

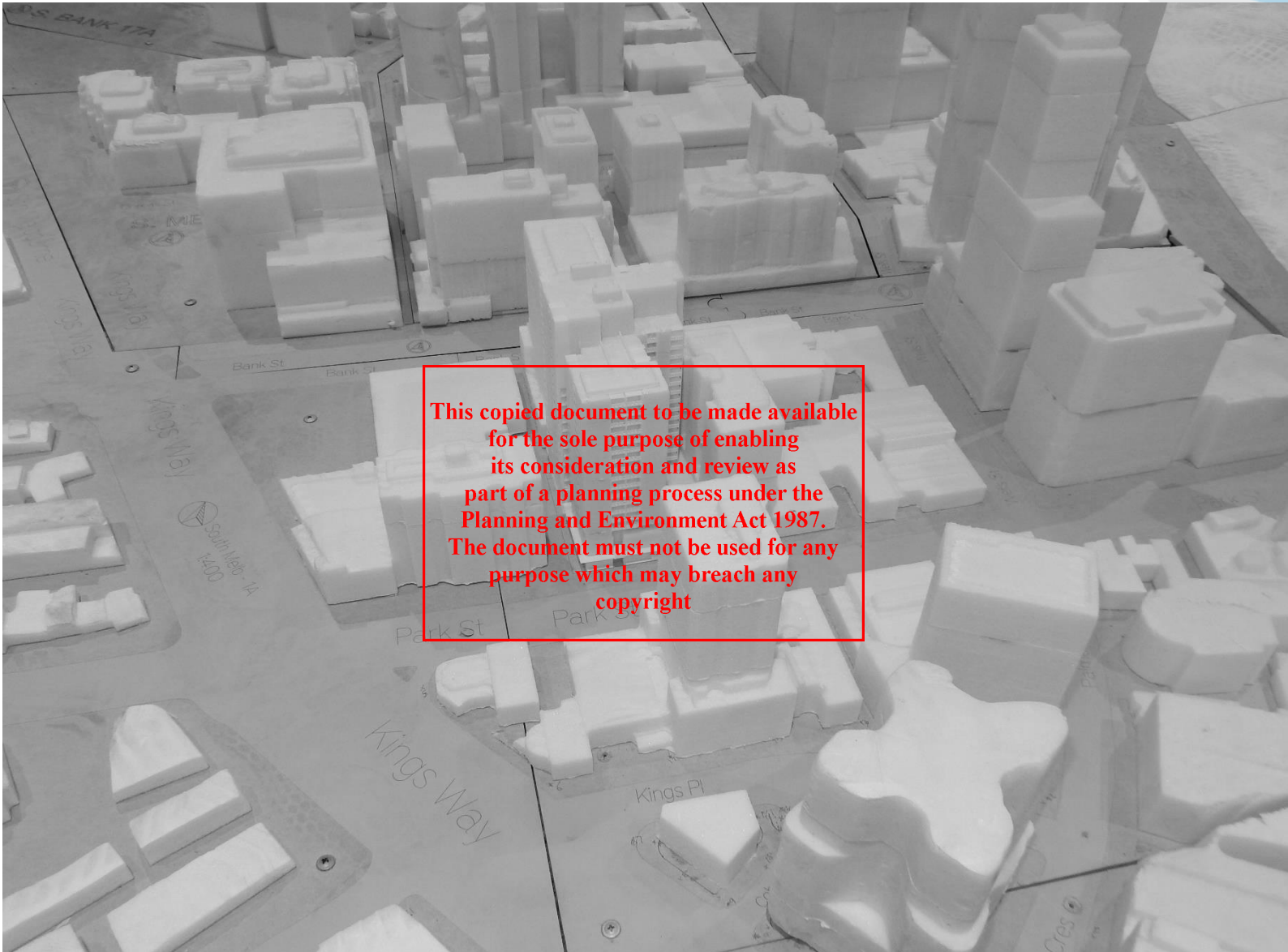
ADVERTISED PLAN



M E L
CONSULTANTS

60-70 PARK ST, SOUTH MELBOURNE

ENVIRONMENTAL WIND CONDITIONS STUDY



MEL CONSULTANTS IS A WIND
ENGINEERING CONSULTANCY
SPECIALISING IN DETERMINING
WIND EFFECTS ON BUILDINGS,
STRUCTURES AND THE ENVIRONMENT

31 July 2025

Prepared for:
Time & Place

Report: 24091A-WT-ENV00

SUMMARY

A wind tunnel study has been conducted to quantify the pedestrian wind safety and comfort conditions for the proposed 60-70 Park Street development in South Melbourne. The wind tunnel study was completed in MEL Consultants boundary layer wind tunnel facility for 360 degrees of wind direction at 22.5 degree increments. The testing was performed using a 1/400 scale model of the proposed development based on drawings by DKO received on 30th June, 2025. The model was inserted into a proximity model that included topography and existing and under construction buildings out to a minimum radius of 300m.

The model of the development within surrounding buildings, was tested in a simulated upstream boundary layer of the natural wind to determine likely environmental wind conditions. Mean and peak wind speeds were measured at locations within and around the development using hot-wire anemometers. The wind speed ratios determined from the wind tunnel measurements were combined with local wind climate data for the site to determine equivalent full-scale wind conditions around the proposed development. These full-scale wind conditions were compared against the City of Port Phillip Planning Scheme Clause 58.04-4 (Standard D17) wind safety and comfort criteria. These criteria are based on the 3 second gust wind speed for pedestrian safety and the Gust Equivalent Mean (GEM) wind speed for pedestrian comfort. The wind conditions for the Existing Configuration were also quantified to allow that assessment of the wind impacts of the proposed development. The study did not include the effects of any landscaping or street trees.

The findings of this study are as follows:

- There are no exceedances of the pedestrian safety criterion for the Existing and Proposed Configurations at ground and upper levels.
- All locations in and around the proposed development at ground level satisfy the walking comfort criterion as a minimum, with most locations satisfying the standing or sitting/standing comfort criteria.



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

- The wind conditions at the main building entrances along the Park Street and Little Bank Street satisfy the standing comfort criterion.
- The wind conditions at the drop-off area, at the centre of the development, satisfy the sitting comfort criterion.
- The wind conditions on the podium, balconies and rooftop terraces have been shown to satisfy the standing comfort criterion.



**This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright**

**60-70 PARK STREET, SOUTH MELBOURNE
ENVIRONMENTAL WIND TUNNEL MODELLING**

MEL CONSULTANTS REPORT NO:

24091A-WT-ENV00

PREPARED FOR:

Time & Place
Level 2 South/161 Collins Street
Melbourne VIC 3000

PREPARED BY:

MEL Consultants Pty Ltd
22 Cleeland Road
Oakleigh South VIC 3167

PREPARED BY:

Date: 25 July 2025

REVIEWED BY:

Date: 30 July 2025

RELEASED BY:

Date: 31 July 2025

REVISION HISTORY

Revision No:
0

Date Issued
31 July 2025

Reason/Comment
Initial Issue

DISTRIBUTION

Copy No:
1

Copy
1
2

Location
Time & Place
MEL Consultants – Report Library

Type
Electronic PDF
Electronic PDF

NOTE: This is a controlled document within the document control system. If revised, it must be marked SUPERSEDED and returned to the MEL Consultants Pty Ltd contact.



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Report 24091A-WT-ENV00

CONTENTS

SUMMARY

1.	INTRODUCTION	- 5 -
2.	WIND TUNNEL MODEL.....	- 6 -
3.	ENVIRONMENTAL WIND CRITERIA	- 9 -
3.1	Recommended Comfort Criteria	- 10 -
4.	EXPERIMENTAL TECHNIQUE.....	- 11 -
5.	DISCUSSION OF RESULTS.....	- 18 -
5.1	Wind Safety Assessment.....	- 18 -
5.2	Wind Comfort Assessment	- 18 -
	APPENDIX A – VELOCITY AND TURBULENCE PROFILES	- 28 -
	APPENDIX B – PEDESTRIAN SAFETY PLOTS	- 29 -

**This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright**

1. INTRODUCTION

The proposed development at 60-70 Park Street will be a 22 level residential building (approximately 72m high) and will be enclosed by Little Bank and Park Streets in South Melbourne, as shown in Figure 1.

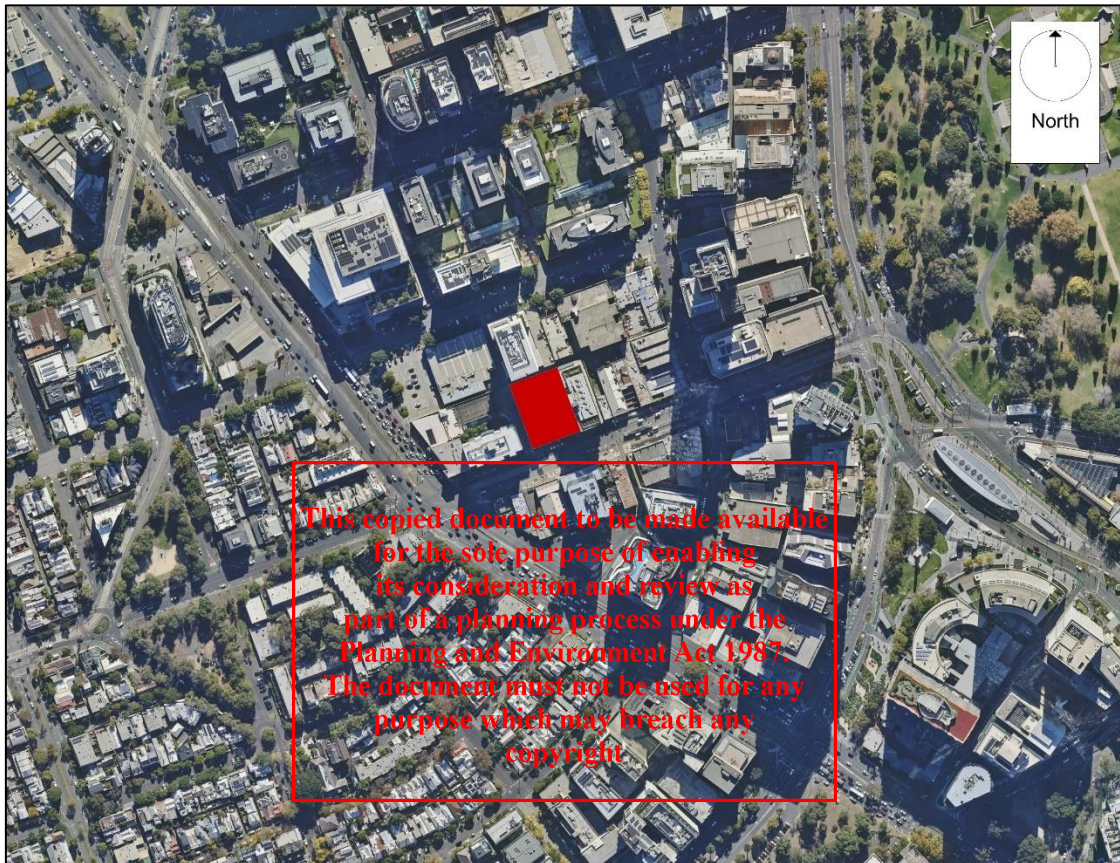


Figure 1 - Location of the proposed 60-70 Park Street, South Melbourne, development site (highlighted red).

A wind tunnel model study was commissioned by Time & Place to investigate the environmental wind effects of the proposed development and, if necessary, to develop wind amelioration features to achieve conditions satisfying the recommended environmental wind criteria. This report details the environmental wind assessment of the 1/400 scale model of the proposed development within a proximity model of surrounding buildings out to a minimum radius of 300m. This study was undertaken in the MEL Consultants' 400kW Boundary Layer Wind Tunnel during July 2025.

2. WIND TUNNEL MODEL

A 1/400 scale model of 60-70 Park Street development was constructed from architectural drawings by DKO received on 30th June, 2025. The model of the 60-70 Park Street development was inserted into a proximity model of surrounding buildings out to a minimum radius of 300m. No existing or proposed landscape trees were included within the model. Photographs of wind tunnel model inserted into the proximity model are presented in Figures 2a - 2d.



Figure 2a - View from the south of the 1/400 scale model of the proposed 60-70 Park Street development in the wind tunnel.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



Figure 2b - View from the west of the 1/400 scale model of the proposed 60-70 Park Street development in the wind tunnel.

This copied document to be made available for the sole purpose of enabling its consideration as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

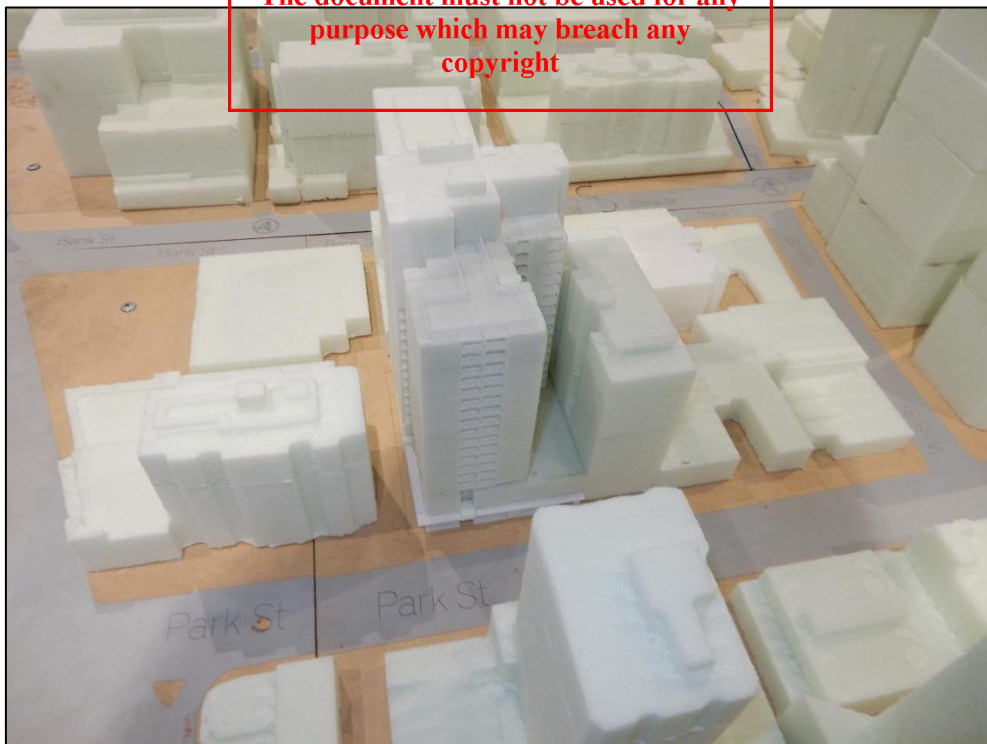


Figure 2c - Close-up view from the south of the 1/400 scale model of the proposed 60-70 Park Street development in the wind tunnel.



Figure 2d - Close-up view from the north-west of the 1/400 scale model of the proposed 60-70 Park Street development in the wind tunnel.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

3. ENVIRONMENTAL WIND CRITERIA

The advancement of wind tunnel testing techniques, using large boundary layer flows to simulate the natural wind, has facilitated the prediction of wind speeds likely to be induced around a development. To assess whether the predicted wind conditions are likely to be acceptable or not, the City of Port Phillip Planning Scheme Clause 58.04-4 (Standard D17) wind safety and comfort criteria will be used. These criteria are as follows:

Unsafe wind conditions means the annual maximum 3 second gust wind speed which exceeds 20 metres/second with the probability of exceedance of 0.1% from any wind direction considering at least 16 wind directions with the corresponding probability of exceedance percentage.

Comfortable wind conditions means hourly mean wind speed or gust equivalent mean speed from all wind directions combined with 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)

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

The above comfort criteria are pass/fail criteria which assess the integrated probability of all wind directions to determine whether a location passes or fails the threshold criterion. The safety criterion is a pass/fail criterion based upon exceedance of the wind speed for any one wind direction.

The wind condition must be assessed within a distance of half the greatest length of the building, or half the total height of the building, whichever is greater.

The City of Port Phillip Planning Scheme guidelines do not provide any methodology or worked example as how to obtain the 'from all wind directions combined'. Therefore, to obtain the probability for all wind directions combined we will apply the methodology described in Melbourne (1978) to determine the probability for all wind directions. The guidelines use the definition of mean wind speed as based on the hourly wind speed so the probabilities will be determined from the hourly wind data for an applicable automatic weather station for the Melbourne Airport. The probability data used have been corrected for the approach terrain at the location of the automatic weather station and referenced to 10m in Terrain Category 2. This is the standard reference height of AS/NZS1170.2:2021.

3.1 Recommended Comfort Criteria

The recommended comfort criteria for the proposed 60-70 Park Street development are as follows:

- Pedestrian transit areas Walking Criterion
- Building entrances Standing Criterion
- Outdoor terraces/balconies Walking Criterion[†]

[†] It is noted that these areas could be considered elective when external conditions would be perceived as acceptable for the desired activity. Users of these terraces will need to be educated on the wind effects and loose objects should not be left unattended in outdoor areas.

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 the walking criterion, then the proposed Development should not have any adverse wind effects in these areas.

All areas of the development must satisfy the pedestrian wind safety criterion.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

4. EXPERIMENTAL TECHNIQUE

The building model was tested in a model of the natural wind generated by flow over roughness elements augmented by vorticity generators at the beginning of the wind tunnel working section. The approach Terrain Categories have been assessed based on the definitions in AS/NZS1170.2:2021 and has been determined as Terrain Category 3 (suburban terrain) for all wind directions.

