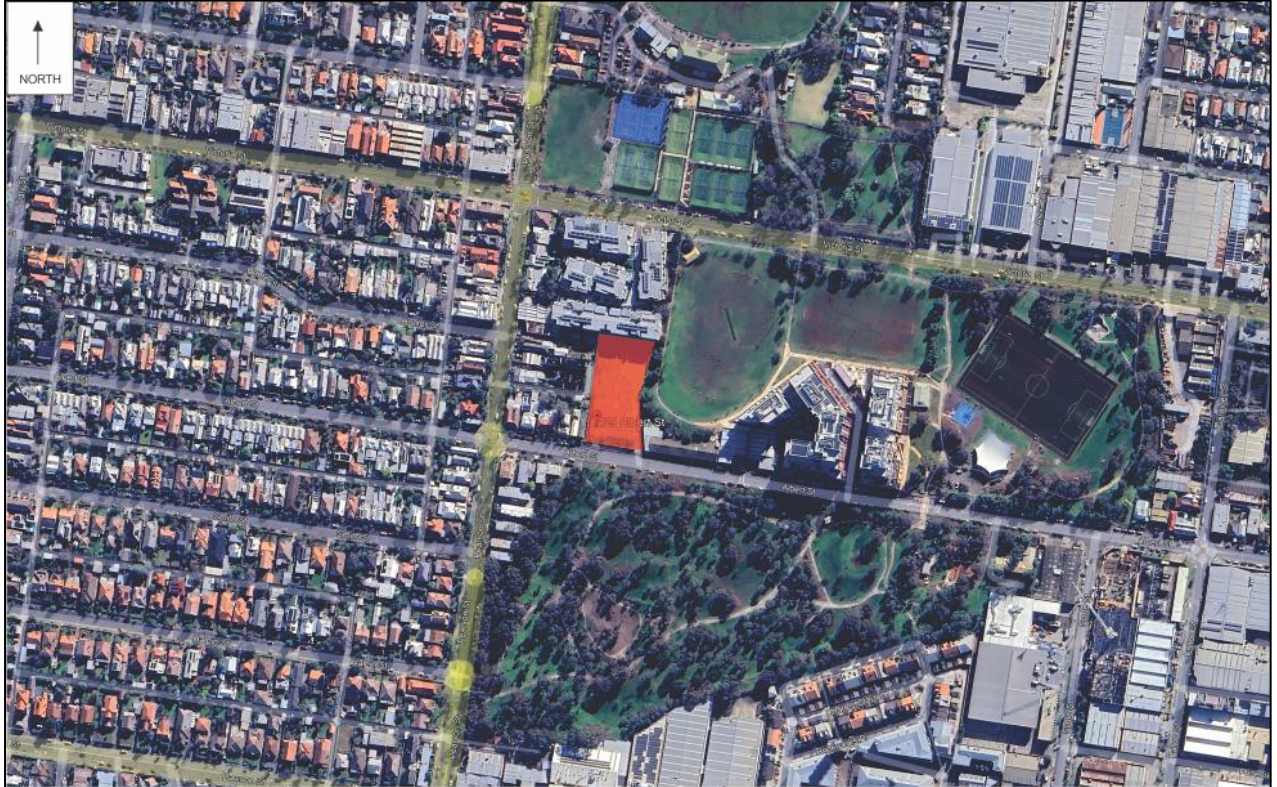


Figure 1: Location of the proposed development (highlighted in red) [Google]

This assessment was commissioned by Stockland Development Pty Ltd and is based on a review of drawings prepared by Jackson Clements Burrows listed in Appendix A and only considers current surrounding and under construction buildings (i.e. no proposed future buildings). This desktop environmental wind assessment is based on MEL Consultants knowledge of wind flow around buildings and structures from undertaking numerous wind tunnel model studies, no specific wind tunnel study has been undertaken for this assessment.

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2. THE DEVELOPMENT

The proposed development will comprise of a multi-level residential building with a frontage to Albert Road and a pedestrian connection from the laneway to the west through the site to Clifton Park. The ground floor plan with the main entrances indicated is presented in Figure 2. The main lobby entrance is setback from Albert Road and there are secondary entrances from the 2 level high (6210mm) walkway in the middle of the building.