The velocity and turbulence profiles for the Terrain Categories are provided in Appendix A.

Hot-wire anemometers were used to measure the local wind speeds at locations in and around the development. The positions of the measurement locations satisfied the minimum study radius from the development as required by Clause 58.04-4. Some of the positions of the measurement locations may be outside the minimum radius where significant pedestrian spaces were identified. The minimum radius examined was half the building height or width, whichever is greater, measured from the site boundaries. The Test Locations in the surrounding streetscapes, building entrances and frontages, communal spaces and elevated terraces are shown in Figures 3a to 3e.

The wind tunnel velocity measurements were made for an equivalent 1 hour period in full scale and filtered to determine the mean and an equivalent full scale 3 second gust wind speed for 16 wind directions.

The following velocity ratios were measured in the wind tunnel:

$$\text{mean } \bar{V}_R = \frac{\bar{V}_{local}}{\bar{V}_{300m}}$$
$$\text{gust } \hat{V}_R = \frac{\hat{V}_{local}}{\bar{V}_{300m}}$$

where:

\bar{V}_{local} is the mean velocity

\hat{V}_{300m} is the gust velocity

V_{300m} is the velocity at the free-stream reference height of 300m

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

These measured velocity ratios were combined with a statistical model of the local wind climate that relates wind speed to a probability of exceedance. The model of the wind climate also includes the directional variation of wind speed (frequency). The measured wind speeds are assessed against the pedestrian safety and the pedestrian comfort criteria. The pedestrian safety criterion is applied to the annual hourly maximum wind gusts for each wind direction. The pedestrian comfort criteria are based on all wind directions combined (i.e. summation of exceedances across 360° of wind direction) and the pedestrian comfort criterion utilises the maximum of either the hourly mean wind speed, or the gust equivalent mean wind speed (GEM) as follows

$$\text{Mean wind speed for comfort criterion} = \max\left(\bar{V}, \frac{\hat{V}}{1.85}\right)$$

where:

\bar{V} is the mean wind speed

\hat{V} is the 3-second gust wind speed

$\frac{\hat{V}}{1.85}$ is the gust equivalent mean (GEM) velocity

The two model configurations examined by this study are as follows:

Existing Configuration

- Existing surrounding proximity model
- Existing 2-level building currently on site

Proposed Configuration

- Existing surrounding proximity model
- Proposed 22-level 60-70 Park Street development

The wind tunnel study has been undertaken to exceed the requirements of the Australasian Wind Engineering Society Quality Assurance Manual for Wind Tunnel Studies.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

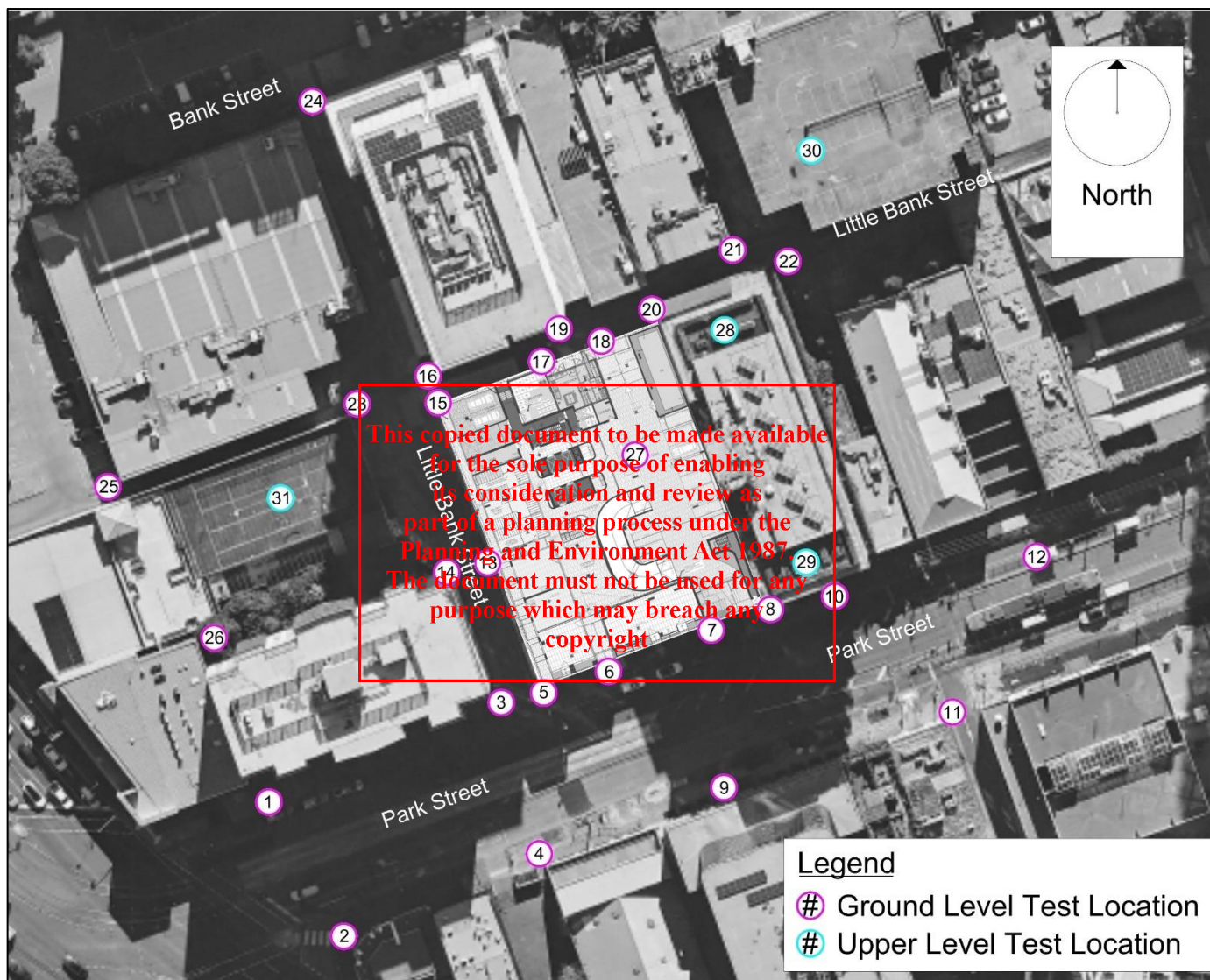


Figure 3a - Test Locations in the streetscapes surrounding the proposed 60-70 Park Street development.

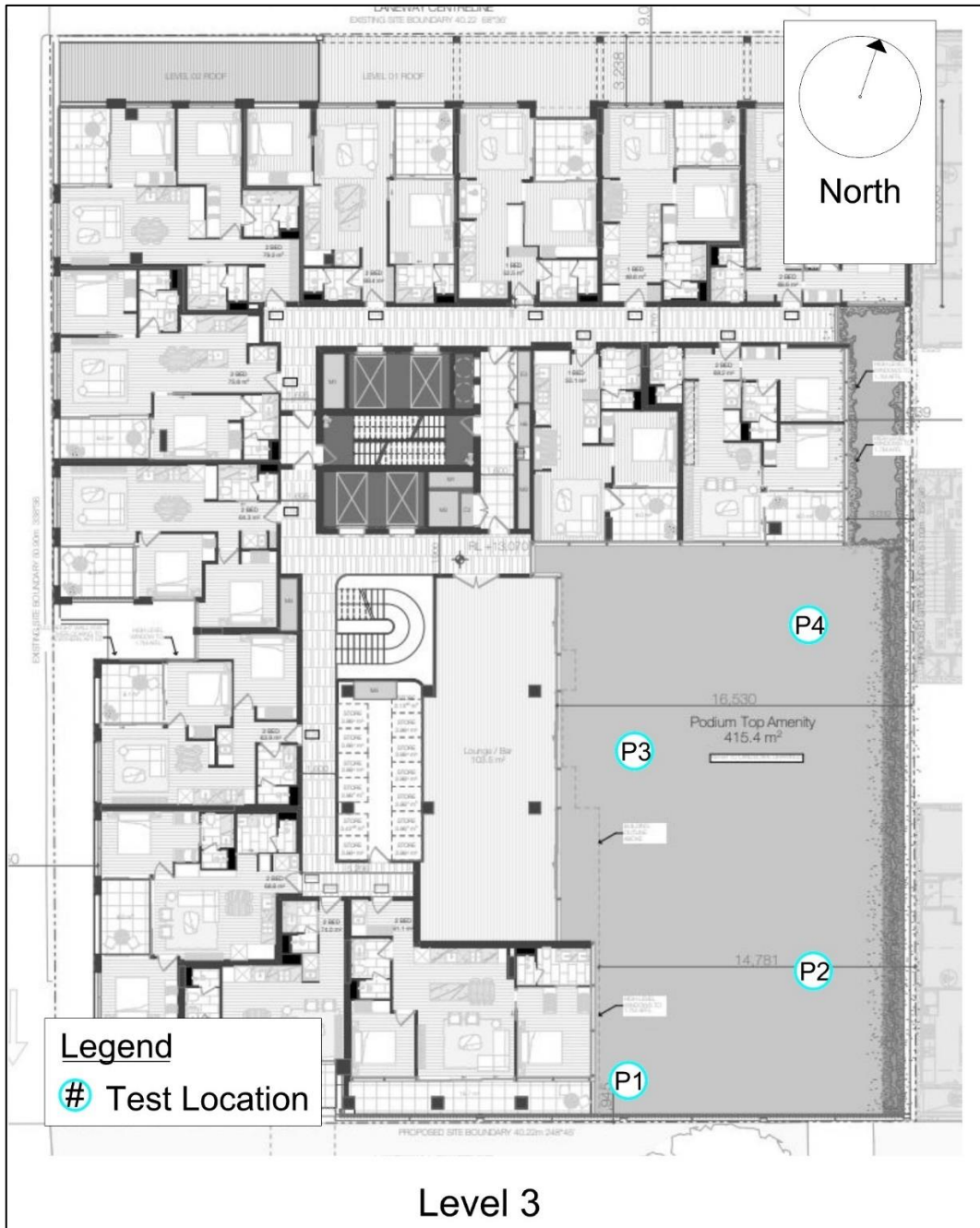


Figure 3b - Test Locations on Level 3 of the proposed 60-70 Park Street development.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

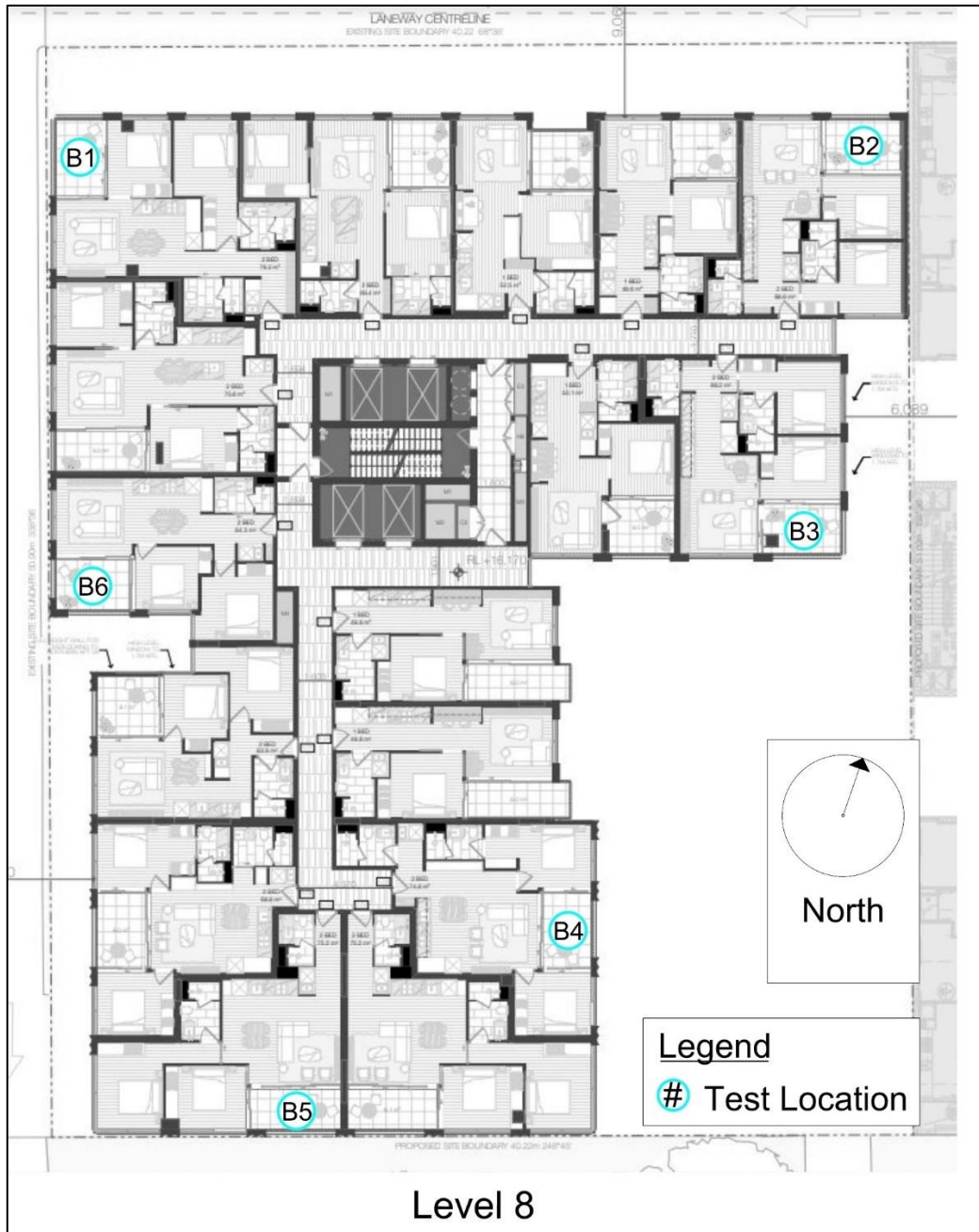


Figure 3c - Test Locations on Level 8 of the proposed 60-70 Park Street development.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

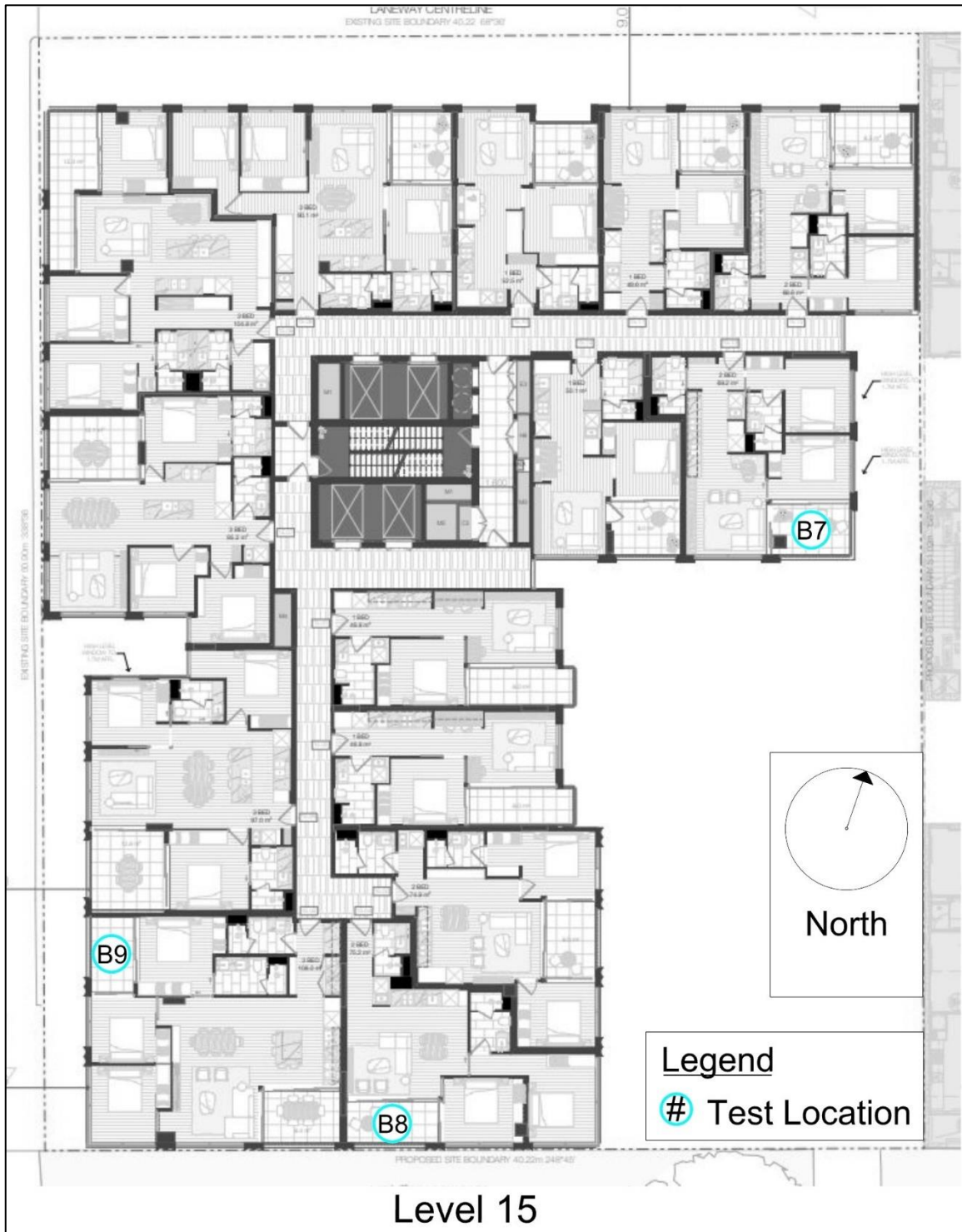


Figure 3d - Test Locations on Level 15 of the proposed 60-70 Park Street development.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

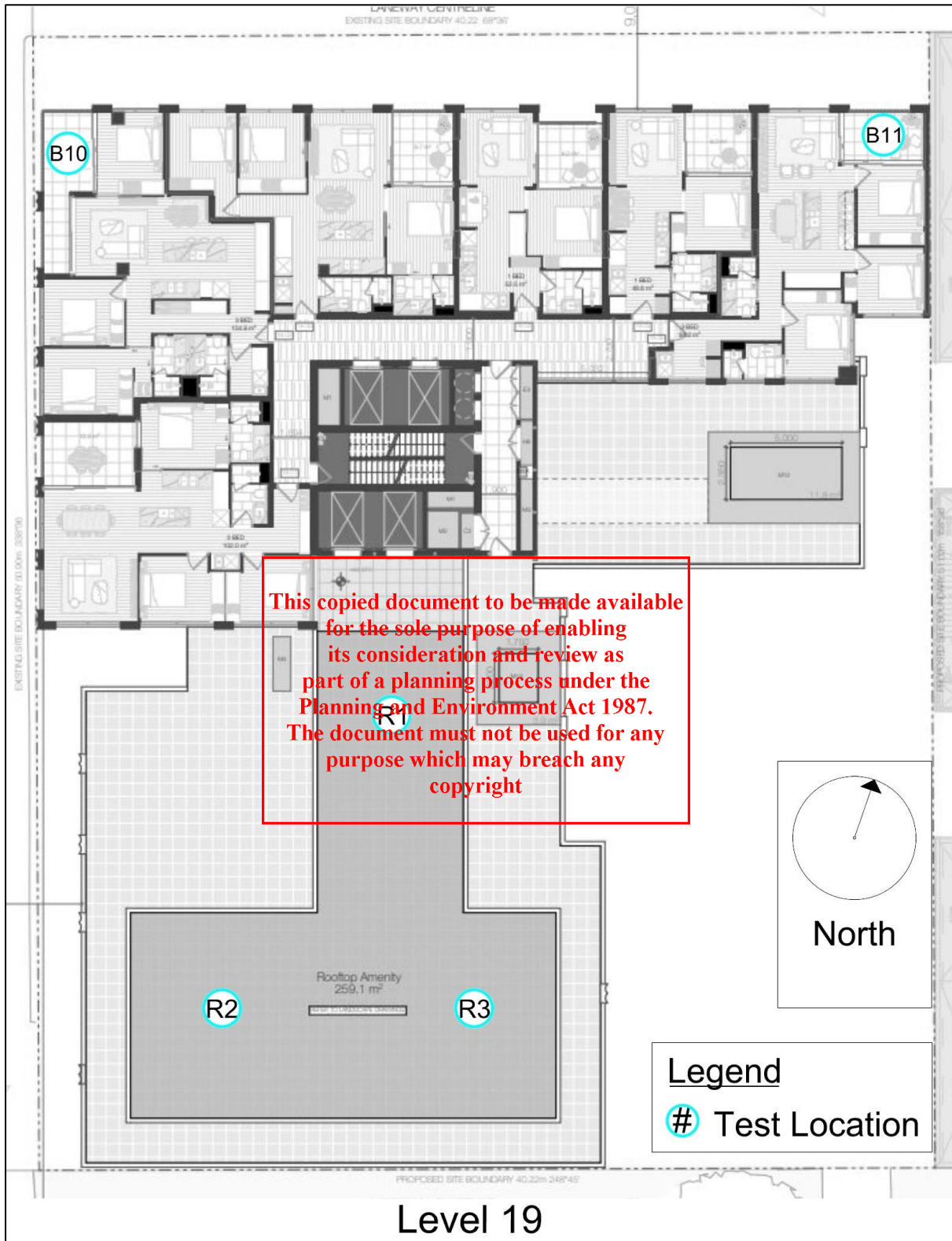


Figure 3e - Test Locations on Level 19 of the proposed 60-70 Park Street development.

5. DISCUSSION OF RESULTS

The assessment of the wind safety and comfort criteria are presented in Tables 1 to 3. The Tables detail the yearly exceedances and mean wind speed for wind comfort, peak wind speed for wind safety, and the result compared to the recommended wind safety and comfort criteria.

The wind conditions for the Existing Configuration have been provided where applicable, for comparison purposes.

5.1 Wind Safety Assessment

The wind conditions for the Existing and Proposed Configurations at all Test Locations satisfy the safety criterion. The annual maximum 3 second gust wind speed from each of the 16 wind directions are also presented in polar plots and compared against the safety criterion in Appendix B.

5.2 Wind Comfort Assessment

In addition to the tabular format, the assessment of the pedestrian comfort for the Existing and Proposed Configurations are summarised in the following;

Figure 4	Existing Configuration
Figures 5a to 5e	Proposed Configuration (ground and terraces)

The figures present the pedestrian comfort criteria satisfied using colour code system, where different colours have been used to represent the wind criteria satisfied at each Test Location.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

5.2.1 Pedestrian Streetscapes

The wind conditions for the Proposed Configuration at all Test Locations at the immediate surrounds and the surrounding streetscapes of the development satisfy the walking comfort criterion at a minimum, with most locations satisfying the standing or sitting comfort criteria.

5.2.2 Building Entrances

The wind conditions for the Proposed Configuration at the drop-off area (Test Location 27) and main entrances along Park and Little Bank Streets (Test Locations 6 and 13) satisfy the recommended standing comfort criterion.

5.2.3 Balconies and Terraces

The wind conditions on the upper-level balconies and terraces on levels 3, 8, 15 and 19 have been shown to satisfy the standing comfort criterion.

**This copied document to be made available
for the sole purpose of enabling
its consideration and review as
part of a planning process under the
Planning and Environment Act 1987.
The document must not be used for any
purpose which may breach any
copyright**

Table 1: Pedestrian Wind Comfort and Safety – Ground Level Streetscapes

Configuration		Wind Criteria							
		Comfort					Safety		
		Yearly exceedence of given wind speed			Mean wind speed (exceeded 20% of year)	Recommended criterion	Result (compared against Recommended criterion)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
		Sitting (3m/s)	Standing (4m/s)	Walking (5m/s)					
%	%	%	m/s			m/s			
1	Proposed Configuration	22.8%	7.9%	2.4%	3.2	Walking	Pass	12.3	Pass
	Existing Configuration	18.9%	5.5%	1.1%	3.0	Walking	Pass	10.0	Pass
2	Proposed Configuration	23.2%	10.0%	3.7%	3.2	Walking	Pass	13.3	Pass
	Existing Configuration	19.1%	6.6%	1.6%	3.0	Walking	Pass	11.0	Pass
3	Proposed Configuration	31.0%	14.4%	5.2%	3.6	Walking	Pass	13.6	Pass
	Existing Configuration	27.9%	12.5%	4.4%	3.5	Walking	Pass	12.6	Pass
4	Proposed Configuration	14.4%	4.3%	0.8%	2.7	Walking	Pass	10.6	Pass
	Existing Configuration	9.7%	1.9%	0.3%	2.5	Walking	Pass	9.1	Pass
5	Proposed Configuration	46.0%	26.8%	13.9%	4.5	Walking	Pass	18.4	Pass
	Existing Configuration	36.3%	18.0%	7.0%	3.9	Walking	Pass	12.9	Pass
6	Proposed Configuration	17.7%	6.9%	1.9%	2.8	Standing	Pass	11.5	Pass
	Existing Configuration	18.8%	7.2%	2.1%	2.9	Walking	Pass	11.7	Pass
7	Proposed Configuration	27.2%	11.6%	3.8%	3.4	Walking	Pass	12.9	Pass
	Existing Configuration	21.9%	9.3%	3.5%	3.1	Walking	Pass	13.5	Pass
8	Proposed Configuration	19.7%	7.5%	2.4%	3.0	Walking	Pass	12.8	Pass
	Existing Configuration	29.3%	14.6%	7.3%	3.6	Walking	Pass	19.5	Pass
9	Proposed Configuration	29.8%	14.0%	5.8%	3.5	Walking	Pass	14.8	Pass
	Existing Configuration	22.6%	8.6%	2.6%	3.1	Walking	Pass	12.8	Pass
10	Proposed Configuration	19.7%	7.4%	2.0%	3.0	Sitting	Pass	12.1	Pass
	Existing Configuration	11.3%	4.5%	1.0%	2.7	Sitting	Pass	10.6	Pass
11	Proposed Configuration	17.8%	6.2%	2.0%	2.8	Walking	Pass	12.8	Pass
	Existing Configuration	15.4%	4.1%	1.1%	2.6	Walking	Pass	11.3	Pass
12	Proposed Configuration	30.2%	18.9%	5.0%	3.6	Walking	Pass	13.2	Pass
	Existing Configuration	20.9%	7.2%	2.1%	3.0	Walking	Pass	12.0	Pass
13	Proposed Configuration	26.3%	11.4%	4.3%	3.4	Standing	Pass	15.8	Pass
	Existing Configuration	23.1%	8.9%	3.0%	3.2	Walking	Pass	14.6	Pass
14	Proposed Configuration	20.9%	6.7%	1.5%	3.0	Walking	Pass	11.9	Pass
	Existing Configuration	17.7%	6.4%	2.0%	2.9	Walking	Pass	13.4	Pass
15	Proposed Configuration	36.3%	19.4%	8.1%	4.0	Walking	Pass	14.7	Pass
	Existing Configuration	22.6%	9.0%	2.8%	3.1	Walking	Pass	12.1	Pass
16	Proposed Configuration	30.2%	12.7%	4.7%	3.5	Walking	Pass	12.2	Pass
	Existing Configuration	23.2%	7.9%	1.6%	3.2	Walking	Pass	10.7	Pass
17	Proposed Configuration	20.2%	9.7%	4.3%	3.0	Walking	Pass	17.0	Pass
	Existing Configuration	20.8%	10.5%	5.4%	3.1	Walking	Pass	18.4	Pass
18	Proposed Configuration	27.0%	13.2%	6.5%	3.4	Walking	Pass	15.1	Pass
	Existing Configuration	40.9%	23.5%	11.5%	4.3	Walking	Pass	18.7	Pass
19	Proposed Configuration	31.5%	15.1%	6.7%	3.7	Walking	Pass	15.2	Pass
	Existing Configuration	17.5%	8.4%	4.3%	2.8	Walking	Pass	18.3	Pass
20	Proposed Configuration	21.1%	10.8%	5.7%	3.1	Walking	Pass	15.3	Pass
	Existing Configuration	36.0%	18.9%	8.7%	3.9	Walking	Pass	14.7	Pass
21	Proposed Configuration	20.5%	11.2%	4.7%	3.0	Walking	Pass	14.6	Pass
	Existing Configuration	26.5%	10.6%	3.3%	3.3	Walking	Pass	13.2	Pass
22	Proposed Configuration	32.7%	18.8%	9.3%	3.9	Walking	Pass	16.5	Pass
	Existing Configuration	28.8%	12.0%	4.0%	3.5	Walking	Pass	12.9	Pass
23	Proposed Configuration	20.3%	7.5%	2.2%	3.0	Walking	Pass	11.4	Pass
	Existing Configuration	24.3%	10.7%	4.0%	3.3	Walking	Pass	14.3	Pass
24	Proposed Configuration	18.9%	7.0%	2.4%	2.9	Walking	Pass	12.5	Pass
	Existing Configuration	17.0%	6.0%	2.0%	2.8	Walking	Pass	12.2	Pass
25	Proposed Configuration	22.1%	10.3%	4.1%	3.1	Walking	Pass	13.7	Pass
	Existing Configuration	15.0%	5.2%	1.7%	2.7	Walking	Pass	13.8	Pass
26	Proposed Configuration	8.3%	2.0%	0.3%	2.2	Walking	Pass	9.2	Pass
	Existing Configuration	8.0%	1.9%	0.3%	2.2	Walking	Pass	9.8	Pass
27	Proposed Configuration	5.1%	1.2%	0.3%	2.0	Standing	Pass	8.5	Pass

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright.

Table 2: Pedestrian Wind Comfort and Safety – Upper Level Test Locations on Neighbouring Buildings

Configuration		Wind Criteria							
		Comfort					Safety		
		Yearly exceedence of given wind speed			Mean wind speed (exceeded 20% of year)	Recommended criterion	Result (compared against Recommended criterion)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
		Sitting (3m/s)	Standing (4m/s)	Walking (5m/s)					
%	%	%	m/s			m/s	Pass/Fail		
28	Proposed Configuration	25.1%	14.4%	7.1%	3.4	Walking	Pass	15.4	Pass
	Existing Configuration	33.8%	21.1%	12.4%	4.1	Walking	Pass	18.2	Pass
29	Proposed Configuration	27.3%	14.7%	7.4%	3.5	Walking	Pass	15.1	Pass
	Existing Configuration	15.9%	4.9%	1.5%	2.8	Walking	Pass	12.1	Pass
30	Proposed Configuration	29.1%	12.7%	5.2%	3.5	Walking	Pass	12.7	Pass
	Existing Configuration	30.3%	14.3%	6.4%	3.6	Walking	Pass	15.3	Pass
31	Proposed Configuration	23.7%	9.6%	3.6%	3.2	Walking	Pass	13.9	Pass
	Existing Configuration	23.4%	9.2%	2.8%	3.2	Walking	Pass	11.9	Pass

Table 3: Pedestrian Wind Comfort and Safety – Upper Level Balconies and Terraces within 60-70 Park Street development

Configuration		Wind Criteria							
		Comfort					Safety		
		Yearly exceedence of given wind speed			Mean wind speed (exceeded 20% of year)	Recommended criterion	Result (compared against Recommended criterion)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
		Sitting (3m/s)	Standing (4m/s)	Walking (5m/s)					
%	%	%	m/s			m/s	Pass/Fail		
P1	Proposed Configuration	34.5%	19.1%	9.8%	3.9	Walking	Pass	15.0	Pass
P2	Proposed Configuration	23.6%	11.9%	5.1%	3.3	Walking	Pass	13.1	Pass
P3	Proposed Configuration	17.5%	7.8%	2.6%	2.8	Walking	Pass	11.6	Pass
P4	Proposed Configuration	8.0%	1.9%	0.3%	2.1	Walking	Pass	9.3	Pass
B1	Proposed Configuration	21.0%	12.8%	7.9%	3.1	Walking	Pass	17.2	Pass
B2	Proposed Configuration	3.9%	0.6%	0.1%	1.5	Walking	Pass	9.6	Pass
B3	Proposed Configuration	7.1%	1.4%	0.2%	2.1	Walking	Pass	7.3	Pass
B4	Proposed Configuration	8.7%	1.8%	0.3%	2.4	Walking	Pass	9.6	Pass
B5	Proposed Configuration	5.4%	0.8%	0.1%	2.1	Walking	Pass	8.3	Pass
B6	Proposed Configuration	4.0%	0.6%	0.1%	1.8	Walking	Pass	9.2	Pass
B7	Proposed Configuration	8.9%	2.6%	0.7%	2.3	Walking	Pass	8.3	Pass
B8	Proposed Configuration	6.7%	1.2%	0.1%	2.0	Walking	Pass	9.5	Pass
B9	Proposed Configuration	4.4%	0.9%	0.1%	1.6	Walking	Pass	7.5	Pass
B10	Proposed Configuration	25.2%	14.2%	8.6%	3.4	Walking	Pass	18.6	Pass
B11	Proposed Configuration	5.0%	1.2%	0.1%	1.7	Walking	Pass	10.9	Pass
R1	Proposed Configuration	15.3%	5.4%	1.7%	2.7	Walking	Pass	13.8	Pass
R2	Proposed Configuration	20.7%	9.5%	4.1%	3.0	Walking	Pass	13.7	Pass
R3	Proposed Configuration	20.4%	8.4%	3.4%	3.0	Walking	Pass	15.2	Pass

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

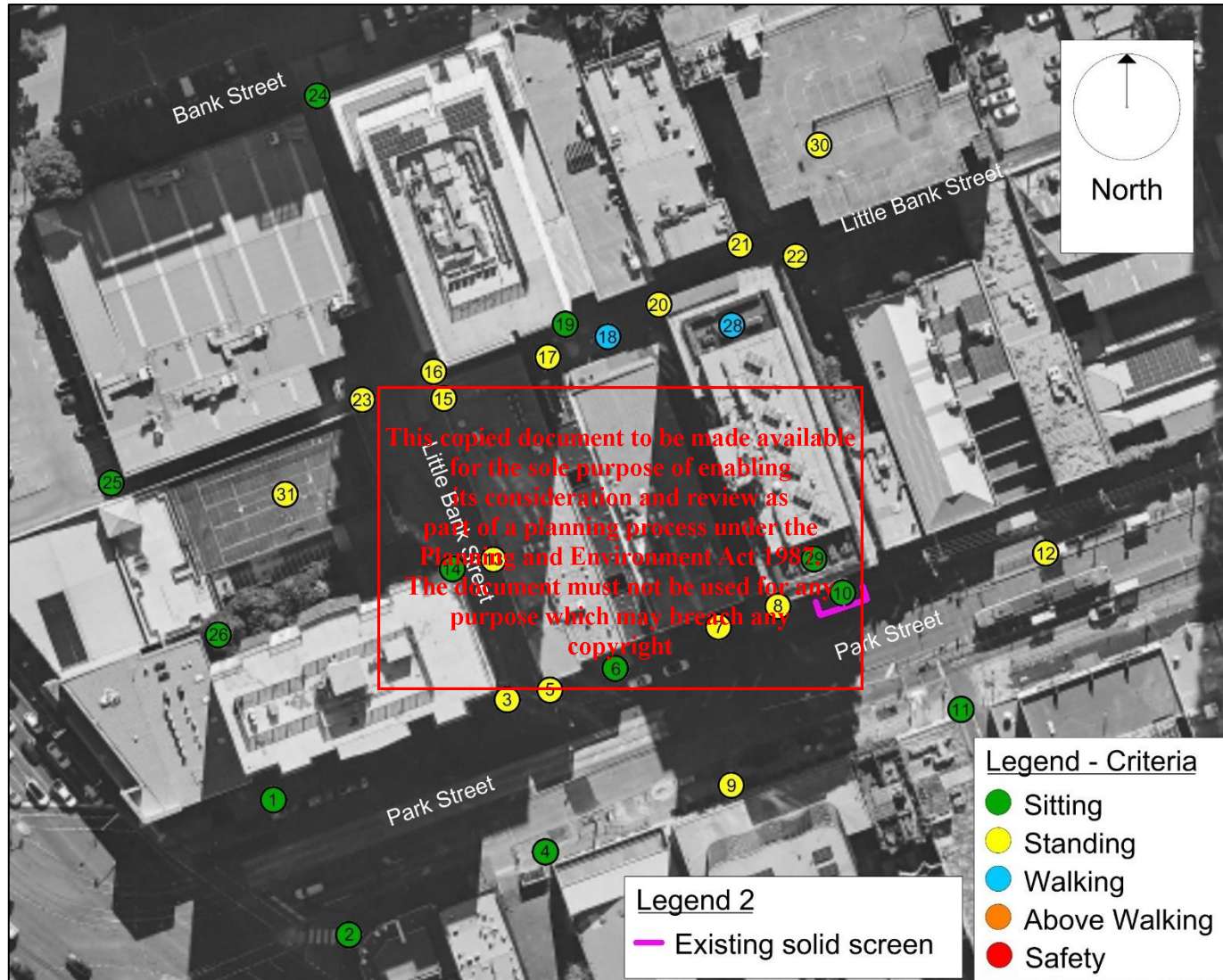


Figure 4 - Summary of wind criteria satisfied in the surrounding streetscapes for the Existing Configuration of the 60-70 Park Street development.