The built form of the building is similar from Levels 1 to 5 with setbacks from north, east, and west site boundaries as shown in Figures 3 to 6. At Level 6, 7, 8, and 9 the built form of the north and south ends reduces as the apartment configurations are altered as shown in Figures 7 and 8. Furthermore, a larger terrace is created at northeast corner of Level 6 due to the building setback. The built form of Level 10 (Figure 9) further reduces with increase setbacks from the site boundaries. The changes of built form with building height are shown in the east and south elevations in Figures 10 and 11, respectively.

There are private balconies for each apartment, which are located either recessed into the middle of the building faces or at the corners.

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Figure 3: Level 1 Plan

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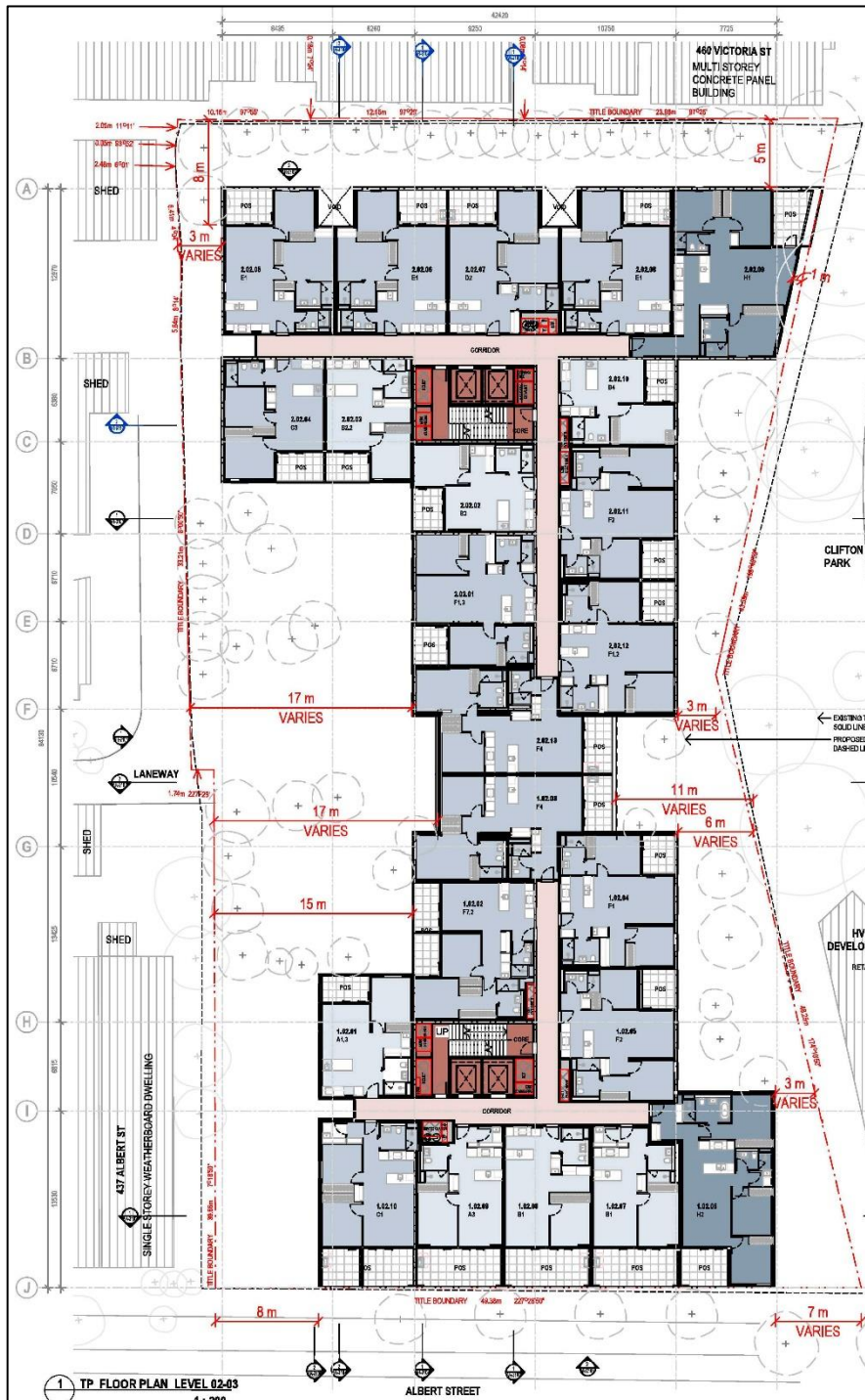