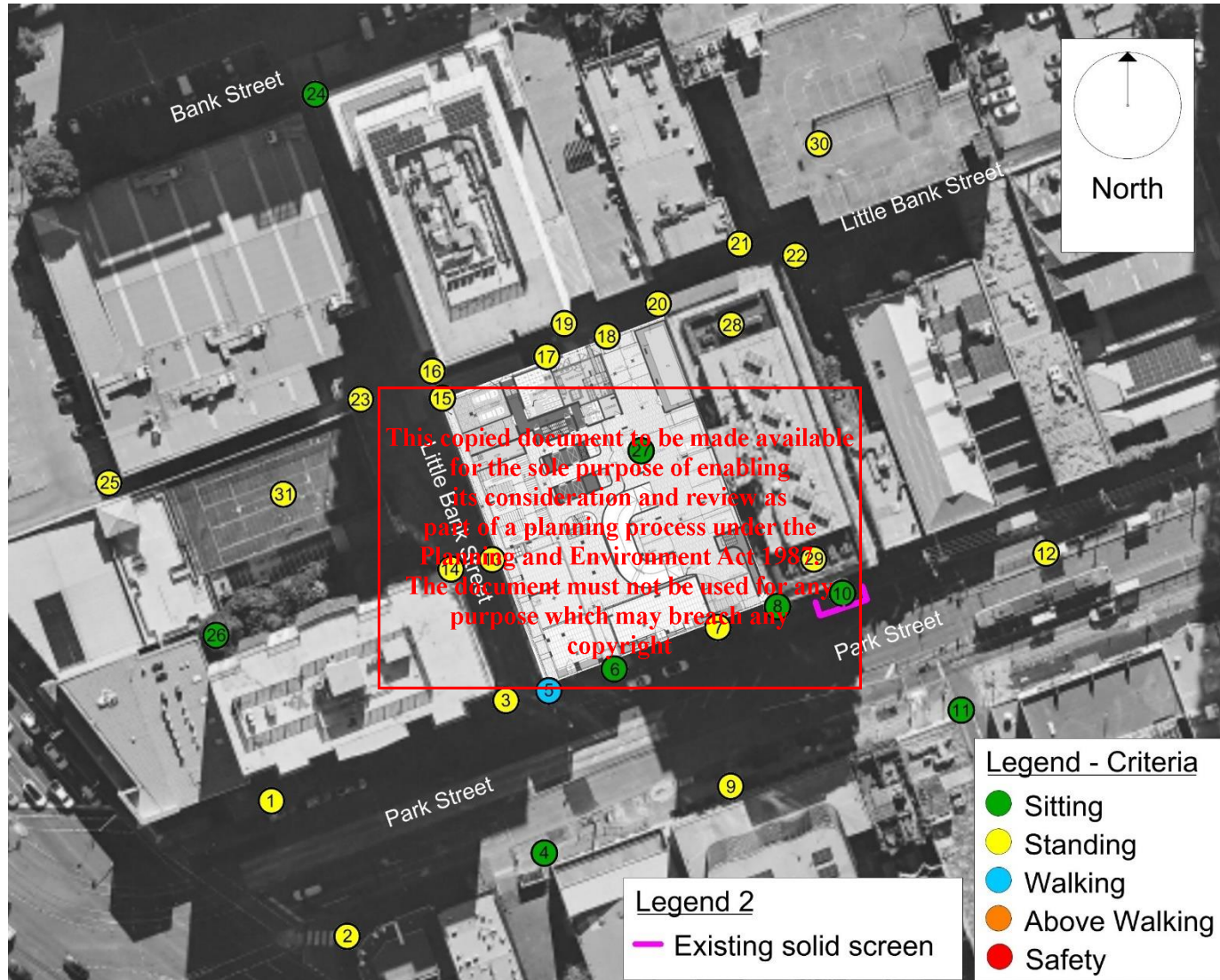


Figure 5a - Summary of wind criteria satisfied in the surrounding streetscapes for the Proposed Configuration of the 60-70 Park Street development.

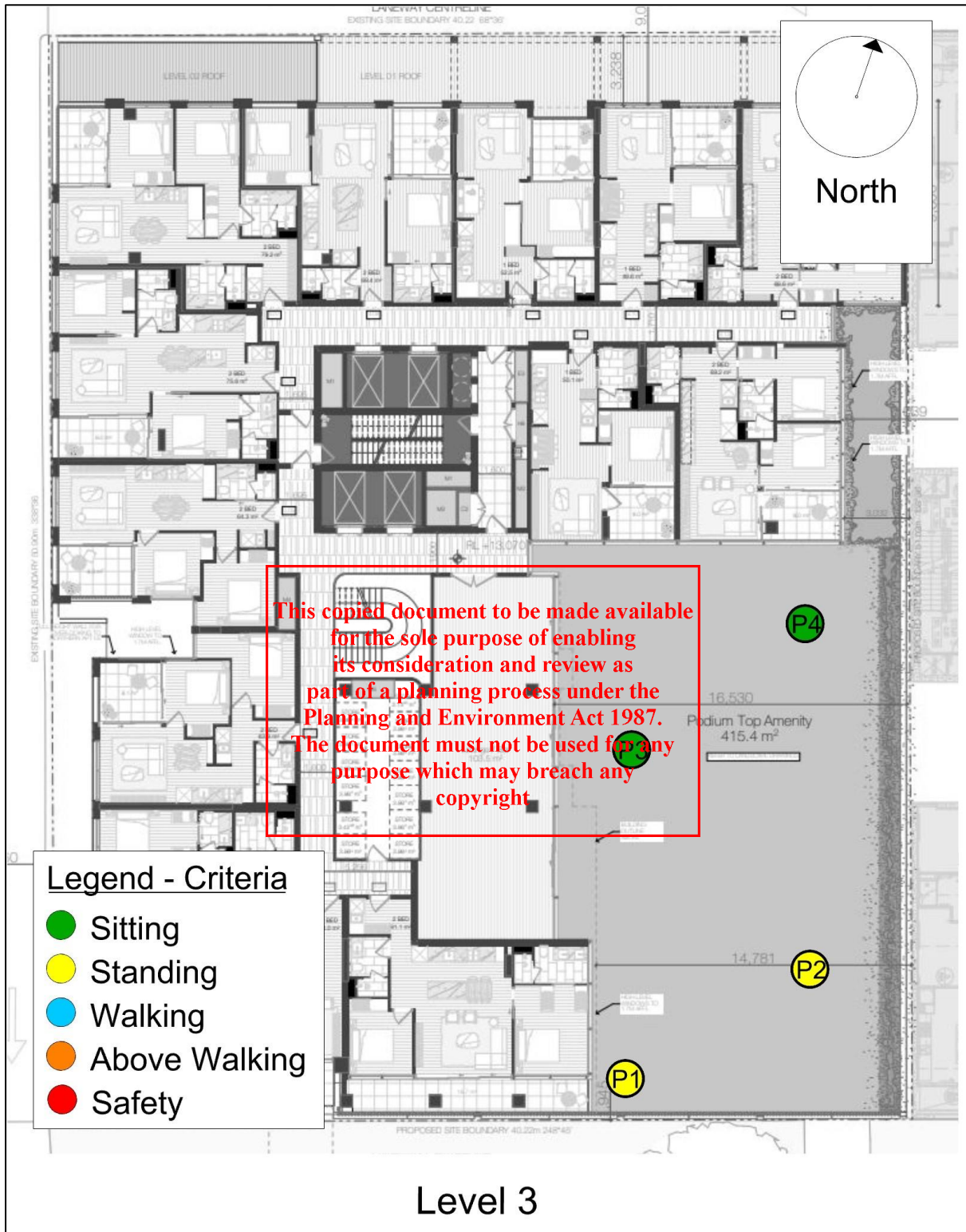


Figure 5b - Summary of wind criteria satisfied at Test Locations on Level 3 of the 60-70 Park Street development for the Proposed Configuration.

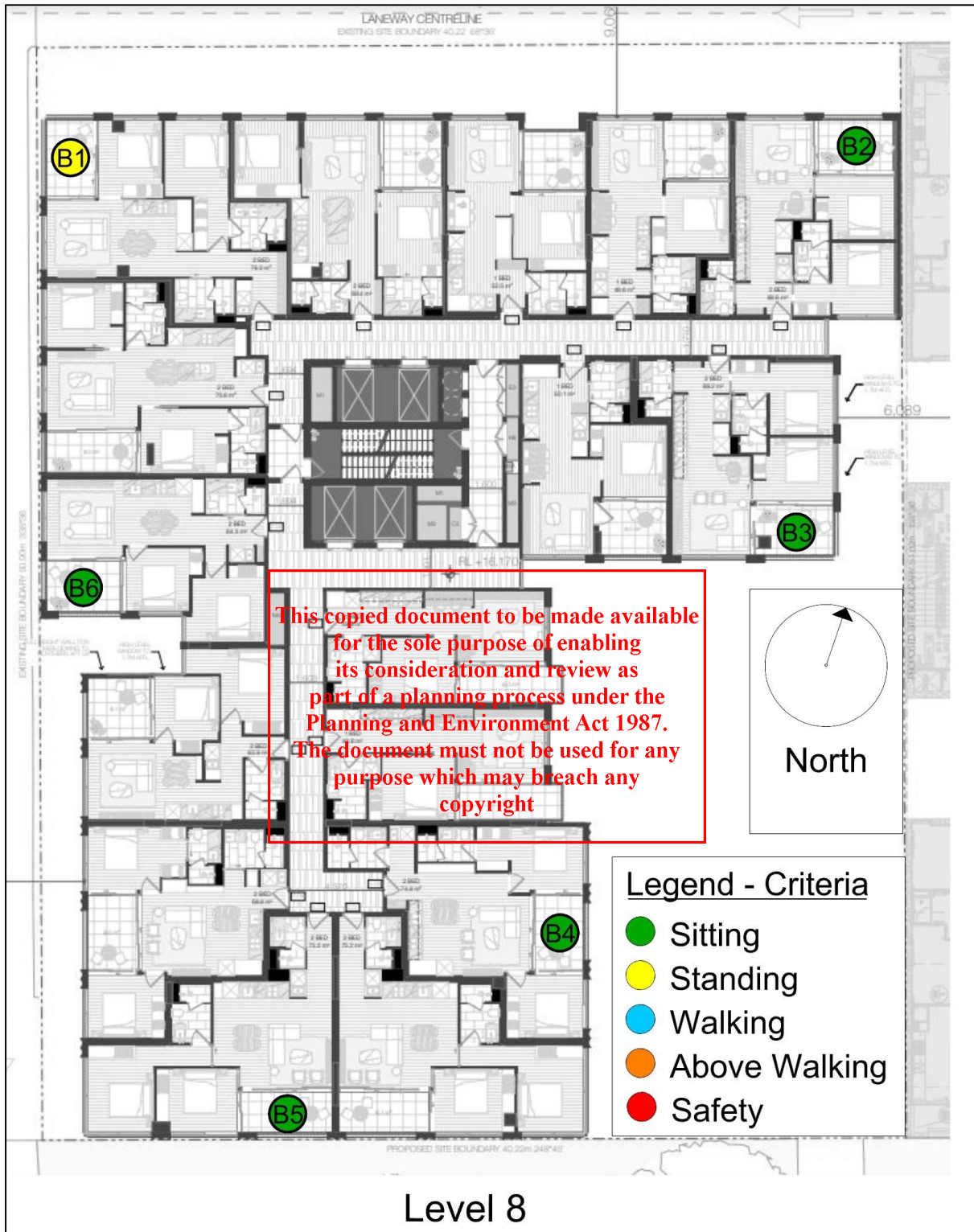


Figure 5c - Summary of wind criteria satisfied at Test Locations on Level 8 of the 60-70 Park Street development for the Proposed Configuration.



Figure 5d - Summary of wind criteria satisfied at Test Locations on Level 15 of the 60-70 Park Street development for the Proposed Configuration.

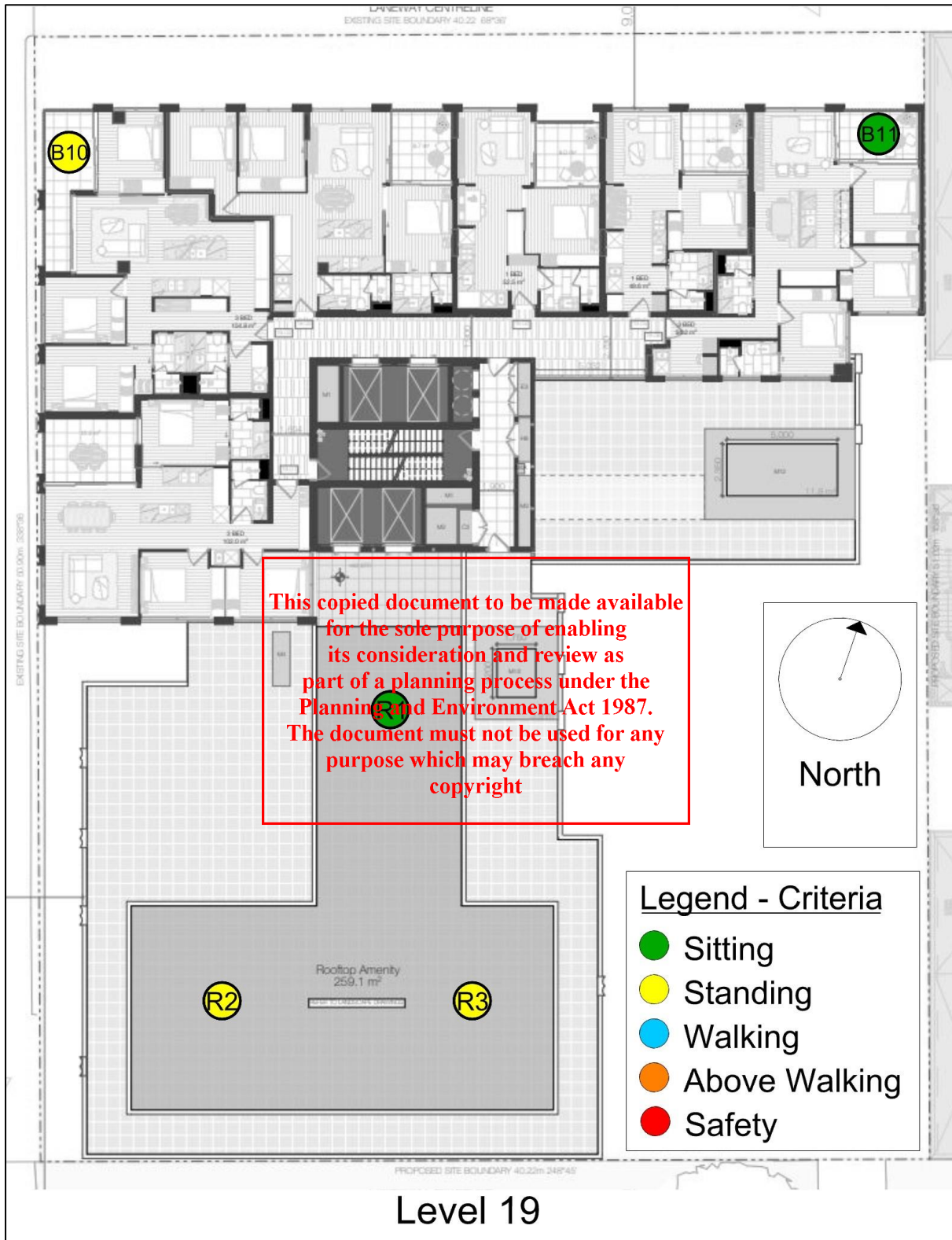


Figure 5e - Summary of wind criteria satisfied at Test Locations on Level 19 of the 60-70 Park Street development for the Proposed Configuration.

APPENDIX A – VELOCITY AND TURBULENCE PROFILES

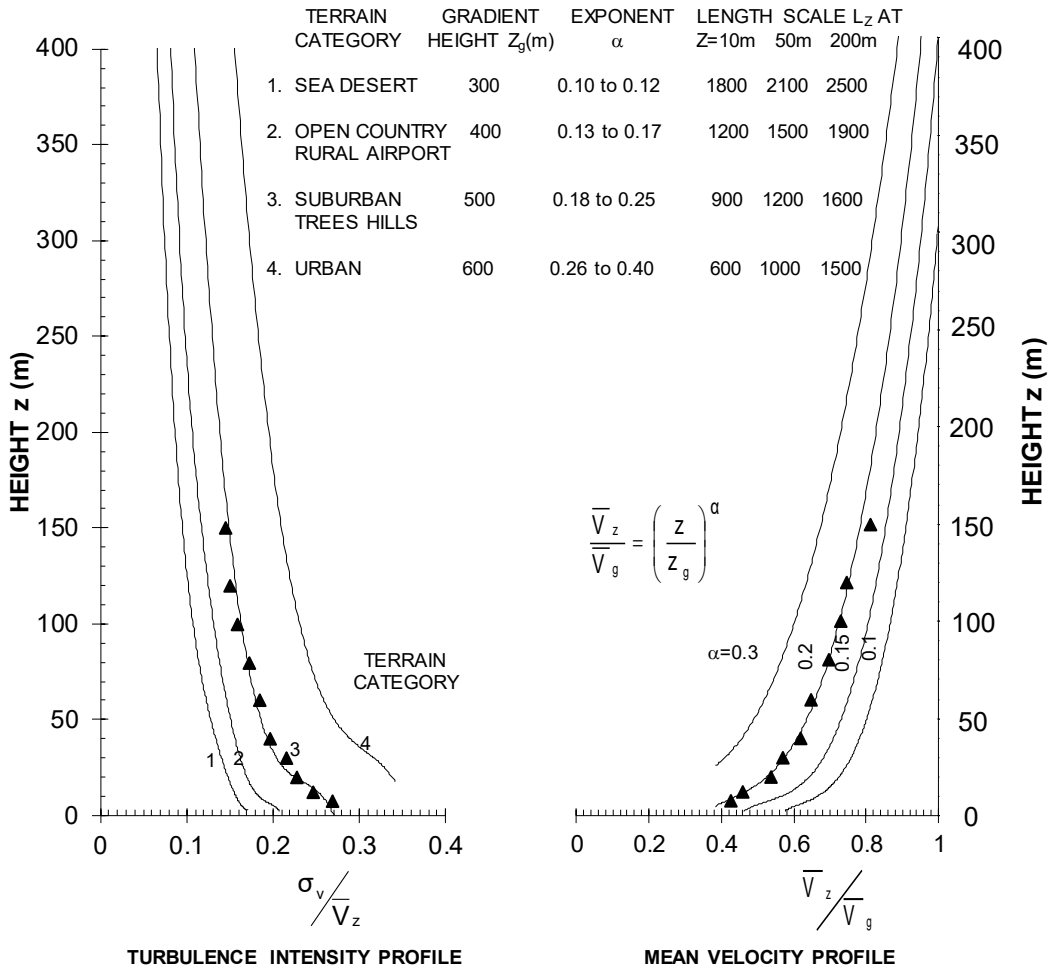


Figure A1 -1/400 scale TC3 boundary layer turbulence intensity and mean velocity profiles in the MEL Consultants Boundary Layer Wind Tunnel 4.8m x 2.2m working section, scaled to full scale dimensions.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

APPENDIX B – PEDESTRIAN SAFETY PLOTS

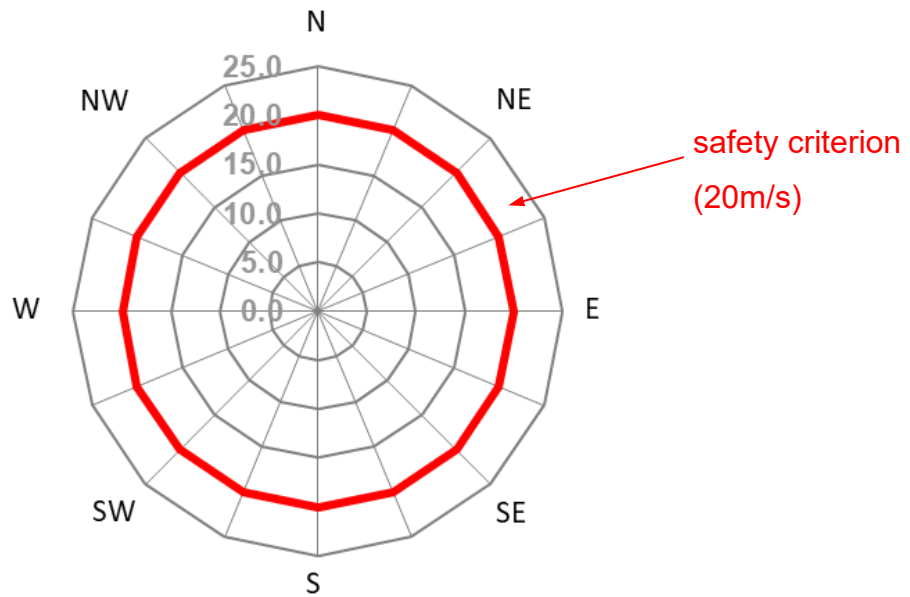
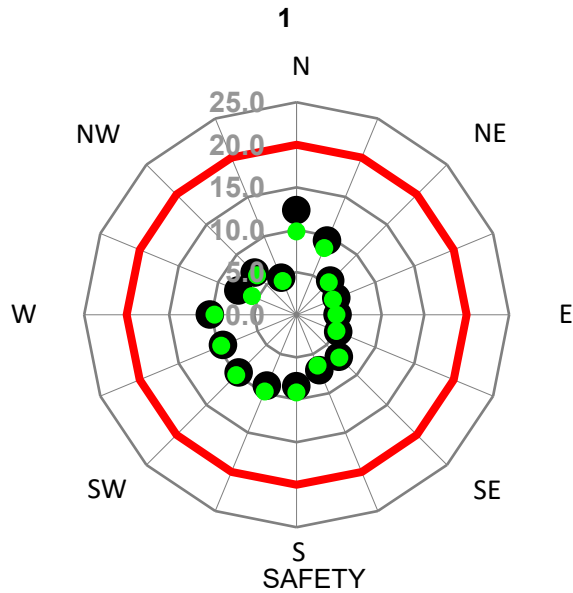


Figure B1 – Environmental wind safety criterion for Melbourne Region based on local 3 second peak gust wind speed

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



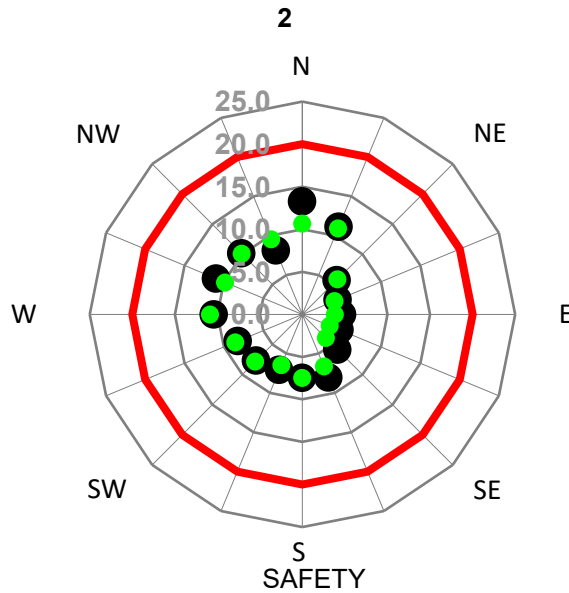
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %					
● Proposed Configuration	22.8%	7.9%	2.4%	3.2	Pass	12.3	Pass
● Existing Configuration	18.9%	5.5%	1.1%	3.0	Pass	10.0	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



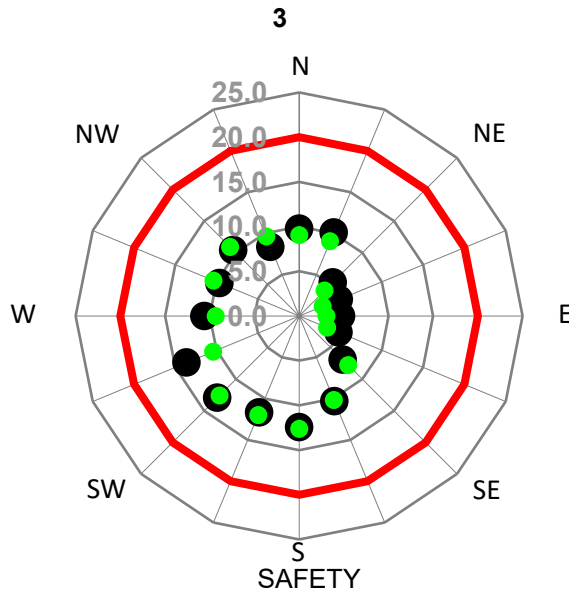
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	23.2%	10.0%	3.7%	3.2	Pass	13.3	Pass
● Existing Configuration	19.1%	6.6%	1.6%	3.0	Pass	11.0	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



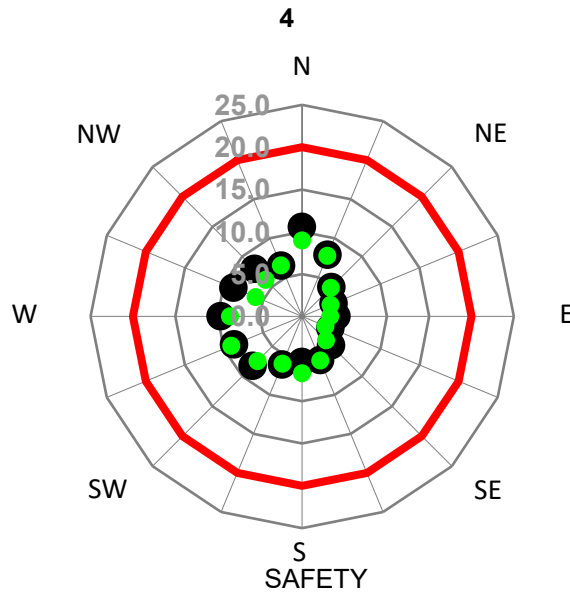
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	31.0%	14.4%	5.2%	3.6	Pass	13.6	Pass
● Existing Configuration	27.9%	12.5%	4.4%	3.5	Pass	12.6	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



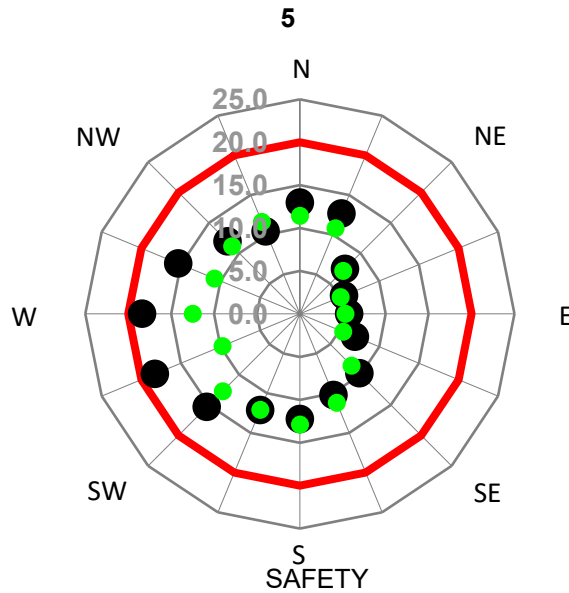
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	14.4%	4.3%	0.8%	2.7	Pass	10.6	Pass
● Existing Configuration	9.7%	1.9%	0.3%	2.5	Pass	9.1	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



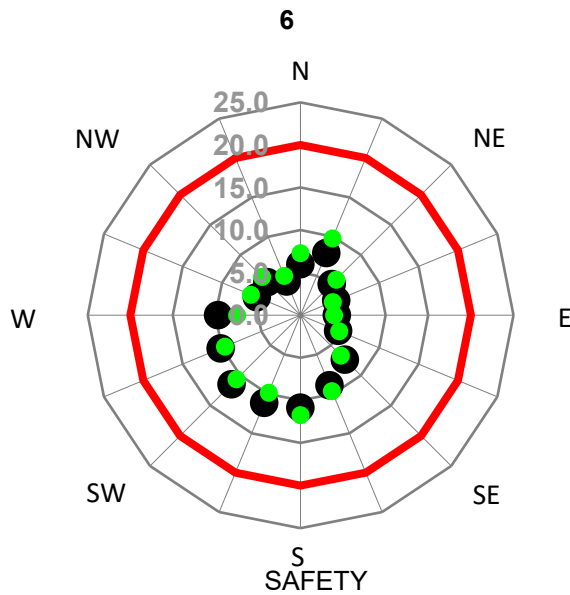
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	46.0%	26.8%	13.9%	4.5	Pass	18.4	Pass
● Existing Configuration	36.3%	18.0%	7.0%	3.9	Pass	12.9	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



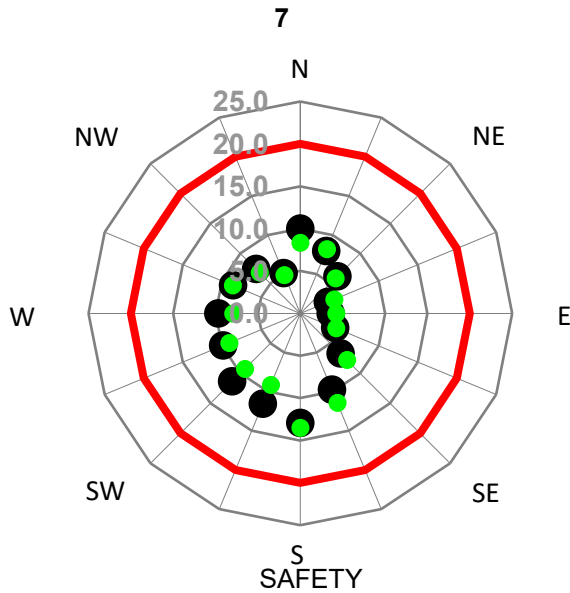
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 4m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	17.7%	6.9%	1.9%	2.8	Pass	11.5	Pass
● Existing Configuration	18.8%	7.2%	2.1%	2.9	Pass	11.7	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



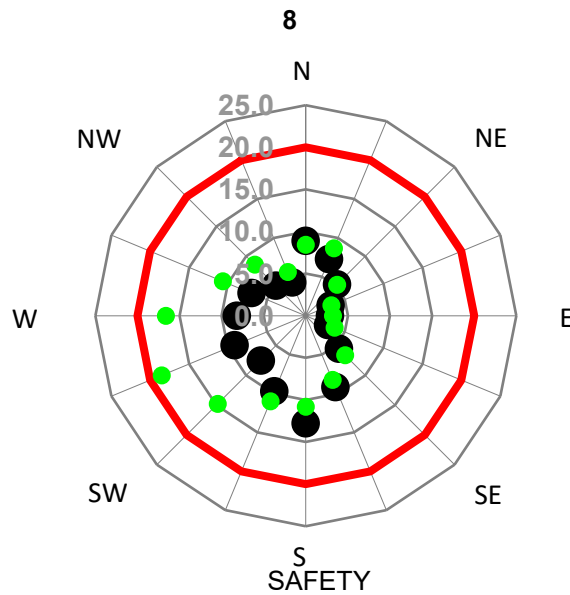
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	27.2%	11.6%	3.8%	3.4	Pass	12.9	Pass
● Existing Configuration	21.9%	9.3%	3.5%	3.1	Pass	13.5	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



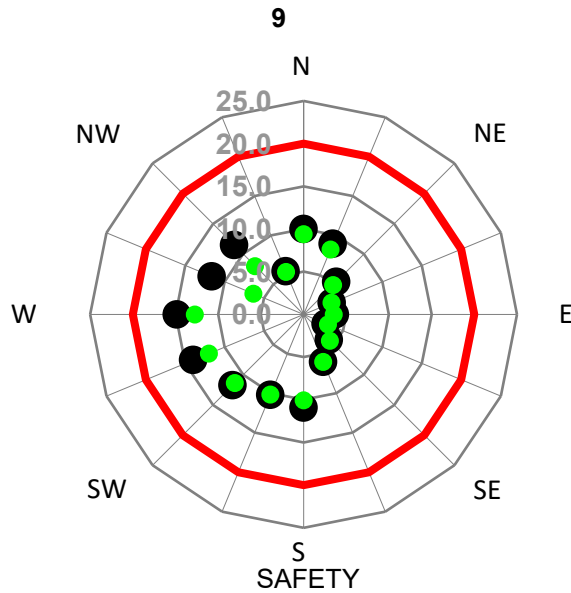
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	19.7%	7.5%	2.4%	3.0	Pass	12.8	Pass
● Existing Configuration	29.1%	14.3%	7.0%	3.6	Pass	18.5	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