Figure 4: Levels 2-3 Plan

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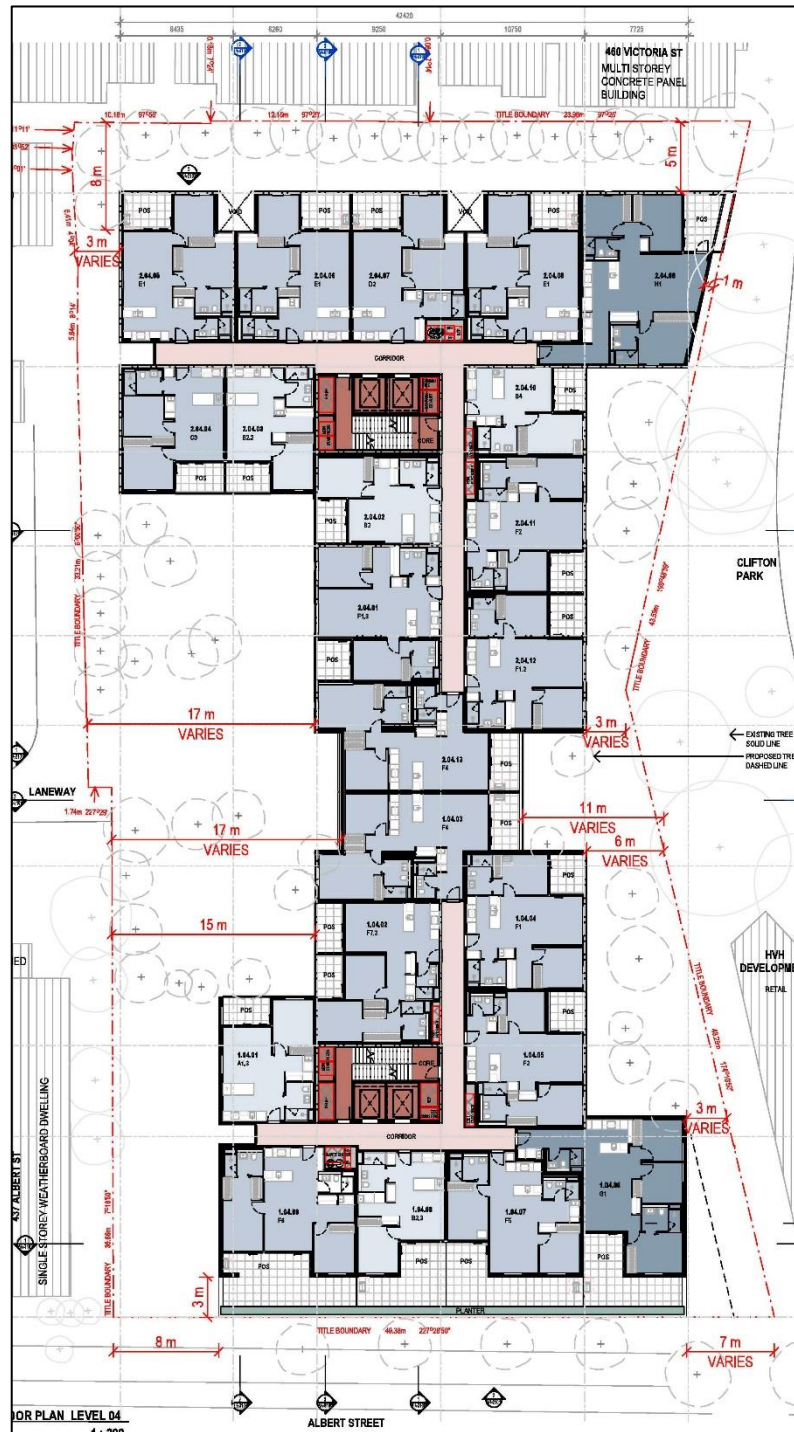