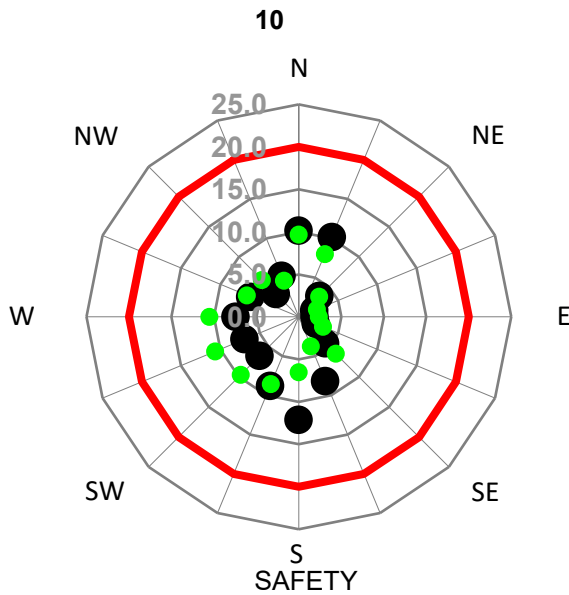
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	29.8%	14.0%	5.8%	3.5	Pass	14.8	Pass
● Existing Configuration	22.6%	8.6%	2.6%	3.1	Pass	12.8	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



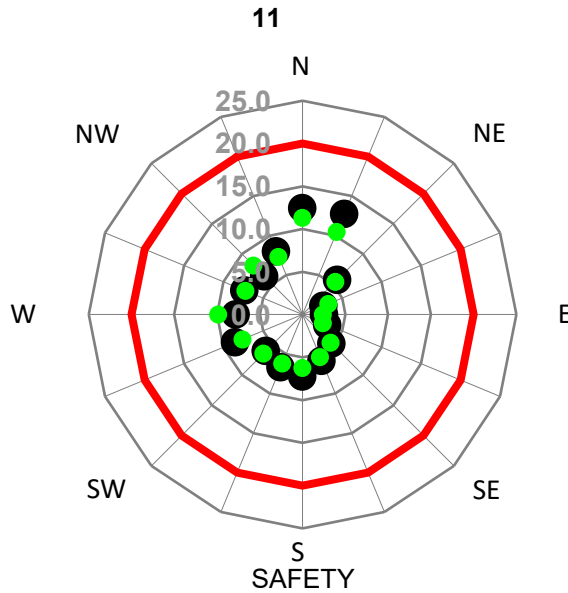
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 3m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %					
● Proposed Configuration	19.7%	7.4%	2.0%	3.0	Pass	12.1	Pass
● Existing Configuration	14.7%	4.5%	1.0%	2.7	Pass	10.6	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



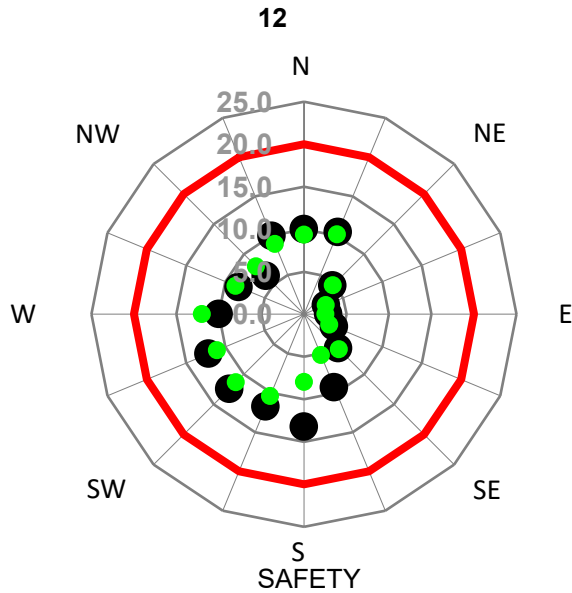
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	17.8%	6.6%	2.5%	2.9	Pass	12.8	Pass
● Existing Configuration	15.4%	5.2%	1.4%	2.7	Pass	11.3	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



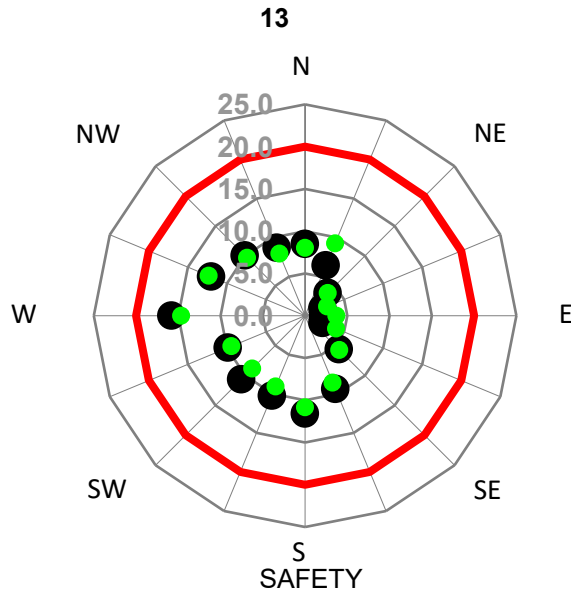
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 4m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	30.2%	13.9%	5.0%	3.6	Pass	13.2	Pass
● Existing Configuration	20.4%	7.2%	2.1%	3.0	Pass	12.0	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



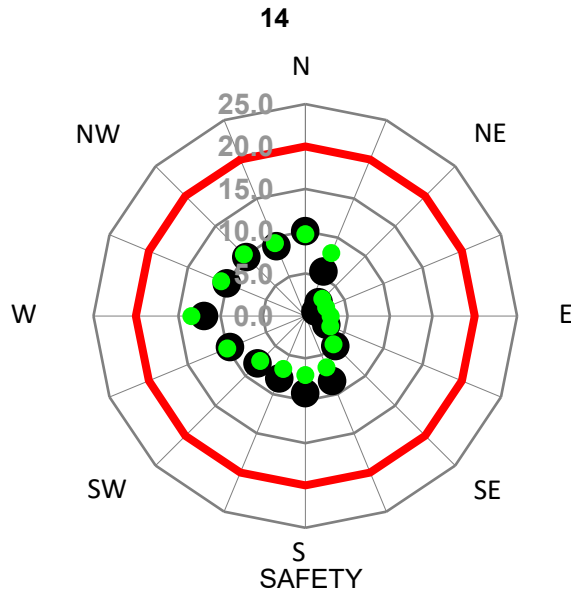
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 4m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	26.3%	11.4%	4.3%	3.4	Pass	15.8	Pass
● Existing Configuration	23.1%	8.9%	3.0%	3.2	Pass	14.6	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



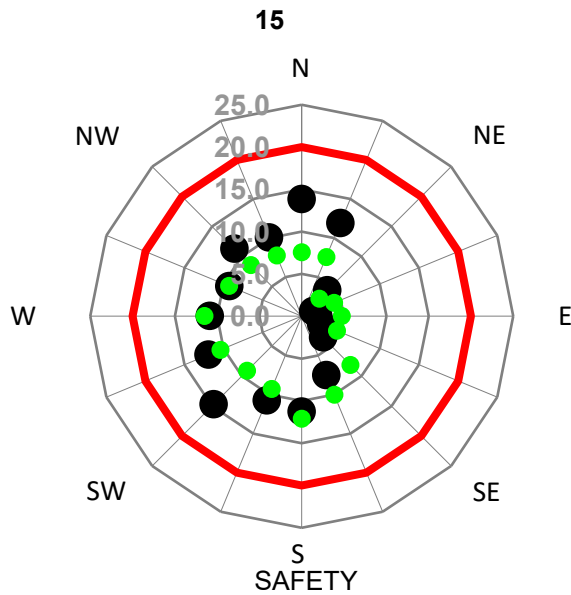
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	20.9%	6.7%	1.5%	3.0	Pass	11.9	Pass
● Existing Configuration	17.7%	6.4%	2.0%	2.9	Pass	13.4	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



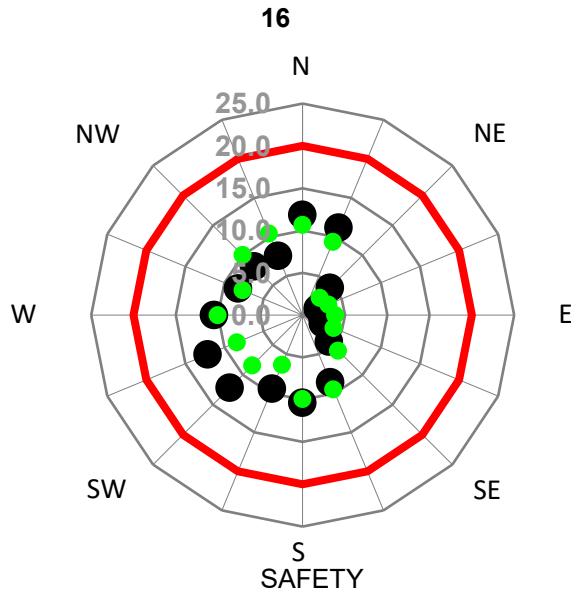
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	36.3%	19.4%	8.1%	4.0	Pass	14.7	Pass
● Existing Configuration	22.6%	9.0%	2.8%	3.1	Pass	12.1	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



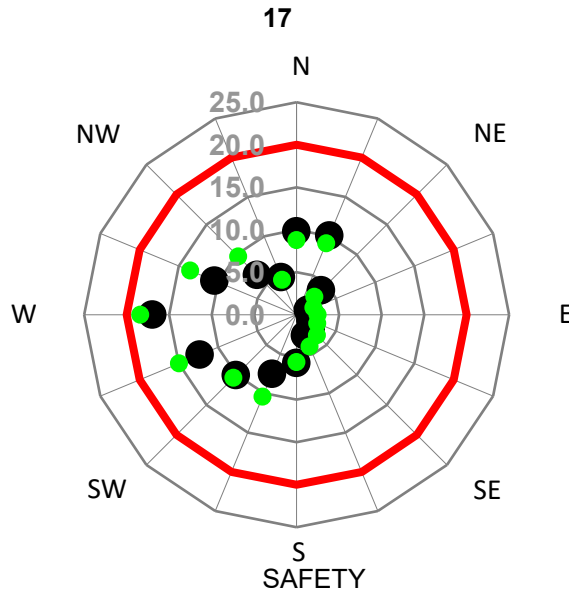
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	30.2%	12.7%	4.7%	3.5	Pass	12.2	Pass
● Existing Configuration	23.2%	7.9%	1.6%	3.2	Pass	10.7	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



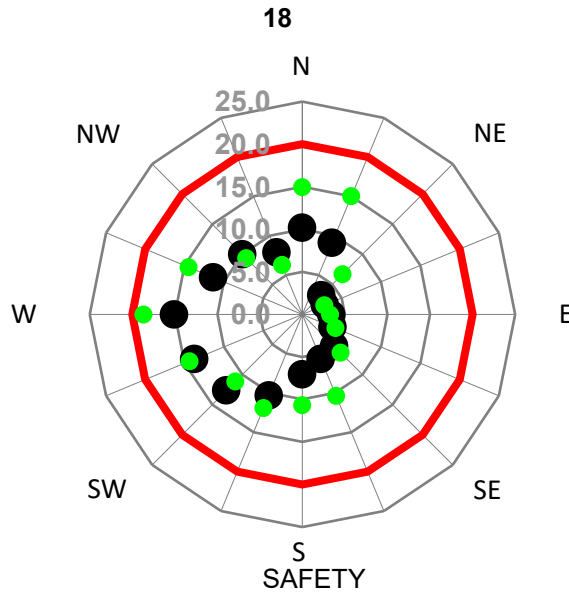
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	20.2%	9.7%	4.3%	3.0	Pass	17.0	Pass
● Existing Configuration	20.8%	10.5%	5.4%	3.1	Pass	18.4	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



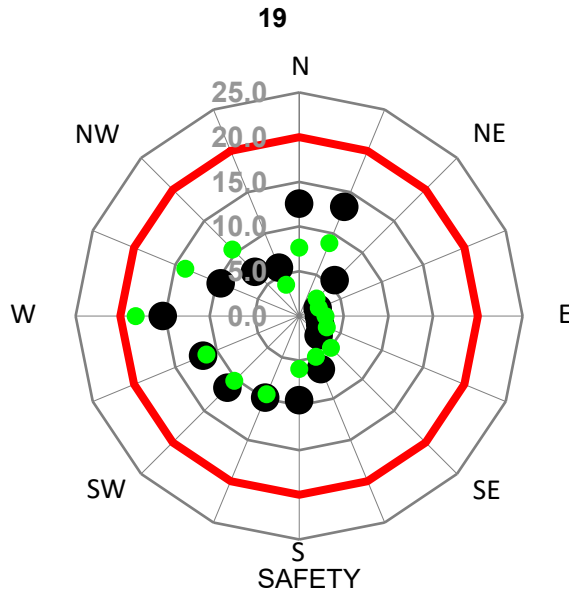
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	27.0%	13.2%	6.5%	3.4	Pass	15.1	Pass
● Existing Configuration	40.9%	23.5%	11.5%	4.3	Pass	18.7	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



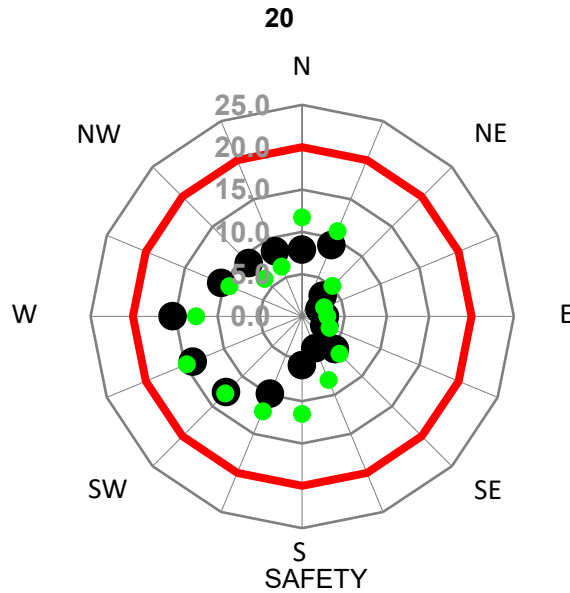
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	31.5%	15.1%	6.7%	3.7	Pass	15.2	Pass
● Existing Configuration	17.5%	8.4%	4.3%	2.8	Pass	18.3	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



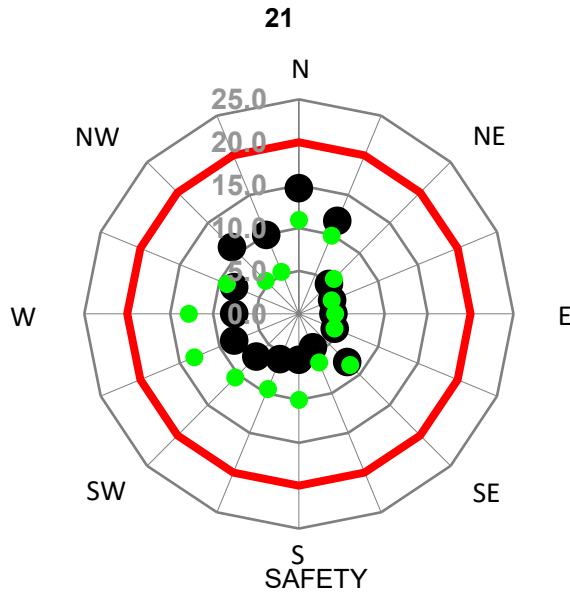
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	21.1%	10.8%	5.7%	3.1	Pass	15.3	Pass
● Existing Configuration	36.0%	18.9%	8.7%	3.9	Pass	14.7	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



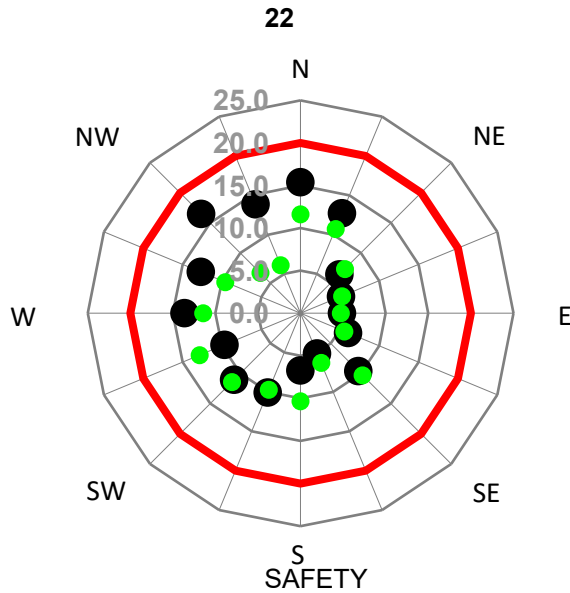
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
Sitting (3m/s)	Standing (4m/s)	Walking (5m/s)	%				
● Proposed Configuration	20.5%	11.2%	4.7%	3.0	Pass	14.6	Pass
● Existing Configuration	26.5%	10.6%	3.3%	3.3	Pass	13.2	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



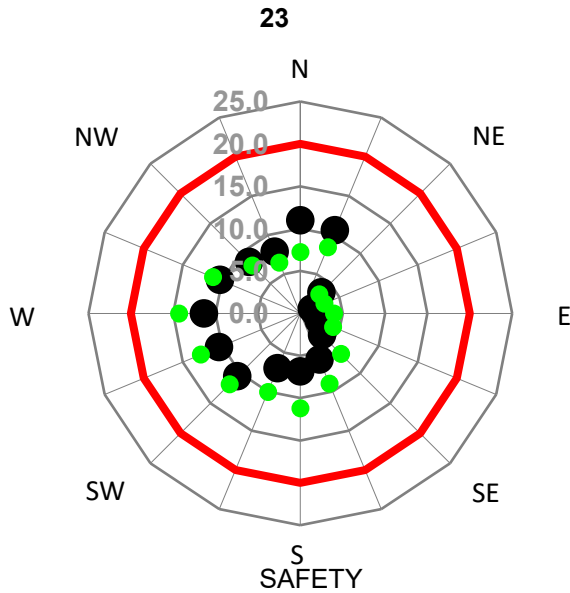
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	32.7%	18.8%	9.3%	3.9	Pass	16.5	Pass
● Existing Configuration	28.8%	12.0%	4.0%	3.5	Pass	12.9	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



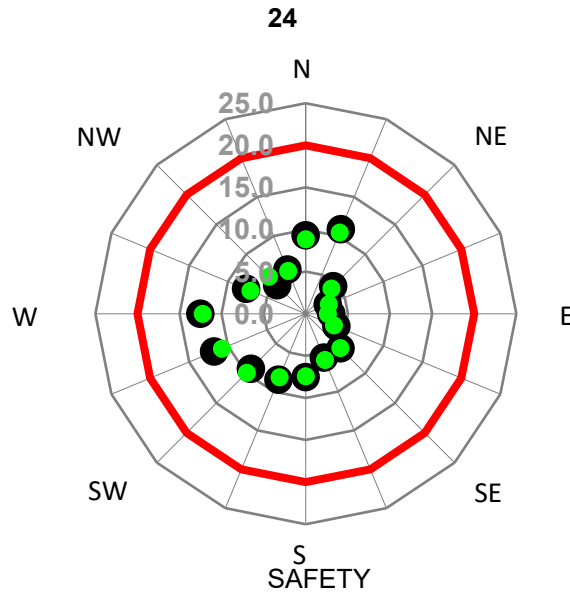
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	20.3%	7.5%	2.2%	3.0	Pass	11.4	Pass
● Existing Configuration	24.3%	10.7%	4.0%	3.3	Pass	14.3	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



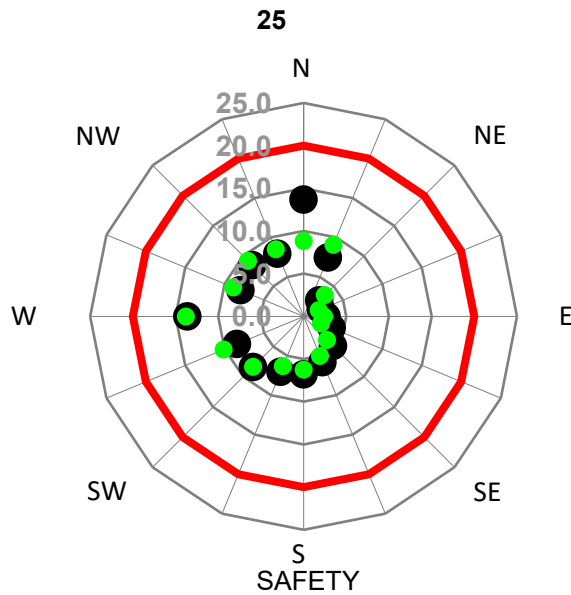
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	18.9%	7.0%	2.4%	2.9	Pass	12.5	Pass
● Existing Configuration	17.0%	6.0%	2.0%	2.8	Pass	12.2	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



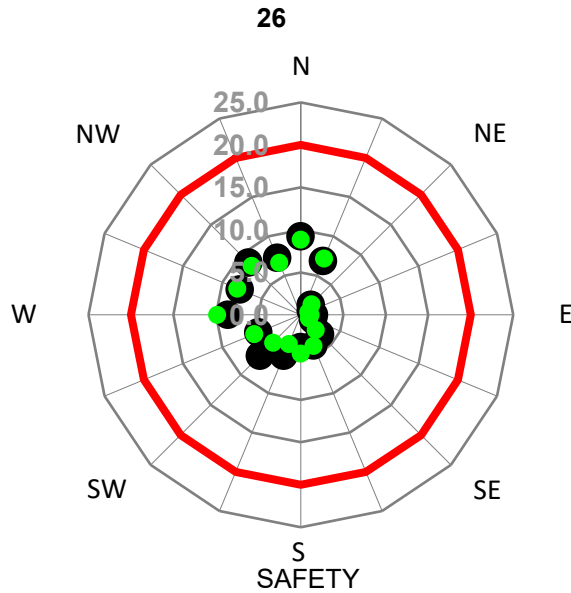
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	22.1%	10.3%	4.1%	3.1	Pass	13.7	Pass
● Existing Configuration	15.0%	5.2%	1.7%	2.7	Pass	13.8	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



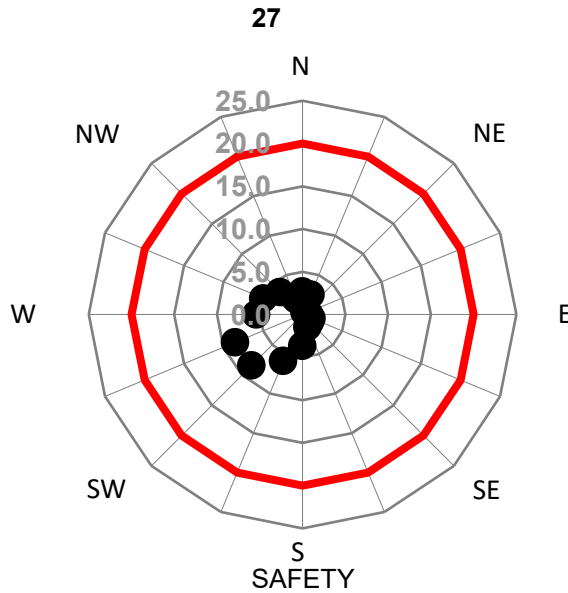
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	8.3%	2.0%	0.3%	2.2	Pass	9.2	Pass
● Existing Configuration	8.0%	1.9%	0.3%	2.2	Pass	9.8	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



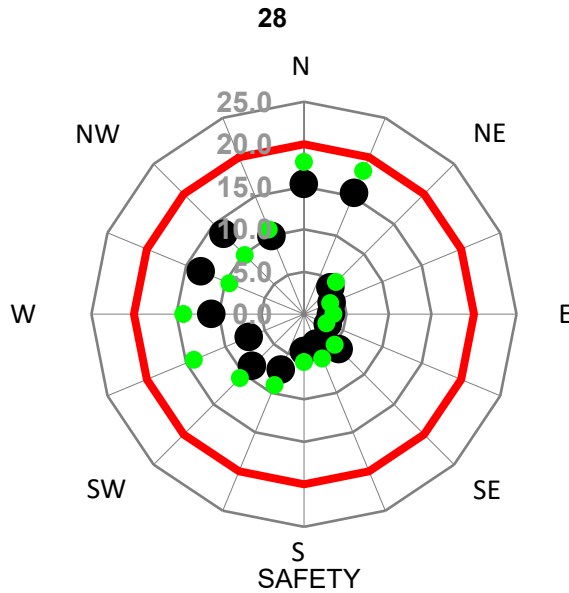
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 4m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %					
● Proposed Configuration	5.1%	1.2%	0.3%	2.0	Pass	8.5	Pass
● Existing Configuration							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



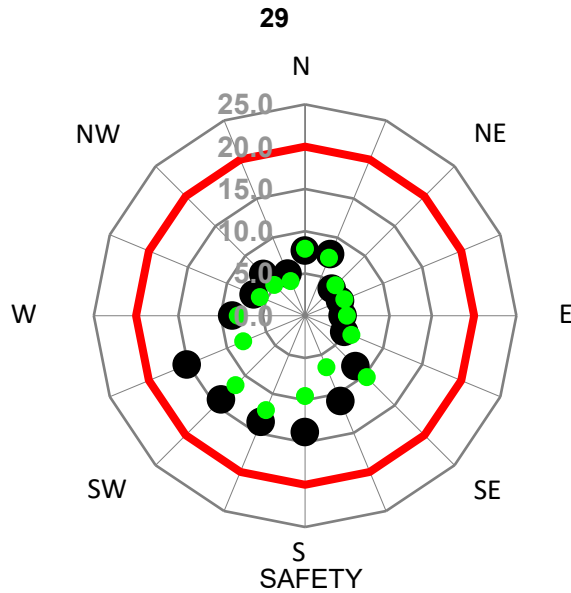
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	25.1%	14.4%	7.1%	3.4	Pass	15.4	Pass
● Existing Configuration	33.8%	21.1%	12.4%	4.1	Pass	18.2	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



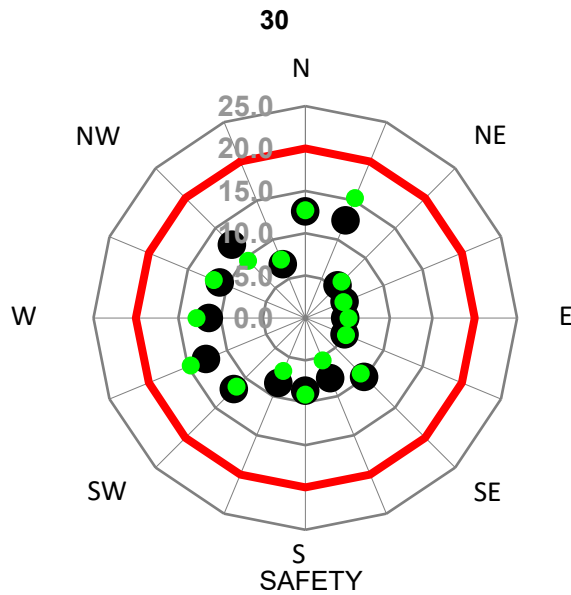
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	27.3%	14.7%	7.4%	3.5	Pass	15.1	Pass
● Existing Configuration	15.9%	4.9%	1.5%	2.8	Pass	12.1	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



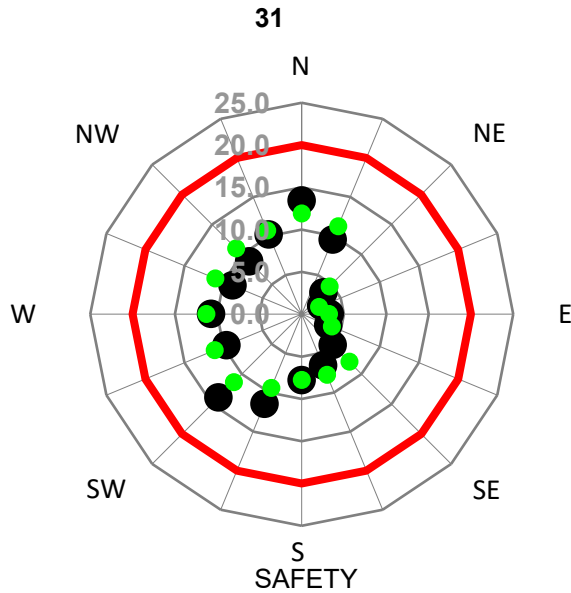
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	29.1%	12.7%	5.2%	3.5	Pass	12.7	Pass
● Existing Configuration	30.3%	14.3%	6.4%	3.6	Pass	15.3	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



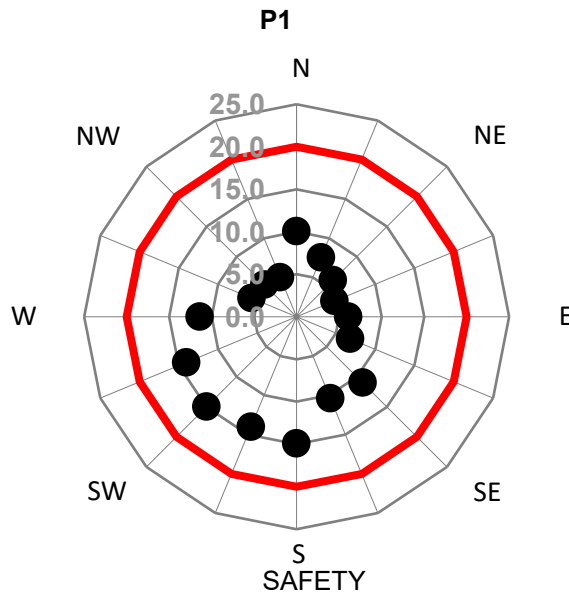
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	23.7%	9.6%	3.6%	3.2	Pass	13.9	Pass
● Existing Configuration	23.4%	9.2%	2.8%	3.2	Pass	11.9	Pass
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



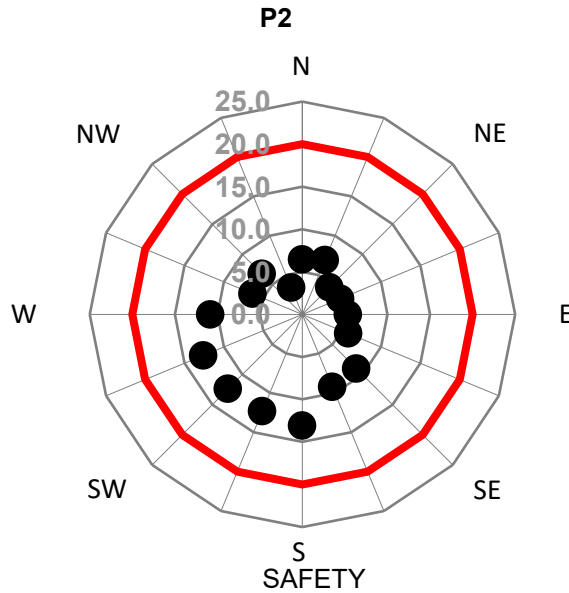
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	34.5%	19.1%	9.8%	3.9 m/s	Pass	15.0 m/s	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



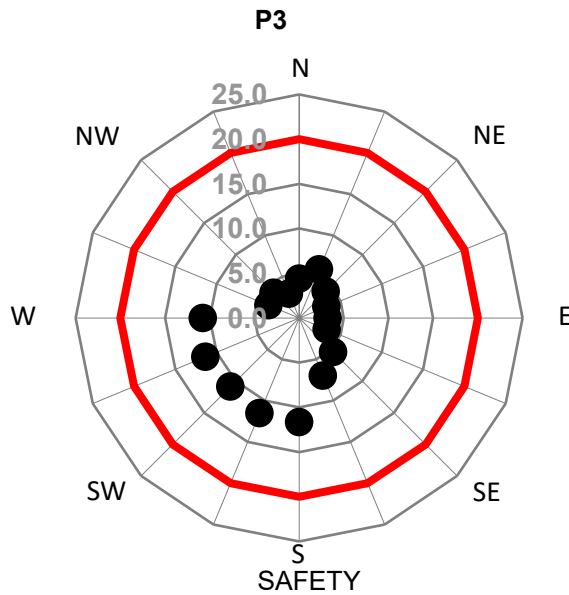
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	23.6%	11.9%	5.1%	3.3	Pass	13.1	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



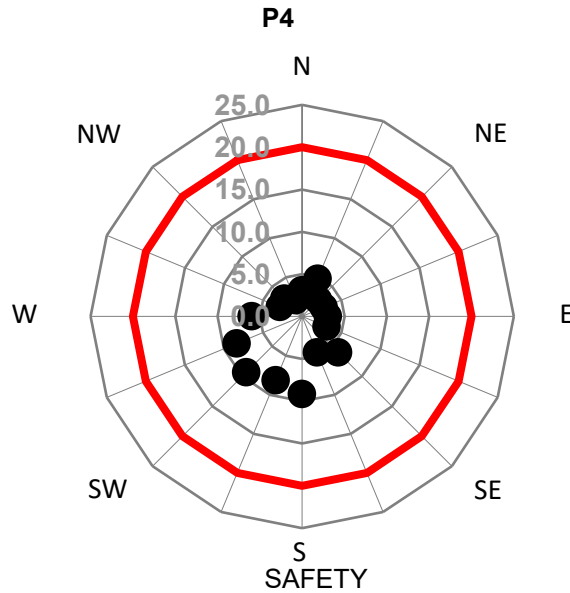
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 4m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	17.5%	7.8%	2.6%	2.8	Pass	11.6	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



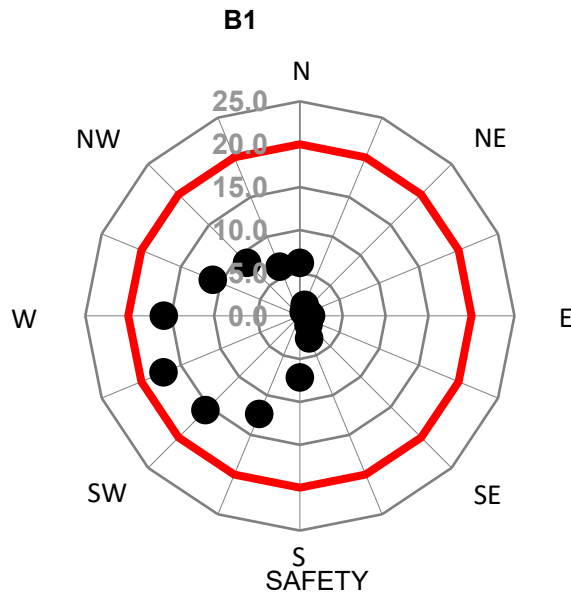
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	8.0%	1.9%	0.3%	2.1	Pass	9.3	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