Figure 5: Level 4 Plan

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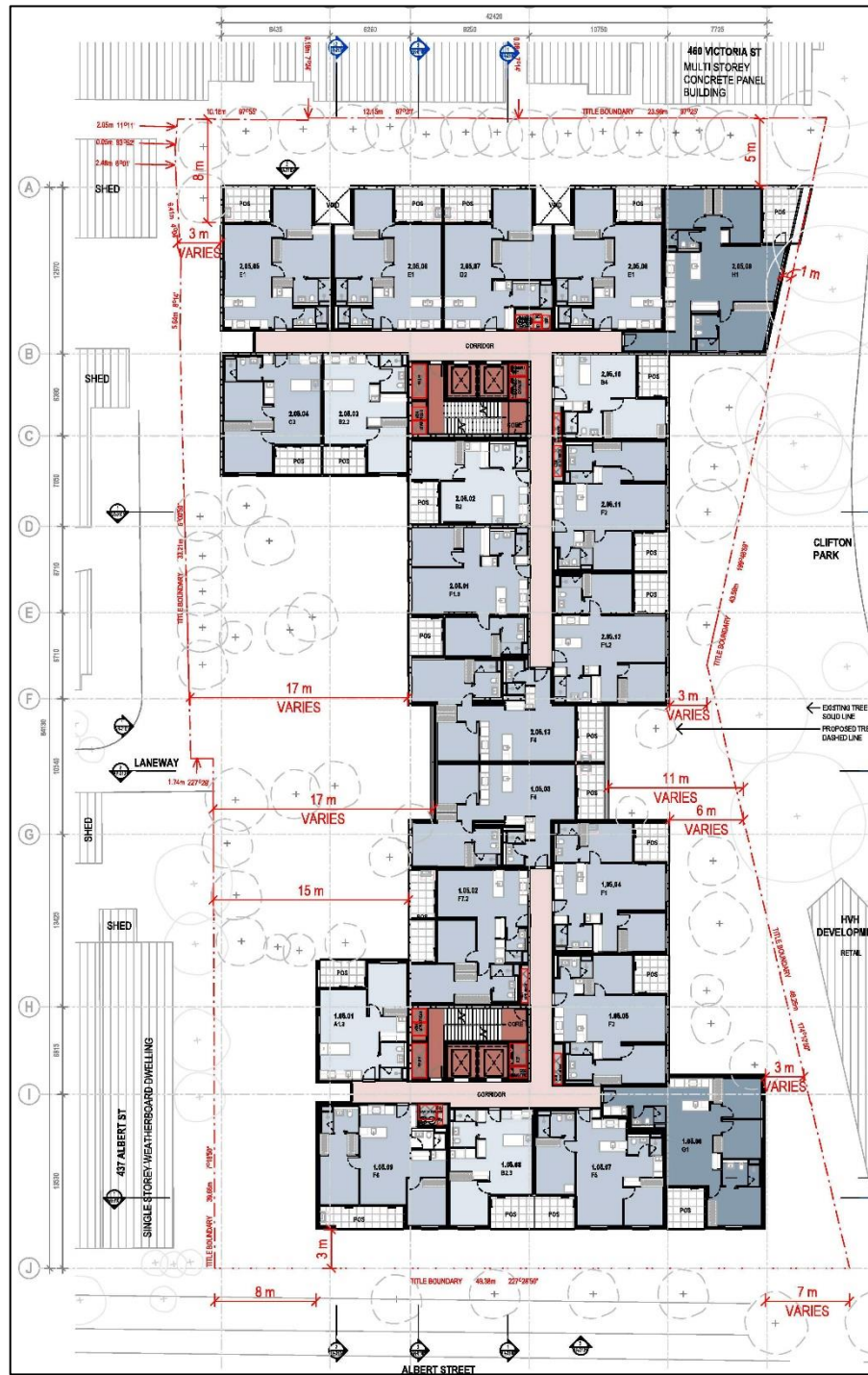


Figure 6: Level 5 Plan

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Figure 7: Level 6 Plan

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Figure 8: Levels 7-9 Plan

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Figure 9: Level 10 Plan

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Figure 10: South Elevation (Albert Road)

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Figure 11: East Elevation

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3. WIND ENVIRONMENT AND EXPOSURE

The strongest and most frequent winds in the Melbourne Region come from the north and west sectors with secondary strong winds coming from the south sector; east sector winds are relatively light and infrequent.

The site location of the 429 Albert Street development has a number of 4 storey apartment buildings immediately to the north, along with two factory buildings, that provide shielding to half of the building height for the northerly wind directions. There are two taller buildings to east along Albert Road, HVH (8 storeys) Liv Albert (11 storeys), which would provide shielding for the east wind direction. For the remaining wind directions, the exposure would be over typical suburban housing, Clifton Park, and Gilpin Park to the south.

The topography of the area is flat and would not influence the wind conditions around the development.

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4. ASSESSMENT CRITERIA

The Merri-bek Planning Scheme defines the following wind safety and comfort criteria for apartment development in Clause 58.04-4 Standard D17. These criteria are defined as follows:

Unsafe wind conditions mean the hourly maximum 3 second gust which exceeds 20 metres/second from any wind direction considering at least 16 wind directions with the corresponding probability of exceedance percentage.

Comfortable wind conditions A 'mean wind speed' from all wind directions combined with a probability of exceedance less than 20% of the time, equal to or less than:

- 3 metres/second for sitting areas
- 4 metres/second for standing areas
- 5 metres/second for walking areas

Mean wind speed means the maximum of:

- Hourly mean wind speed, or
- Gust equivalent mean wind speed (3 second gust wind speed divided by 1.85)

Trees and landscaping should not be used to mitigate wind impacts. This does not apply to sitting areas, where trees and landscaping may be used to supplement fixed wind mitigation elements.

Wind mitigation elements, such as awnings and screens should be located within the site boundary, unless consistent with existing urban context or preferred future development of the area.

The above criteria are pass/fail criteria as they only assess the summation of probabilities of exceedance across all wind directions to determine whether a location passes or fails the threshold criterion i.e. the criteria assess the average wind conditions.

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4.1 Suggested Comfort Criteria

The following wind criteria are suggested for the surrounding streetscapes:

- | | |
|----------------------------|----------------------------|
| - Pedestrian transit areas | Walking Comfort Criterion |
| - Building entrances | Standing Comfort Criterion |
| - Private Terraces | Walking Comfort Criterion* |

* The wind conditions on terraces have been recommended to satisfy the standing comfort criterion as these spaces could be considered elective when external wind conditions would be perceived as acceptable for the desired activity.

The activation of the public realm external to the site would depend on the existing wind conditions in the streetscapes that are often beyond the control of the proposed development. For cases where the existing wind conditions in the public realm external to the site are on or above the walking criterion, then the proposed development should not have any adverse wind effects in these areas.

All locations must satisfy the pedestrian safety criterion.

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5. WIND ASSESSMENT

5.1 Albert Road

The south face of the proposed development would have exposure to direct wind flow as discussed in Section 3. The south face of the development has little significant setback of the building from the site boundary up to Level 8 but then the face narrows and is setback from the site boundary. The south face would be expected to induced downwash wind flow down into Albert Road, but the volume of downwash would be expected to mitigated to a degree by the changes to the upper levels of the building. The wind conditions along Albert Road would also be influenced by the westerly winds that are deflected off the broad west face and around into Albert Road. Based on the above scenarios, the wind conditions along Albert Road would be expected to satisfy the walking comfort criterion. The highest wind conditions expected around the southwest corner due to the combined effects of the southerly and westerly winds and these wind conditions would be expected to be on the walking comfort criterion.

The wind conditions outside the main entrance would be expected to satisfy the standing comfort criterion as it is setback into the south face.

5.2 West Laneway and Clifton Park

The wind conditions along the Laneway to the west would be expected to increase due to the downwash caused by the exposure to the westerly winds. Wind conditions along the Laneway and in the private open spaces of the adjacent residential properties would be expected to increase, but remain within the walking comfort criterion.

The wind conditions in in the southern area of Clifton Park would be expected to change in two ways. Firstly, the proposed development would be expected to shield the park from the westerly winds and, secondly, the wind conditions caused by the southerly and northerly winds would be expected to increase due to the reduced gap between the proposed development and the existing development to the east along Albert Road. Overall, in terms of the comfort criteria listed in Section 4, the wind conditions in the park would still satisfy the walking comfort criterion.

5.3 Site Ground Level Outdoor Areas

The ground level design of the development has a pedestrian link through the building that links the Laneway to Clifton Park. The wind flow through the pedestrian link would be controlled by the wind induced pressure difference across the building. For the westerly wind directions, the wind flow through the link would be expected to be up to the walking comfort criterion, which is above the suggested standing comfort criterion for building entrances. Similar wind comfort would be expected for the northeasterly wind directions over Clifton Park.

The proposed development also has a relatively narrow gap to the 4 level apartment building to the north. The westerly and northeasterly wind directions would accelerate through this gap and wind conditions between the building would be expected to satisfy the walking comfort criterion.

5.4 Private Balconies

Typically, private balconies that are set into the middle of building faces or open to single aspect have better wind conditions compared to balconies near or around the corners (i.e. open to two aspects) of the building. The designs of the balconies for the proposed development are either recessed in the middle of the faces or located on the building corners. Therefore, the wind conditions on the private balconies that are recessed into the middle of the building faces would be expected to satisfy the standing comfort criterion and the corner balconies would satisfy the walking comfort criterion.

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6. CONCLUSIONS

We have assessed the likely environmental wind conditions for the proposed development at 429 Albert Road, Brunswick, based on the drawings by Jackson Clements Burrows listed in Appendix A.

The general wind conditions in the surrounding streetscapes have been assessed as satisfying the walking comfort criterion.

The wind conditions in Clifton Park would be expected to satisfy the walking comfort criterion.

The wind conditions in the adjacent private open spaces to the west have been assessed as satisfying the walking comfort criterion.

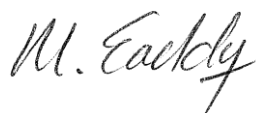
The wind conditions outside the ground level main entrance have been assessed as satisfying the standing comfort criterion. The wind conditions outside the entrances in the pedestrian link have been assessed as satisfying the walking comfort criterion.

The wind conditions in the pedestrian link and the gap between the proposed development and the 4 level apartment buildings to the north would be expected to satisfy the walking comfort criterion.

The wind conditions on the private balconies have been assessed as satisfying the standing comfort criterion and walking comfort criterion for middle face recessed and corner balconies, respectively.

There would be expected to be no exceedances of the pedestrian safety criterion.

The wind conditions in and around the proposed development at 429 Albert Road are recommended to be confirmed by a wind tunnel model study.



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10th June 2026

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Appendix A – Drawing Register

Drawing #	Rev	Date	Title
AR-0000	4	05.06.2026	Cover Page
AR-0101	4	05.06.2026	Site Plan – Existing
AR-0102	4	05.06.2026	Site Plan – Existing Conditions / Demolition Plan
AR-0103	4	05.06.2026	Site Plan – Proposed
AR-1101	12	05.06.2026	Proposed Floor Plan_Level B1-B2
AR-1102	11	05.06.2026	Proposed Floor Plan_Level GF-01
AR-1103	12	05.06.2026	Proposed Floor Plan_Level 02-05
AR-1104	12	05.06.2026	Proposed Floor Plan_Level 06-09
AR-1105	11	05.06.2026	Proposed Floor Plan_Level 10-11
AR-1106	9	05.06.2026	Proposed Floor Plan Roof
AR-2101	5	05.06.2026	Elevations
AR-2102	5	05.06.2026	Elevations
AR-3100	9	05.06.2026	Sections
AR-3101	5	05.06.2026	Sections
AR-3102	5	05.06.2026	Sections
AR-6110	4	05.06.2026	Overlooking Diagrams
AR-9102	5	05.06.2026	Shadow Diagrams
AR-9103	1	05.06.2026	Shadow Diagrams

Notes:

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