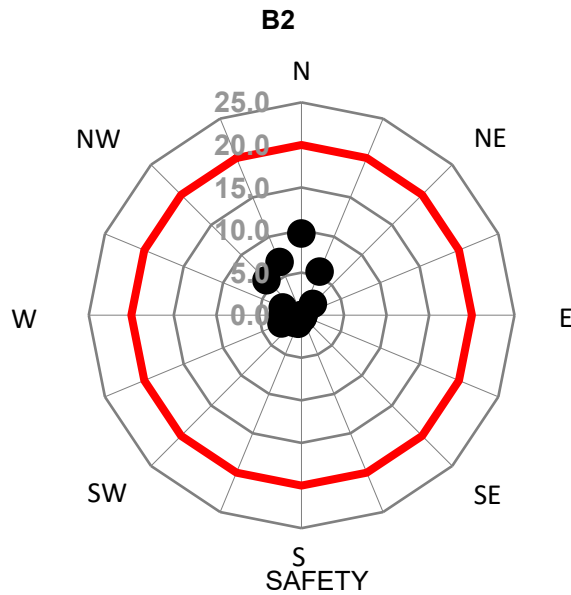
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	21.0%	12.8%	7.9%	3.1	Pass	17.2	Pass
● Existing Configuration							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



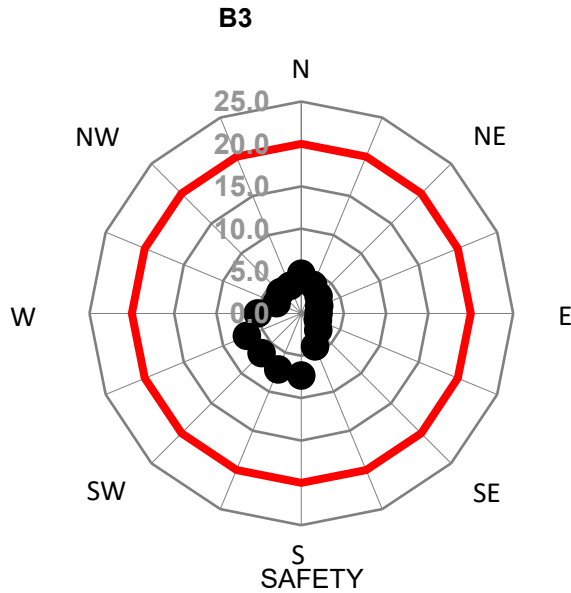
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	3.9%	0.6%	0.1%	1.5	Pass	9.6	Pass
● Existing Configuration							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



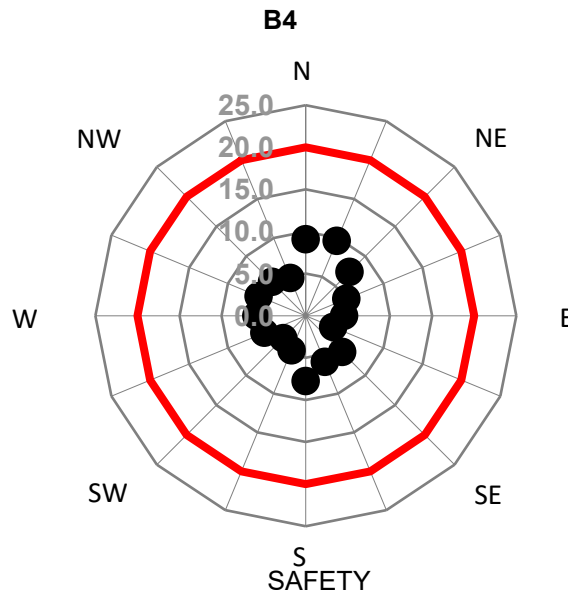
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	7.1%	1.4%	0.2%	2.1	Pass	7.3	Pass
● Existing Configuration							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



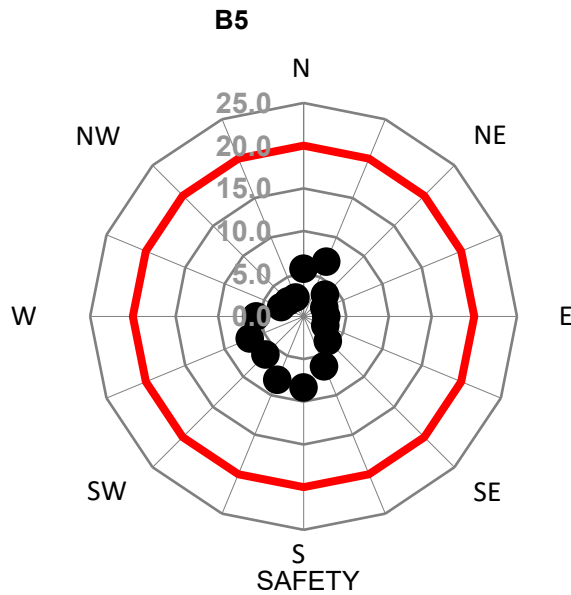
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	8.7%	1.8%	0.3%	2.4	Pass	9.6	Pass
● Existing Configuration							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



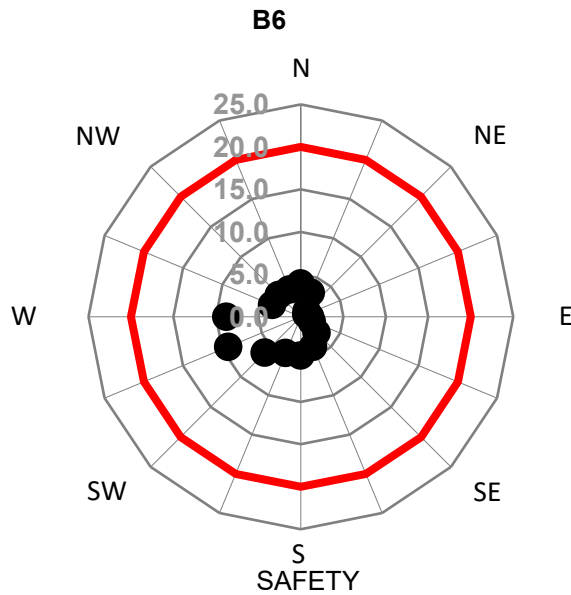
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year	Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)		
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	m/s	Pass/Fail	m/s	Pass/Fail
● Proposed Configuration	5.4%	0.8%	0.1%	2.1	Pass	8.3	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



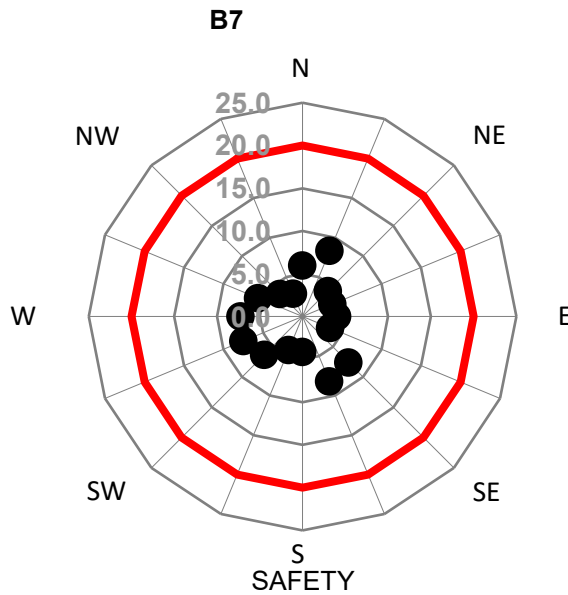
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	4.0%	0.6%	0.1%	1.8	Pass	9.2	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



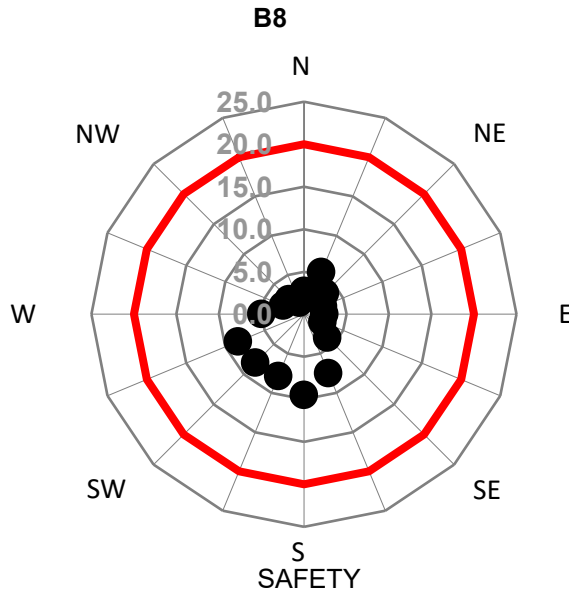
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	8.9%	2.6%	0.7%	2.3	Pass	8.3	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



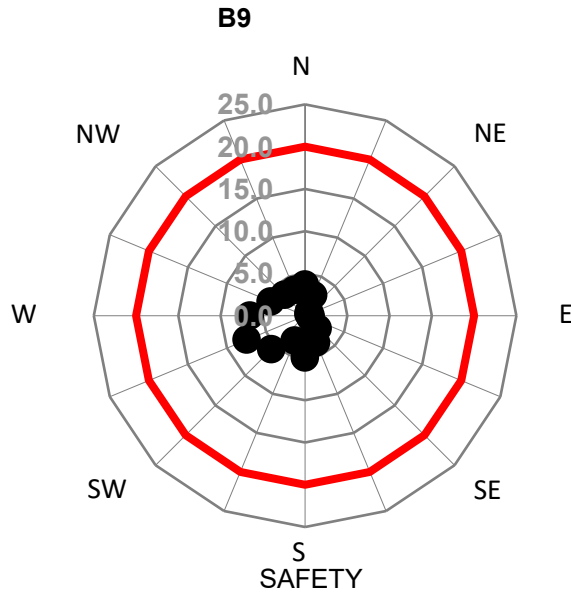
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	6.7%	1.2%	0.1%	2.0	Pass	9.5	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



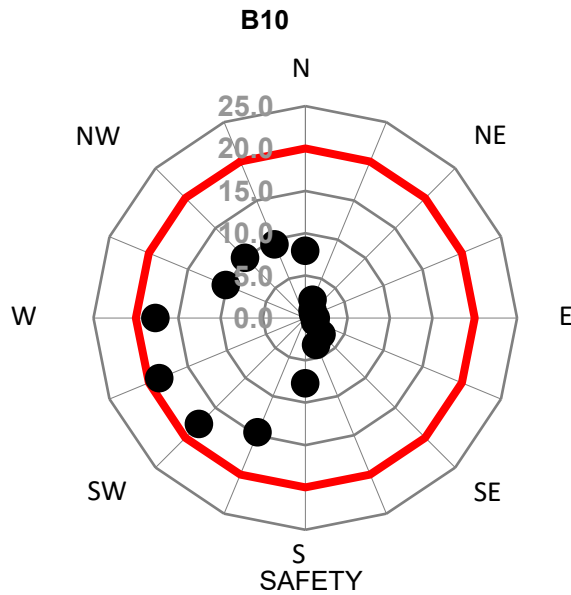
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	4.4%	0.9%	0.1%	1.6	Pass	7.5	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



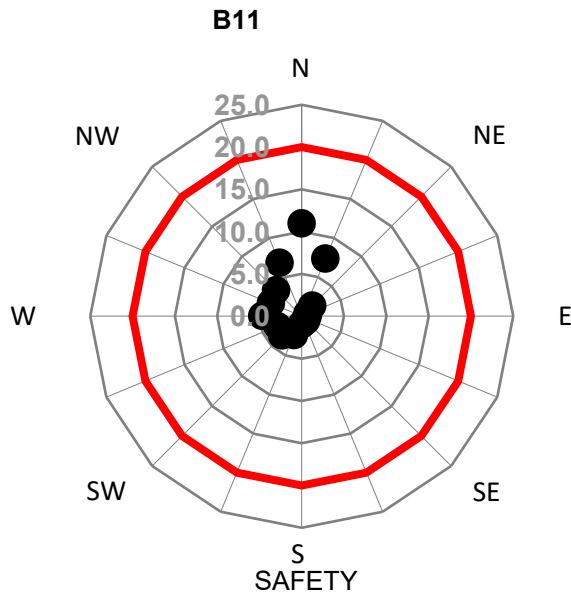
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %					
● Proposed Configuration	25.2%	14.2%	8.6%	3.4	Pass	18.6	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



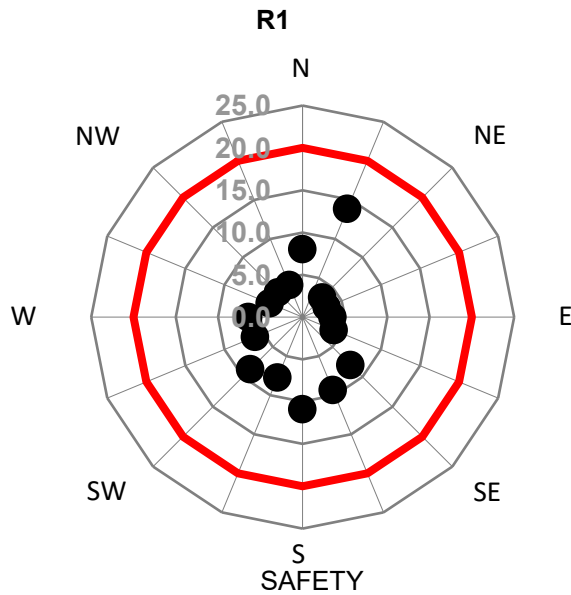
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	5.0%	1.2%	0.1%	1.7	Pass	10.9	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



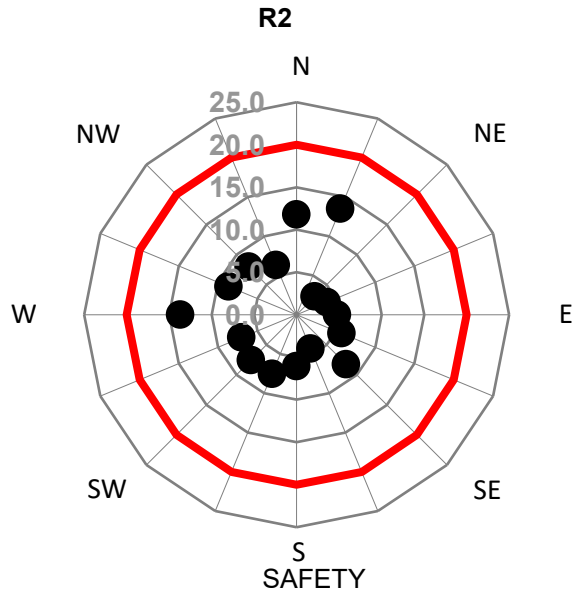
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria				Safety Criterion		
	Exceedence of given wind speed per year Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %	Mean wind speed (exceeded 20% of year) m/s	Result (compared against Target wind speed of 5m/s) Pass/Fail	Peak wind speed (of all wind directions) m/s	Result (compared against Safety wind speed of 20m/s) Pass/Fail
● Proposed Configuration	15.3%	5.4%	1.7%	2.7	Pass	13.8	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



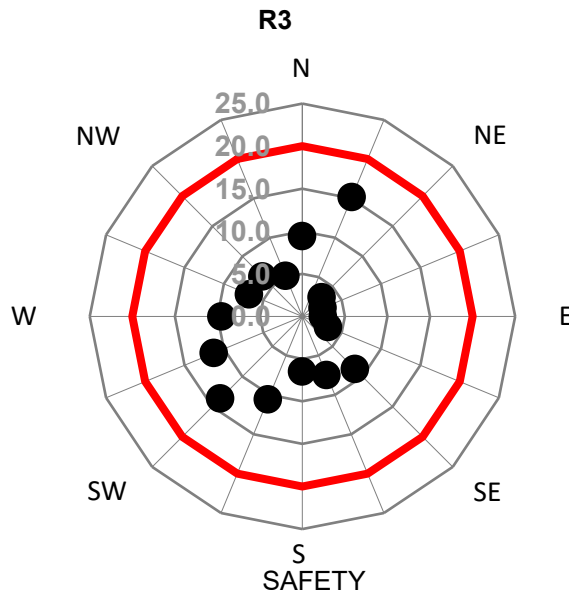
Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	20.7%	9.5%	4.1%	3.0	Pass	13.7	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Test Location



Local peak 3 second gust wind speed (m/s)

Safety Wind Speed = 20m/s

Configuration	Wind Comfort Criteria					Safety Criterion	
	Exceedence of given wind speed per year			Mean wind speed (exceeded 20% of year)	Result (compared against Target wind speed of 5m/s)	Peak wind speed (of all wind directions)	Result (compared against Safety wind speed of 20m/s)
	Sitting (3m/s) %	Standing (4m/s) %	Walking (5m/s) %				
● Proposed Configuration	20.4%	8.4%	3.4%	3.0	Pass	15.2	Pass
●							
■							
◆							
▲							
■							
◆							
▲							

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright