

GREEN SQUARE STAGE 3

ZETLAND, NSW

SSDA PEDESTRIAN WIND STUDY

RWDI # 2512280

16 December 2025

SUBMITTED TO

Mirvac
L28, 200 George Street
Sydney NSW 2000

SUBMITTED BY

RWDI Australia Pty Ltd
Suite 602, Level 6, 80 William Street,
Woolloomooloo NSW 2011, Australia
ABN 86 641 303 871

DOCUMENT CONTROL

Version	Status	Date	Prepared By	Reviewed By
A	Initial	12 December 2025	RL	AMC
B	Final for SSDA	16 December 2025	RL / MJP	AMC

NOTE

The information contained in this document produced by RWDI is solely for the use of the client identified on the front page of this report. Our client becomes the owner of this document upon full payment of our **Tax Invoice** for its provision. This document must not be used for any purposes other than those of the document's owner. RWDI undertakes no duty to or accepts any responsibility to any third party who may rely upon this document.

QUALITY ASSURANCE

RWDI Australia Pty Ltd operates a Quality Management System which complies with the requirements of AS/NZS ISO 9001:2015. This management system has been externally certified by SAI Global and Licence No. QEC 13457 has been issued for the following scope: The provision of consultancy services in acoustic engineering, air quality and wind engineering; and the sale, service, support and installation of acoustic monitoring and related systems and technologies.



STATEMENT OF DECLARATION

The undersigned declares that the SSDA Pedestrian Wind Study (SSDA-PWS) has been prepared in accordance with relevant policy, guidelines, or legislative requirements. The SSDA-PWS Report contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the SSDA-PWS Report relates; does not contain information that is false or misleading; identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project; identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the SSDA-PWS Report relates; and contains a consolidated summary of the proposed or necessary mitigation measures.



Dr. Aman Choudhry, *Ph.D., MIEAust*
Leader Microclimate | APAC
RWDI Australia Pty Ltd

EXECUTIVE SUMMARY

RWDI Australia Pty Ltd (RWDI) was retained to conduct a pedestrian wind environment assessment for the proposed Green Square Stage 3 development located in Zetland, NSW. The pedestrian level wind tunnel microclimate assessment was conducted for the following configurations of the site:

- Existing Configuration:** Existing site with existing surrounding buildings
- Proposed Configuration:** Proposed Development with existing surrounding buildings
- Future Configuration:** Proposed Development with existing and future surrounding buildings including Sites 8A, 8B, 8C, 8D, 19A, and 19B (Stages 4 and 5) of the GSTC

The Future Configuration noted above has been included to address the requirement for a **Cumulative Impact Assessment**. This configuration has included Stages 4 and 5 of the Green Square Town Centre Development, namely Sites 8A, 8B, 8C, 8D, 19A, and 19B, among other known developments. It is noted that this configuration is representative of the anticipated precinct massing at the time of completion of the Proposed Development as construction of Stages 4 and 5 is expected to be advanced at that time.

The pedestrian level wind conditions within and around the Proposed Development were predicted using the results from a boundary-layer wind tunnel test combined with historical meteorological wind records for the region. The wind speeds have been evaluated against suitable criteria to assess pedestrian wind safety and comfort conditions. The results of the assessment are summarised as follows:

Pedestrian Wind Safety

- Wind speeds exceeding the safety limits were noted at 27 locations around the site in the existing configuration. These were observed along Ebsworth Street, Barker Street, the southern plaza area and around the OVO Tower and Infinity Tower.
- With the inclusion of the Proposed Development, the total number of exceedances on the ground level are reduced to 23 locations, resulting in an overall improvement in the wind conditions within the public domain over the existing site. A safety criterion exceedance was also identified at one elevated location on Level 6 at the eastern corner private balcony of the Site 7 Building.
- For the Future Configuration, wind conditions were improved significantly and ground level safety exceedances noted at only 3 locations and no safety exceedances were observed at any elevated locations.

Pedestrian Wind Comfort

- The existing wind comfort conditions were found to be suitable for standing to walking use for the majority of locations and no locations exceed the comfort limits.
- With the inclusion of the Proposed Development, wind conditions generally remain similar to the existing site along most of the ground level area around the site. However, four locations were observed to marginally exceed the comfort limits (by 1%). It is expected that the inclusion of existing vegetation and proposed vegetation within and around the proposed site will resolve these exceedances. Most entrances to the development are expected to be suitable for intended uses. However, the lobby entrances located within the Barker Street laneway, the north-eastern retail entrance of Site 17, and the northern retail entrance of Site 18 can reach wind conditions unsuitable for entrances. The elevated outdoor terraces of Sites 7 and 18 were observed to have standing wind



conditions suitable for intended uses. The proposed planting within these terraces is expected to further improve comfort levels. All private balconies of the Proposed Development were observed to have suitable wind conditions for intended uses.

- With the inclusion of future buildings, the wind conditions within and around the site are significantly improved from the Existing and Proposed Configuration. No locations were found to exceed the comfort limits and only two locations on the ground level exceed the target comfort levels which are expected to be resolved with the inclusion of the existing and proposed vegetation around and within the site. The elevated outdoor terraces remain calm and suitable for intended use with the majority of private balconies of the Proposed Development improve to sitting to standing use conditions.

Summary of Mitigation Measures Recommendations

The wind comfort criteria at the time of completion of Sites 7, 17, and 18 (Stage 3) of the GSTC are anticipated to be met based on the inclusion of the proposed landscaping design. It is noted, however, that the eastern side of Site 18 is exposed to strong winds from the south which persist from the Existing Configuration. This area has been designed so that long duration passive use is not required, with retail entrances located to avoid this area.

TABLE OF CONTENTS

1 INTRODUCTION & OBJECTIVES	1
1.1 Introduction.....	1
1.2 Background – Housing Delivery Authority	1
1.3 Site Description.....	2
1.4 Overview of the Proposed Development.....	2
1.5 Secretary’s Environmental Assessment Requirements	3
2 BACKGROUND AND APPROACH	4
2.1 Wind Tunnel Study Model.....	4
2.2 Meteorological Data.....	8
2.3 Pedestrian Wind Criteria	9
3 RESULTS AND DISCUSSION	10
3.1 Generalised Wind Flows	10
3.2 Pedestrian Wind Safety.....	11
3.2.1 Existing Configuration	11
3.2.2 Proposed Configuration.....	11
3.2.3 Future Configuration	11
3.3 Pedestrian Wind Comfort	11
3.3.1 Existing Configuration	12
3.3.2 Proposed Configuration.....	12
3.3.3 Future Configuration (Cumulative Impact Assessment)	13
3.4 Wind Mitigation Strategy	13
4 STATEMENT OF LIMITATIONS	15
5 REFERENCES	17



LIST OF FIGURES

Figure 1.1A: Pedestrian Wind Comfort Conditions – Existing – Ground Floor – Annual

Figure 1.1B: Pedestrian Wind Comfort Conditions – Proposed – Ground Floor – Annual

Figure 1.1C: Pedestrian Wind Comfort Conditions – Future – Ground Floor – Annual

Figure 1.2B: Pedestrian Wind Comfort Conditions – Proposed – Elevated Levels – Annual

Figure 1.2C: Pedestrian Wind Comfort Conditions – Future – Elevated Levels – Annual

Figure 2.1A: Pedestrian Wind Safety Conditions – Existing – Ground Floor – Annual

Figure 2.1B: Pedestrian Wind Safety Conditions – Proposed – Ground Floor – Annual

Figure 2.1C: Pedestrian Wind Safety Conditions – Future – Ground Floor – Annual

Figure 2.2B: Pedestrian Wind Safety Conditions – Proposed – Elevated Levels – Annual

Figure 2.2C: Pedestrian Wind Safety Conditions – Future – Elevated Levels – Annual

LIST OF TABLES

Table 1: Pedestrian Wind Comfort and Safety Conditions

1 INTRODUCTION & OBJECTIVES

1.1 Introduction

This report supports one of the detailed State Significant Development Applications (SSDA) (SSD-83899206) and concurrent rezoning being lodged with the Department of Planning, Housing and Infrastructure (DPHI) for the construction of three mixed-use Build-to-Rent buildings at 960A Bourke Street (the site). The site is also known collectively as Sites 7, 17 and 18 of the Green Square Town Centre (GSTC) and is legally described as Lot 6, DP 1199427. The proponent for the SSDA is Mirvac Green Square Pty Limited.

The proposal aims to:

- Respond to the housing challenges facing Sydney through the delivery of diverse housing types in a highly accessible location;
- Demonstrate the strategic and site-specific merit of accommodating the proposed height and FSR of development on the site;
- Contribute to the establishment of Green Square as a town centre through a mixed-use approach and use urban design principles to integrate residential and non-residential land uses;
- Improve the pedestrian connectivity throughout the site, while encouraging the direct connections to public transport and the existing street network; and
- Appropriately respond to neighbouring development and public domain within the GSTC through podium and tower forms with appropriate massing, which protect solar access and minimise environmental impacts.

1.2 Background – Housing Delivery Authority

On 19 December 2024, the Housing Development Authority (HDA) was established by DPHI to accelerate the delivery of housing across NSW, under the Environmental Planning and Assessment (Housing Delivery Authority) Order 2024. This has provided a new State Significant Development pathway in which the proposed redevelopment can be undertaken through.

The site was declared State Significant Development (SSD) pursuant to State Significant Declaration Order 2025 (No 2) issued on 26 February 2025. The order specifies development in EOI application 232525 dated 17 January 2025, including development for the purposes of mixed use development comprising commercial premises and residential accommodation with the provision for affordable housing and Build to Rent (BTR) at 960A Bourke Street, 6 Geddes Ave and 411 Botany Road, Zetland as identified in Schedule 18, is declared to be SSD.

The HDA SSD pathway has been established to accelerate delivery of housing and requires that the subject SSD is lodged within 9 months from receipt of the Secretary's Environmental Assessment Requirements (SEARs). Current SEARs for the project were issued for Early Works on 15 April 2025 (SSD-82328958) (SSDA 1), Sites 7, 17 and 18 on 15 May 2025 (SSD-83899206) (SSDA 2) and for Sites 8 and 19 on 15 May 2025 (SSD- 84322496) (SSDA 3).

The key features of the Mirvac Green Square HDA proposal are:

- Detailed development consent for the purposes of a mixed use development, with significant residential components comprising build to sell and build to rent dwelling stock and ground floor non-residential uses.

- Delivery of between 1,000 to 1,200 dwellings across 9 buildings in low rise and high rise tower formats.
- Delivery of Affordable Housing dwellings.
- Delivery of the components in two-stage detailed SSDA process.

In conjunction with the SSDA, a State-assessed rezoning process is intended to facilitate the Proposed Development.

This SSDA forms the second application as part of broader HDA declared development and forms the main works to develop sites 7, 17 and 18 of the GSTC.

1.3 Site Description

The site is located at 960A Bourke Street, Zetland and is located within the GSTC. It is situated within the Sydney Local Government Area (LGA) and is located approximately 3.5km south of the Sydney CBD and within immediate proximity of the Green Square Railway Station. The site forms the northern component of the Mirvac HDA proposal, consisting of one lot which is legally described as Lot 6, DP 1199427. An aerial photo of the site is shown at Image 1 below.



Image 1: Sites 7, 17 and 18 Site Aerial
(Source: Nearmap, Colliers Urban Planning edits.)

1.4 Overview of the Proposed Development

The Proposed Development seeks to deliver the construction of three BTR buildings which will integrate residential, retail, resident amenity and public domain uses. Specifically, the proposal seeks approval for:

- Excavation and enabling works.
- Construction of 3 mixed use BTR buildings up to 21 storeys in height, comprising:

- 511 BTR dwellings including a variety of dwelling types including Studio, 1, 2 and 3-bedroom apartments, a portion of which will be affordable housing.
- Shared internal and external residential amenity space.
- Non-residential floor space including retail, BTR staff offices and BTR resident lobbies
- A shared basement level, incorporating loading zones, waste collection and servicing.
- Car parking and bike parking to service the Proposed Development.
- Public domain and landscaping improvements, including:
 - External pedestrian laneways, pathways and through-site links.
 - Tree removal, protection, new plantings and landscaping works.
- Utility and stormwater connections to support the new development.
- Concurrent amendments to the Sydney Local Environmental Plan (Green Square Town Centre) 2013 to facilitate the SSDA.

1.5 Secretary’s Environmental Assessment Requirements

In accordance with section 4.39 of the Environmental Planning & Assessment Act 1979 (EP&A Act), Secretary’s Environmental Assessment Requirements (SEARs) (SSD-83899206) have been issued. This report has been prepared to respond to the issued SEARs, as set out in the table below.

Table A: SSD-83899206 SEARs

SEAR	Response / Location in Report
<p>7. Environmental Amenity</p> <ul style="list-style-type: none"> ● Assess amenity impacts on the surrounding locality, including solar access, visual privacy, view loss and view sharing, as well as wind, lighting and reflectivity impacts. A high level of environmental amenity for any surrounding residential or other sensitive land uses must be demonstrated. 	<p>Sections 3.2 & 3.3 discuss the wind safety and comfort exceedances within the site for the tested configurations of the Proposed Development.</p>
<p>23. Public Space</p> <ul style="list-style-type: none"> ● If public space is proposed as part of the development, demonstrate how the development: <ul style="list-style-type: none"> ○ maximises the amount, access to and quality of public spaces (including open space, public facilities and streets/plazas within and surrounding the site), reflecting relevant design guidelines and advice from the local council and the Department. ○ provides accessible public space. ○ maximises permeability and connectivity. ○ maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection. ○ maximises street activation. ○ minimises potential vehicle, bicycle and pedestrian conflicts. 	<p>Section 3.4 details the recommendations to ameliorate wind impacts.</p>

2 BACKGROUND AND APPROACH

2.1 Wind Tunnel Study Model

To assess the wind environment within and around the Proposed Development, a 1:400 scale model of the project site and surroundings was constructed for the wind tunnel tests of the following configurations:

- Existing Configuration:** Existing Site with Existing Surrounding Buildings (Image 2a)
- Proposed Configuration:** Proposed Development with Existing Surrounding Buildings (Image 2b)
- Future Configuration:** Proposed Development with existing and future surrounding buildings including Sites 8A, 8B, 8C, 8D, 19A, and 19B (Stages 4 and 5) of the GSTC (Image 2c)

The wind tunnel model included all relevant surrounding buildings and topography within a radius of 480 m around the project site. This encompassed both existing structures and those currently under construction, with an expectation that these would likely be present or completed by the time the proposed subject development concludes. The Future Configuration noted above has been included as part of a **Cumulative Impact Assessment**, which includes most importantly Stages 4 and 5 of the Green Square Town Centre Development, namely Sites 8A, 8B, 8C, 8D, 19A, and 19B, among other known developments (See Image 2c)

The wind and turbulence profiles in the atmospheric boundary layer beyond the modelled area were simulated in RWDI's wind tunnel, incorporating spires and roughness blocks.

The wind tunnel model was instrumented with 144 specially designed wind speed sensors to measure mean and gust wind speeds at a full-scale height of approximately 1.5 - 2 m above local ground in pedestrian areas throughout the study site. The placement of wind measurement sensors was based on our experience and understanding of the pedestrian usage for this site. Wind speeds were measured for 36 directions in 10-degree increments. The measurements at each sensor location were recorded in the form of ratios of local mean and gust speeds to the mean wind speed at a reference height above the model.

Note that no vegetation was included as part of the configurations tested, in accordance with AWES Guidelines (2024). The method for testing scale models in the wind tunnel is consistent with internationally recognized good practice, and meets the requirements set out in the Australasian Wind Engineering Society Quality Assurance Manual (AWES-QAM-2019).

SSDA PEDESTRIAN WIND STUDY
GREEN SQUARE STAGE 3

RWDI # 2512280
16 December 2025

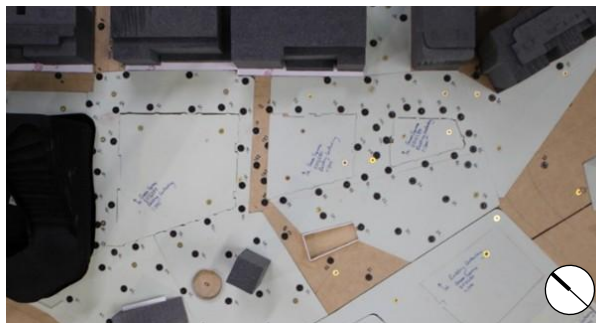


Image 2a: Wind Tunnel Study Model – Existing Configuration

SSDA PEDESTRIAN WIND STUDY
GREEN SQUARE STAGE 3

RWDI # 2512280
16 December 2025

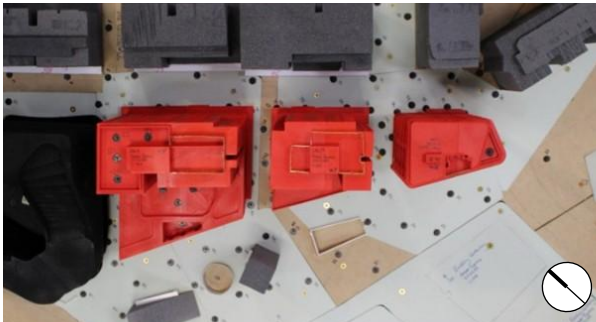


Image 2b: Wind Tunnel Study Model - Proposed Configuration



Image 2c: Wind Tunnel Study Model - Future Configuration

2.2 Meteorological Data

Wind statistics recorded at Sydney International Airport between 1995 and 2022 (inclusive) were analysed annually to assess the wind conditions in the study area. Image 3 graphically depicts the directional distributions of wind frequencies and speeds for the year. Winds from the northeast, south, west and north-west are predominant throughout the year as indicated by the wind rose. Strong winds of a mean speed greater than 10 m/s measured at the airport (at an anemometer height of 10 m) occur for 7.8% of the time throughout the year.

Wind statistics were combined with the wind tunnel data to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the wind criteria for pedestrian comfort and safety, as described in Section 2.3.

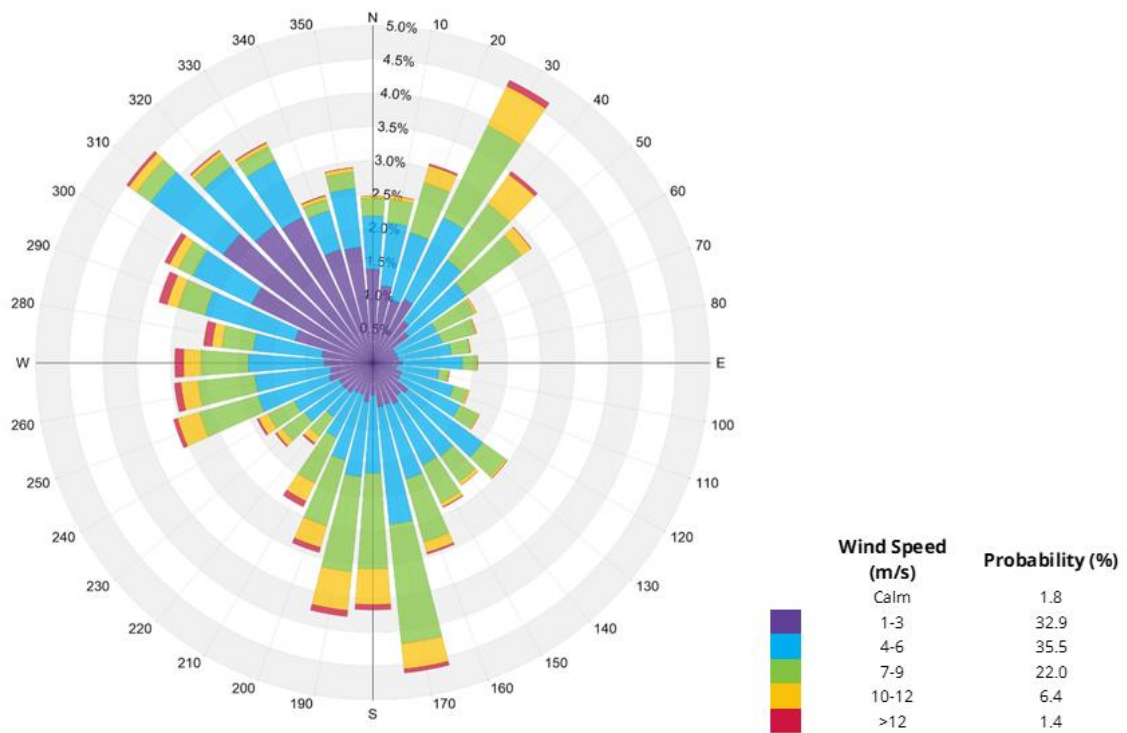


Image 3: Directional Distribution of Winds Approaching Sydney International Airport (1995 to 2022)

2.3 Pedestrian Wind Criteria

The wind criteria presented in the *Sydney DCP 2012* (including recent 2024 amendments) and the *Central Sydney Planning Strategy 2016-2036*, described in the Table below, have been used to assess the pedestrian wind conditions around the development site for the various configurations.

Table B: Pedestrian Wind Comfort and Safety Criteria

Comfort Category	GEM Speed (m/s)	Description
Sitting	≤ 4	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 6	Gentle breezes suitable for main building entrances, bus stops, and other places where pedestrians may linger
Walking	≤ 8	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
Uncomfortable	> 8	Strong winds of this magnitude are considered a nuisance for all pedestrian activities, and wind mitigation is typically recommended

Notes:

- (1) GEM speed = max (mean speed, gust speed/1.85); and,
- (2) GEM speeds listed above are based on a seasonal exceedance of 5% of the time between 6:00 and 22:00.

Safety Criterion	Gust Speed (m/s)	Description
Exceeded	> 24	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.

Notes:

- (1) Based on an annual exceedance of one hour between 6:00 and 22:00 (i.e., 0.0171% of the time).
- (2) Only gust speeds need to be considered in the wind safety criterion. These are usually rare events but deserve special attention in city planning and building design due to their potential safety impact on pedestrians.

It should be noted that factors such as regional wind climate, thermal conditions, age, health, and clothing can also influence an individual's perception of the wind climate. Therefore, a comparison of wind speeds between the various configurations provides an objective assessment of local pedestrian wind conditions and the impact of the building massing.

3 RESULTS AND DISCUSSION

The predicted wind conditions are shown on the plan figures in Figures 1.1A through 2.2C located in the “Figures” section of this report. These conditions and the associated wind speeds are also represented in Table 1, located in the “Tables” section of this report. The following is a detailed discussion of the suitability of the predicted wind conditions for the anticipated pedestrian use of each area of interest. Note that wind tunnel tests have been carried out without any form of vegetation to establish a baseline understanding of the wind conditions around the site.

3.1 Generalised Wind Flows

In the discussion of wind conditions on and around the Proposed Development, reference may be made to the following generalised wind flows (see Image 4). If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity and uncomfortable or potentially unsafe conditions. Design details such as setting back a tower from the edges of a podium, deep canopies close to ground level, windscreens / tall trees with dense landscaping, etc. as shown in Image 4 can help to reduce the high wind activity. The choice and effectiveness of these measures would depend on the exposure and orientation of the site with respect to the prevailing wind directions and the size and massing of the proposed buildings.

Conversely, in areas where higher wind velocities are desired, design measures can be implemented to enhance wind flow. For instance, channels aligned with prevailing wind directions can be integrated into the design to promote increased wind infiltration in regions prone to stagnant conditions. Such measures are particularly beneficial in areas with generally milder climates and high humidity levels, such as those closer to the equator.

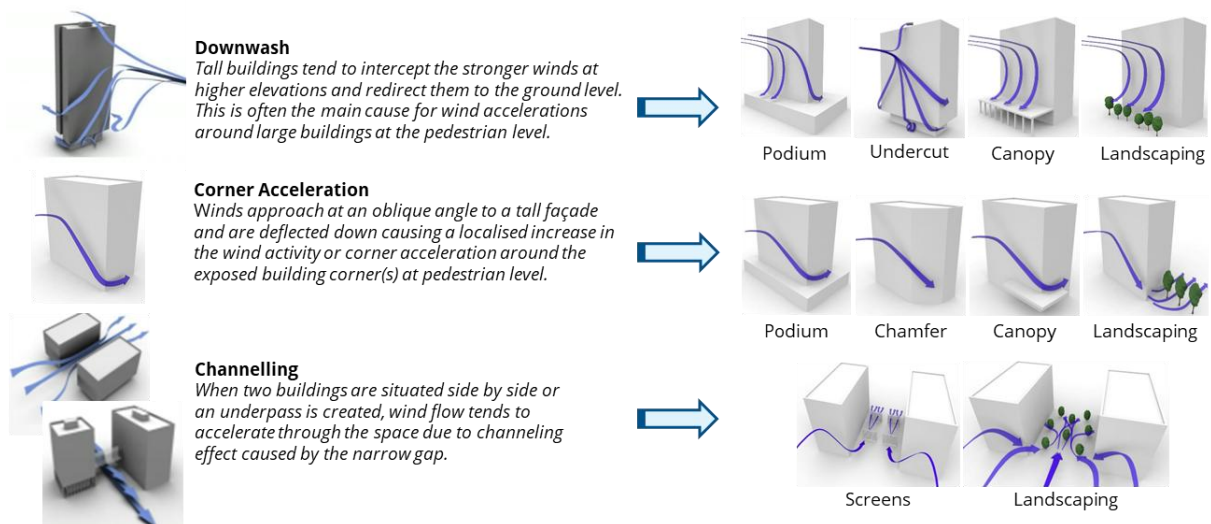


Image 4: General Wind Flows around Buildings and Examples of Wind Control Measures

3.2 Pedestrian Wind Safety

3.2.1 Existing Configuration

Wind safety conditions within and around the existing site are shown in Figure 2.1A.

The existing site is currently exposed to strong regional winds from the south and west. Wind speeds exceeding the safety limits were noted at **27 locations** around the site. These were observed along Ebsworth Street, Barker Street, the southern plaza area, and around the OVO Tower and Infinity Tower.

3.2.2 Proposed Configuration

Wind safety conditions within and around the Proposed Development site are shown in Figures 2.1B and 2.2B.

With the inclusion of the Proposed Development, the ground level safety exceedances were reduced to **23 locations** which generally persist from the existing configuration within similar locations. However, high winds exceeding the safety criteria were also observed at new locations along Ebsworth Street at the building corners of the Proposed Development (Sensors 67, 71 and 76) and along the Barker Street laneway between the Site 17 and Site 18 Buildings (Sensors 105 and 106). One safety exceedance was also observed at the eastern corner private balconies of the Site 7 Building (representative Sensor 112 located on Level 6).

3.2.3 Future Configuration

Wind safety conditions in the Future Configuration are shown in Figures 2.1C and 2.2C.

In the future configuration the additional buildings within the vicinity of the Proposed Development including Sites 8A, 8B, 8C, 8D, 19A, and 19B (Stages 4 and 5) of the GSTC significantly reduce wind impacts within and around the Proposed Development. Ground level safety exceedances are reduced to **3 locations** which persist from the existing configuration and no safety exceedances were observed at any elevated locations within the site.

3.3 Pedestrian Wind Comfort

Wind conditions suitable for walking use are appropriate for footpaths/walkways and areas where pedestrians will be active and less likely to remain in one area for prolonged periods of time. Lower wind speeds conducive to standing are preferred at building entrances & drop-off areas, bus stops and communal outdoor terraces. Wind speeds comfortable for sitting use are preferred for areas intended for passive long-duration activities such as outdoor dining or café seating.

For private balconies, the target wind comfort level is typically standing or better. However, as the usage of these spaces is elective, with occupants having the option to retreat indoors during events of high or low winds, wind conditions can be deemed suitable if they do not exceed the comfort criteria. Furthermore, note that wind comfort on balconies can exhibit notable variability based on the wind direction and position of an individual relative to the balustrade, partitions, screens, and other structural elements. The inherent challenge in accurately assessing wind comfort on individual balconies within the Proposed Development arises from the discrepancy in balcony size relative to the scale of the model which can require removal of balustrades to

accommodate the sensors. However, to provide a semi-quantitative insight into potential conditions, measurements were conducted at representative balcony locations on the study model.

3.3.1 Existing Configuration

Wind conditions within the existing site are shown in Figures 1.1A. The existing wind comfort conditions were found to be suitable for standing to walking use for the majority of locations and no locations exceed the comfort limits. Higher wind speeds were observed to the north and south of the site reaching walking use conditions with standing use conditions within the central area of the site.

3.3.2 Proposed Configuration

Wind comfort conditions within and around the Proposed Development are shown in Figures 1.1B and 2.1B. The overall wind environment on the ground level is noted to remain relatively similar to the existing site. The following key observations can be made with regards to wind comfort within and around the key trafficable areas of the Proposed Development:

3.3.2.1 Ground Level

- With the inclusion of the Proposed Development, wind conditions generally remain the same along the ground level around the site, however 4 locations were noted to marginally exceed the comfort limits by 1%. It is expected that the inclusion of existing vegetation and proposed vegetation within and around the proposed site will resolve these exceedances.
- The lobby entrances to the buildings of the Proposed Development were observed to have standing use wind conditions for most entrances (Site 7: Sensors 69 and 99, Site 17: Sensor 73 and 101, Site 18: Sensor 77). The eastern lobby entrance to Site 17 (Sensor 104) was found to have marginal walking comfort conditions, however is anticipated to be mitigated by the proposed landscaping scheme. However, the lobby entrance to Site 18 (Sensor 106) is exposed to the channelling prevailing winds which can create conditions unsuitable for building entrances.
- Standing use conditions were also observed at most of the entrances to the various retail tenancies of the Proposed Development. The north-eastern retail entrance of Site 17 (Sensor 74) and the northern retail entrance of Site 18 (Sensor 78) have marginal walking use conditions which are expected to be mitigated by the proposed landscaping scheme.
- The Fellmonger Place laneway between Site 7 and 17 (Sensors 71, 72, 90, 91 and 98 to 103) is expected to have walking use conditions and is suitable for pedestrian thoroughfare. With the inclusion of the proposed tree planting within the laneway, conditions are expected to improve by at least one category to standing use conditions.
- The Barker Street laneway between Site 17 and 18 (Sensors 75, 76, 85, 86 and 104-107) is expected to have wind conditions ranging from walking use to uncomfortable levels due to the strength of the channelled winds between the proposed towers.

3.3.2.2 Elevated Areas

- **Site 7 Outdoor Terraces:** Outdoor terraces at Levels 4, 6 and Roof of the Site 7 building (Sensors 110, 113, 114, 115, and 120 to 123) were observed to be calm with standing wind conditions suitable for intended uses. The proposed planting within these terraces is expected to further improve conditions to range from sitting to standing use.

- **Site 18 Outdoor Terrace:** The Site 18 rooftop communal space (Sensors 143 and 144) was also observed to have standing use wind conditions which is suitable for the intended use of this area. The proposed planting is expected to improve wind conditions to range from sitting to standing uses within the terrace.
- **Private Balconies:** All private balconies of the Proposed Development were observed to have suitable wind conditions for intended uses. The wind conditions at these private balconies can range from sitting to walking use conditions.

3.3.3 Future Configuration (Cumulative Impact Assessment)

Wind comfort conditions within and around the Proposed Development for the future surrounds configuration are shown in Figures 1.1C and 2.1C.

With the inclusion of future buildings including Sites 8A, 8B, 8C, 8D, 19A, and 19B (Stages 4 and 5) of the GSTC, the wind conditions within and around the site are significantly improved from the Existing and Proposed Configurations. No locations exceed the comfort limits and only two locations on the ground level are likely to exceed the target comfort levels. These include the northern lobby entrance of Site 18 that marginally exceeds the standing use criterion (Sensor 78) and the western lobby entrance of Site 18 that also exceeds the standing use criterion (Sensor 106). With the inclusion of the existing and proposed vegetation around and within the site these exceedances are expected to be resolved.

The elevated outdoor terrace on Level 4 of Site 7 (Sensor 108) improves to sitting use conditions with the other Site 7 and Site 18 outdoor terraces remaining calm with standing use conditions. The majority of private balconies of the Proposed Development improve to sitting to standing use conditions with all private balconies of the Site 18 building having sitting use conditions.

3.4 Wind Mitigation Strategy

It is understood that at the time of completion of Sites 7, 17, and 18 (Stage 3) of the GSTC, construction of Sites 8A, 8B, 8C, 8D, 19A, and 19B (Stages 4 and 5) will be advanced, with superstructures largely complete and building envelopes or construction hoarding and screening in place for large portions of the building envelopes. As such, the overall precinct massing and thus wind conditions at this time are expected to be in line with the Future Configuration, as opposed to the Proposed Configuration.

Based on the above understanding and the findings of the wind tunnel study, wind comfort criteria at the time of completion of Stage 3 are anticipated to be met based on the inclusion of the proposed landscaping design (see Image 5). It is noted, however, that the eastern side of Site 18 is exposed to strong winds from the south which persist from the Existing Configuration. These winds have been observed to be ground level and not due to downwash off the proposed tower massing. This area has been designed so that long duration passive use is not required, with retail entrances located to avoid this area.



Image 5: Illustrative Landscaping Plan (Source: Oculus)

4 STATEMENT OF LIMITATIONS

Limitations

This report entitled “Green Square Stage 3 SSDA Pedestrian Wind Study” was prepared by RWDI Australia Pty Ltd (“RWDI”) for Mirvac (“Client”). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein (“Project”). The conclusions and recommendations contained in this report are based on the information available to RWDI (“Project Data”) when this report was prepared.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilise the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.

Design Assumptions

RWDI confirms that the pedestrian wind assessment (the “Assessment”) discussed herein was performed by RWDI in accordance with generally accepted professional standards at the time when the Assessment was performed and in the location of the Project. No other representations, warranties, or guarantees are made with respect to the accuracy or completeness of the information, findings, recommendations, or conclusions contained in this Report. This report is not a legal opinion regarding compliance with applicable laws.

The findings and recommendations set out in this report are based on the following information disclosed to RWDI. Drawings and information listed below were received and used to construct the scale model of the Proposed Development, provided as part of the Project Data.

File Name	File Type	Date Received
25044_GS STAGE 3_AR_BASE BUILDING 7_R24	Revit	7 November 2025
25044_GS STAGE 3_AR_BUILDING 17_R24	Revit	17 November 2025
GS_STAGE_3_AR_BUILDING_18_R24	Revit	21 November 2025

The recommendations and conclusions are based on the assumption that the Project Data and the obtained raw climate data are accurate and complete. RWDI assumes no responsibility for any inaccuracy or deficiency in the information it has received from others. In addition, the recommendations and conclusions in this report are partially based on historical data and can be affected by a number of external factors, including but not limited to the Project’s design, quality of materials and construction, site conditions, meteorological events, and climate change (“Project Specific Conditions”). As such, the conclusions and recommendations contained in this report do not list every possible outcome.



The opinions in this report can only be relied upon to the extent that the Project Data and Project Specific Conditions have not changed. Any change in the Project Data or Project Specific Conditions not reflected in this report can impact and/or alter the recommendations and conclusions in this report. Therefore, it is incumbent upon the Client and/or any other third party reviewing the recommendations and conclusions in this report to contact RWDI in the event of any change in the Project Data and Project Specific Conditions in order to determine whether any such change(s) may impact the assumptions upon which the recommendations and conclusions were made.

5 REFERENCES

- ASCE Task Committee on Outdoor Human Comfort (2004). *Outdoor Human Comfort and Its Assessment*, 68 pages, American Society of Civil Engineers, Reston, Virginia, USA.
- Arens E, Aynsley R, Cochran L, Durgin F, Hayashi Y, Irwin P, Isyumov N, Murakami S, Soligo M, Strathopoulos T, Wu H (2003) *Outdoor Human Comfort and its Assessment*, American Society of Civil Engineers
- Australasian Wind Engineering Society, QAM-1, 2019, "Quality Assurance Manual: Wind Engineering Studies of Buildings".
- Australasian Wind Engineering Society (AWES), 2024, "Guidelines for Pedestrian Wind Effects Criteria".
- Choudhry, A., Hackett, D., Kuo, H., Gallace, J., and Peddie, K. (2024). "Harmonising Wind Comfort: Comparative Analysis of Pedestrian Wind Comfort Using Open-Jet and Bounded-Type Working Sections," 22nd AWES Wind Engineering Workshop, Townsville, 20–21 June.
- Durgin, F. H. (1997). "Pedestrian Level Wind Criteria Using the Equivalent average", *Journal of Wind Engineering and Industrial Aerodynamics*, Vol. 66, pp. 215-226.
- Lawson, T.V. (1973). "Wind Environment of Buildings: A Logical Approach to the Establishment of Criteria", Report No. TVL 7321, Department of Aeronautic Engineering, University of Bristol, Bristol, England.
- Soligo, M.J., Irwin, P.A., and Williams, C.J. (1993). "Pedestrian Comfort Including Wind and Thermal Effects," Third Asia-Pacific Symposium on Wind Engineering, Hong Kong.
- Soligo, M.J., Irwin, P.A., Williams, C.J. and Schuyler, G.D. (1998). "A Comprehensive Assessment of Pedestrian Comfort Including Thermal Effects," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.77&78, pp.753-766.
- Williams, C.J., Hunter, M.A. and Waechter, W.F. (1990). "Criteria for Assessing the Pedestrian Wind Environment," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.36, pp.811-815.
- Williams, C.J., Soligo M.J. and Cote, J. (1992). "A Discussion of the Components for a Comprehensive Pedestrian Level Comfort Criteria," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.41-44, pp.2389-2390.
- Williams, C.J., Wu, H., Waechter, W.F. and Baker, H.A. (1999). "Experiences with Remedial Solutions to Control Pedestrian Wind Problems," Tenth International Conference on Wind Engineering, Copenhagen, Denmark.
- Wu, H. and Kriksic, F. (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.104-106, pp.397-407.
- Wu, H., Williams, C.J., Baker, H.A. and Waechter, W.F. (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", ASCE Structure Congress 2004, Nashville, Tennessee.

A decorative graphic on the left side of the page, featuring a blue curved shape at the top left and a larger grey curved shape below it, separated by a white border.

FIGURES



LEGEND:

COMFORT CATEGORIES:

- Sitting ———— ●
- Standing ———— ●
- Walking ———— ●
- Uncomfortable ———— ●

SENSOR LOCATION:

- Grade Level

Pedestrian Wind Comfort Conditions

Existing Configuration - Grade Level
Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



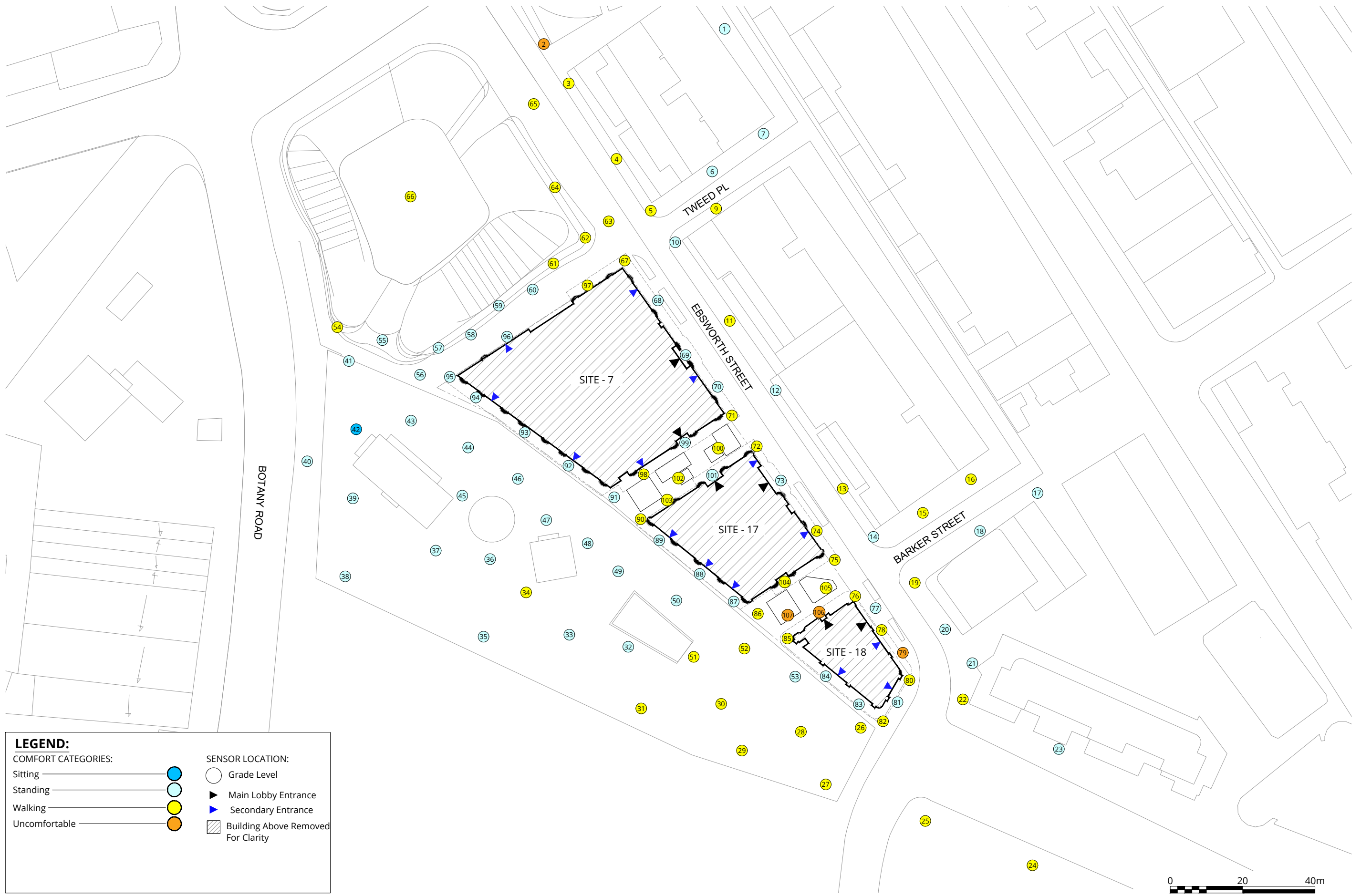
Project #2512280

Drawn by: AKA Figure: 1.1A

Approx. Scale: 1:1000

Date Revised: Dec. 10, 2025





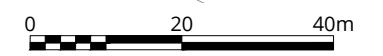
LEGEND:

COMFORT CATEGORIES:

- Sitting — (Blue circle)
- Standing — (Light Blue circle)
- Walking — (Yellow circle)
- Uncomfortable — (Orange circle)

SENSOR LOCATION:

- Grade Level
- ▲ Main Lobby Entrance
- ▲ Secondary Entrance
- ▨ Building Above Removed For Clarity

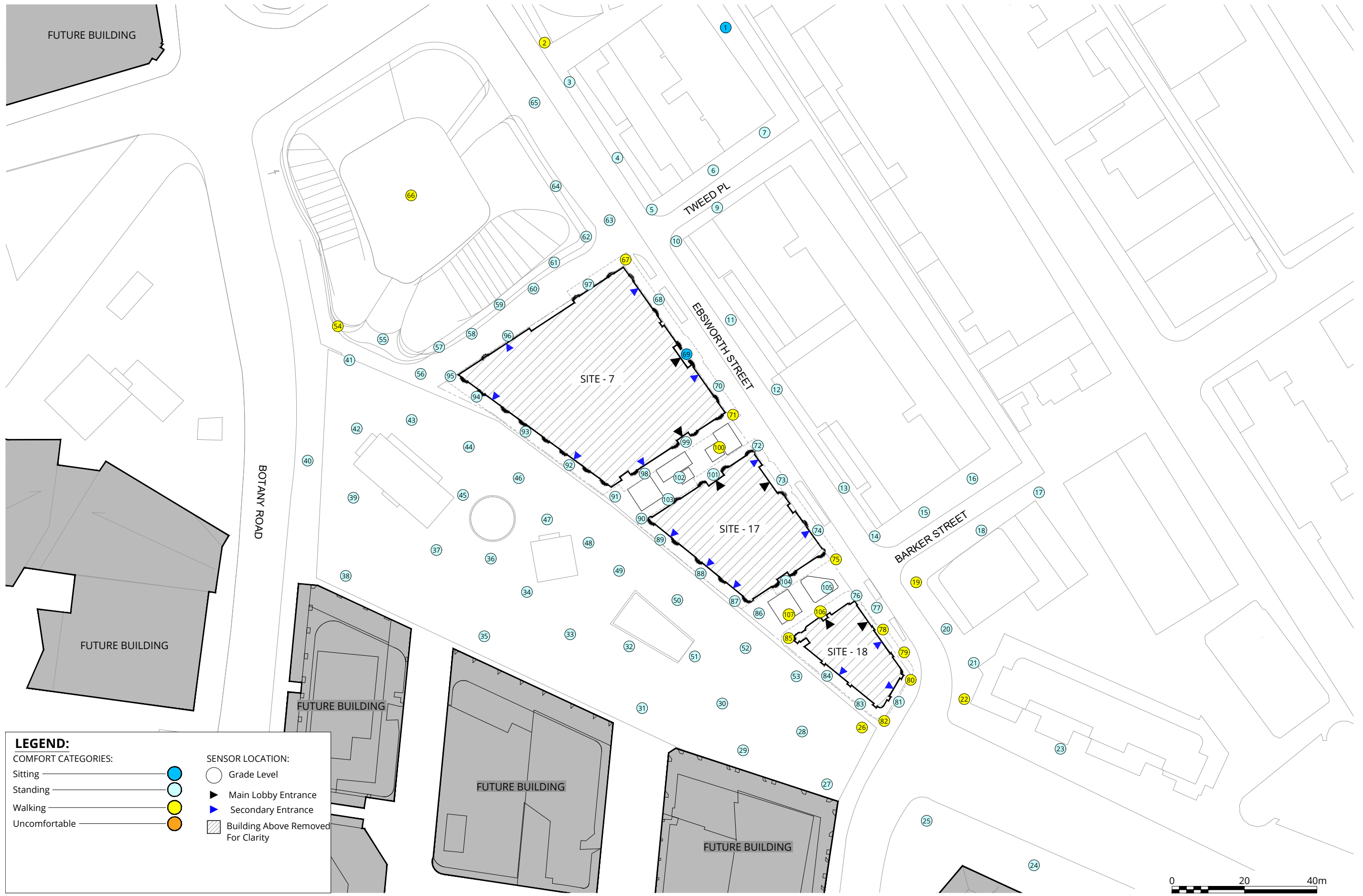


Pedestrian Wind Comfort Conditions
 Proposed Configuration - Grade Level
 Annual (January to December, 6:00 to 22:00)
 Green Square Stage 3 - Sydney, Australia

True North

Project #2512280

Drawn by: AKA	Figure: 1.1B
Approx. Scale: 1:1000	
Date Revised: Dec. 10, 2025	



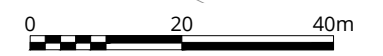
LEGEND:

COMFORT CATEGORIES:

- Sitting ●
- Standing ●
- Walking ●
- Uncomfortable ●

SENSOR LOCATION:

- Grade Level
- ▶ Main Lobby Entrance
- ▶ Secondary Entrance
- ▨ Building Above Removed For Clarity

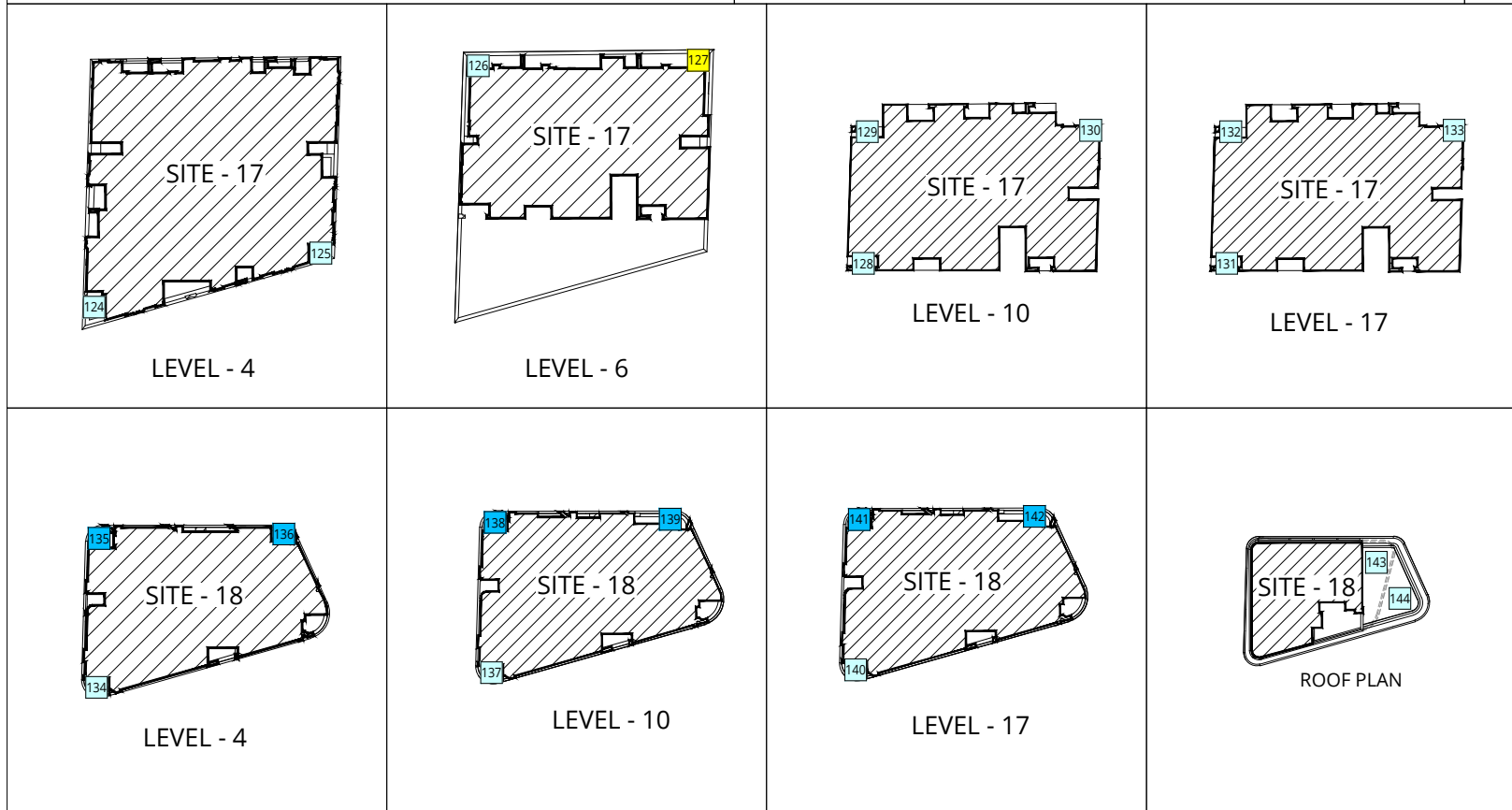
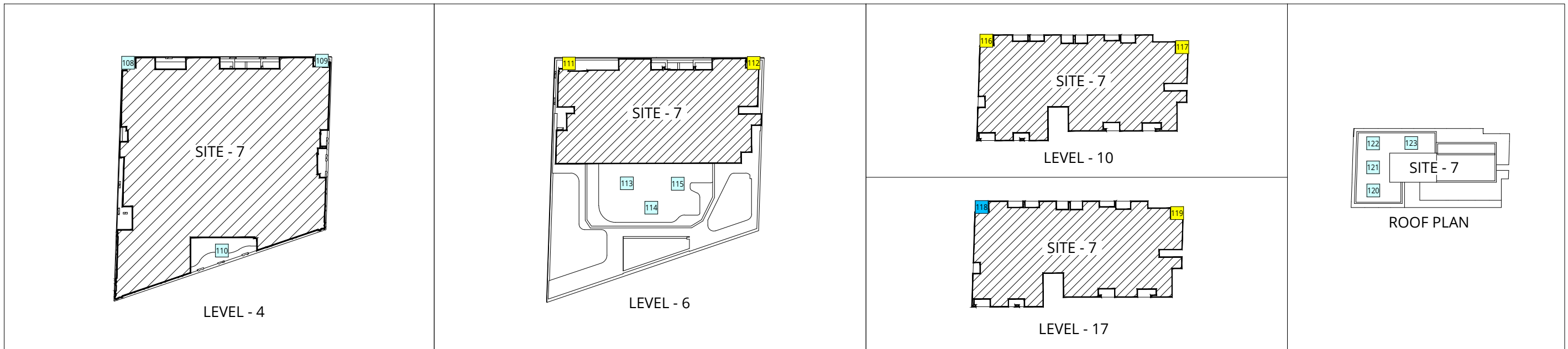


Pedestrian Wind Comfort Conditions
 Future Configuration - Grade Level
 Annual (January to December, 6:00 to 22:00)
 Green Square Stage 3 - Sydney, Australia

True North

Project #2512280

Drawn by: AKA	Figure: 1.1C
Approx. Scale: 1:1000	
Date Revised: Dec. 10, 2025	



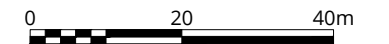
LEGEND:

COMFORT CATEGORIES:

- Sitting — ●
- Standing — ●
- Walking — ●
- Uncomfortable — ●

SENSOR LOCATION:

- Balconies & Terraces



Pedestrian Wind Comfort Conditions
Proposed Configuration - Balconies & Terraces
Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



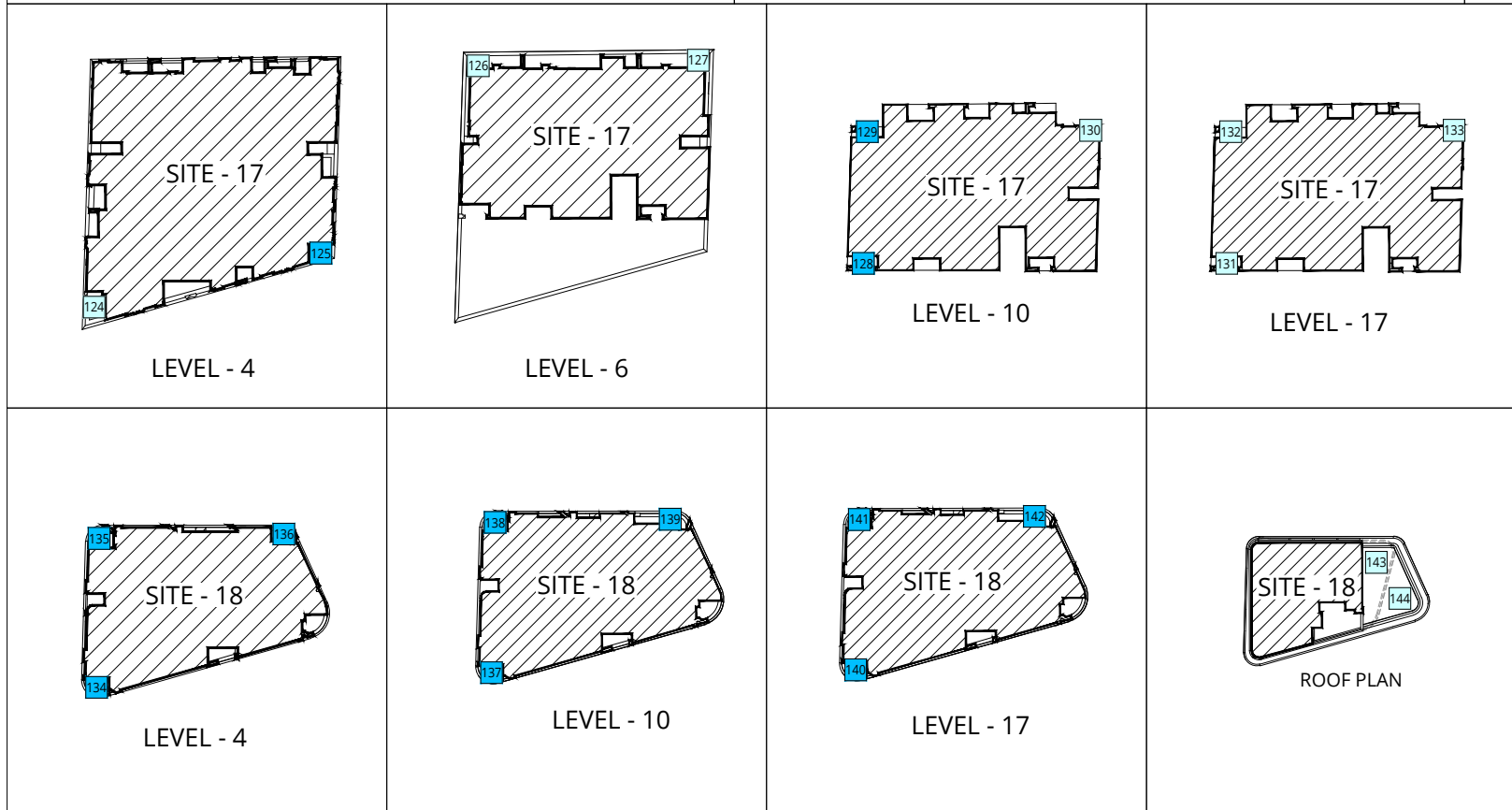
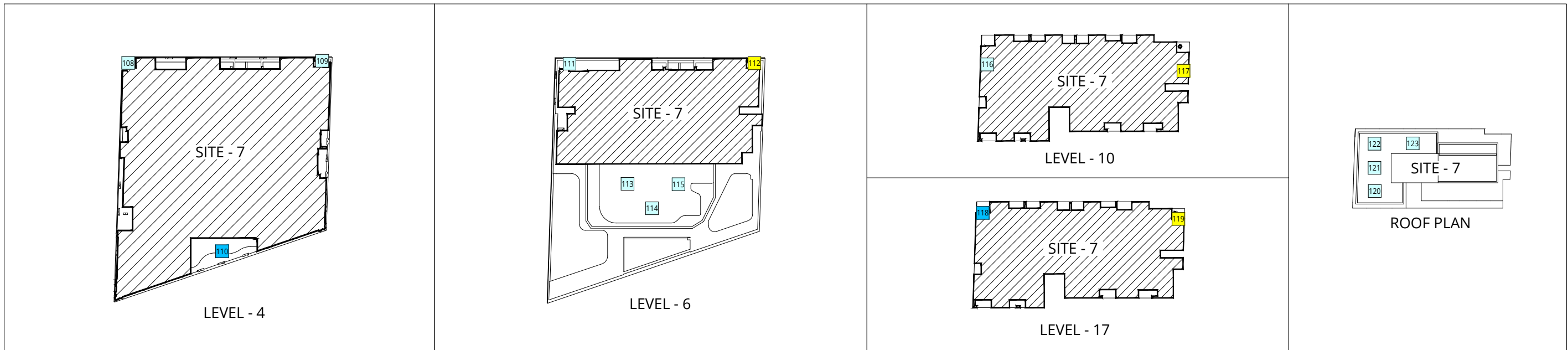
Drawn by: AKA Figure: 1.2B

Approx. Scale: 1:1000

Date Revised: Dec. 10, 2025

Project #2512280





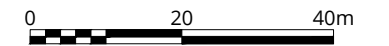
LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable

SENSOR LOCATION:

- Balconies & Terraces



Pedestrian Wind Comfort Conditions
 Future Configuration - Balconies & Terraces
 Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



Drawn by: AKA Figure: 1.2C

Approx. Scale: 1:1000

Date Revised: Dec. 10, 2025

Project #2512280





LEGEND:

SAFETY CATEGORIES:

- Pass
- Exceeded

SENSOR LOCATION:

- Grade Level

Pedestrian Wind Comfort Conditions

Existing Configuration - Grade Level
Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



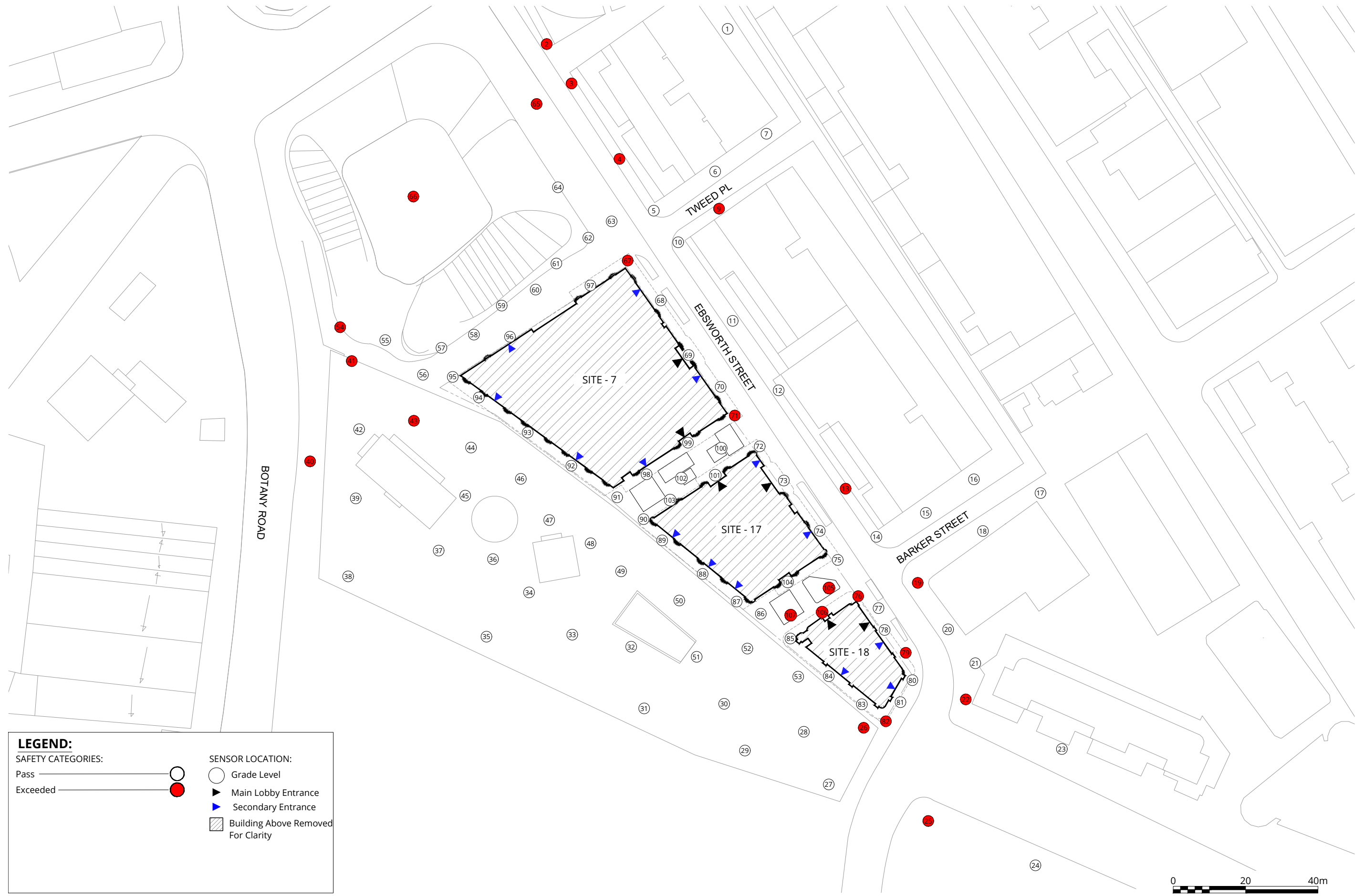
Drawn by: AKA Figure: 2.1A

Approx. Scale: 1:1000

Project #2512280

Date Revised: Dec. 10, 2025

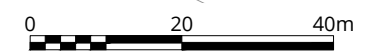





LEGEND:

SAFETY CATEGORIES:
 Pass ———— ○
 Exceeded ———— ●

SENSOR LOCATION:
 ○ Grade Level
 ▲ Main Lobby Entrance
 ▲ Secondary Entrance
 ▨ Building Above Removed For Clarity




Pedestrian Wind Comfort Conditions
 Proposed Configuration - Grade Level
 Annual (January to December, 6:00 to 22:00)
 Green Square Stage 3 - Sydney, Australia

True North 

Project #2512280

Drawn by: AKA	Figure: 2.1B
Approx. Scale: 1:1000	
Date Revised: Dec. 10, 2025	





LEGEND:

SAFETY CATEGORIES:

- Pass
- Exceeded

SENSOR LOCATION:


- Grade Level
- Main Lobby Entrance
- Secondary Entrance
- Building Above Removed For Clarity

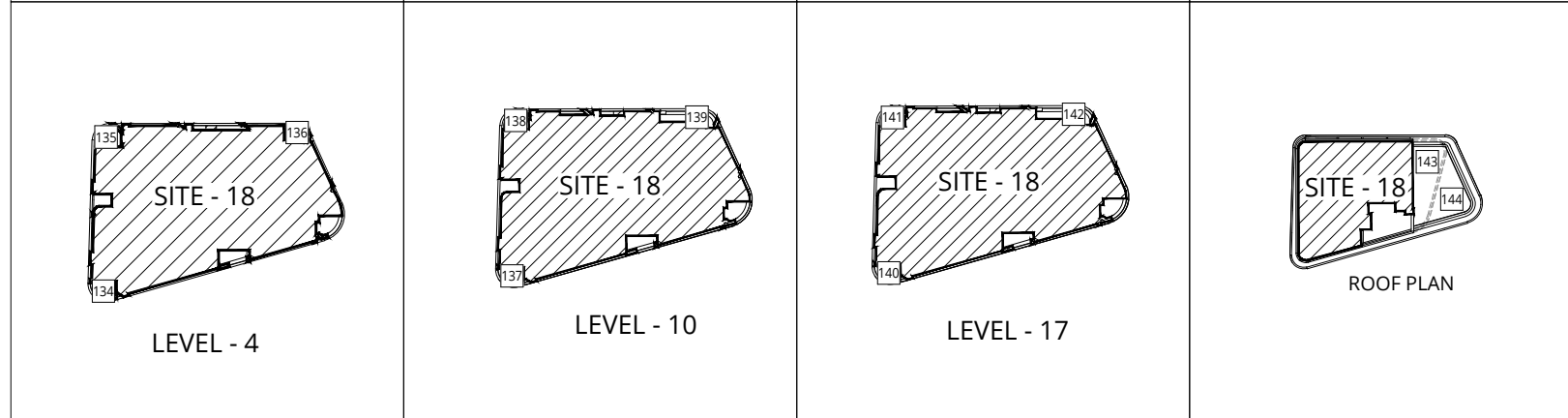
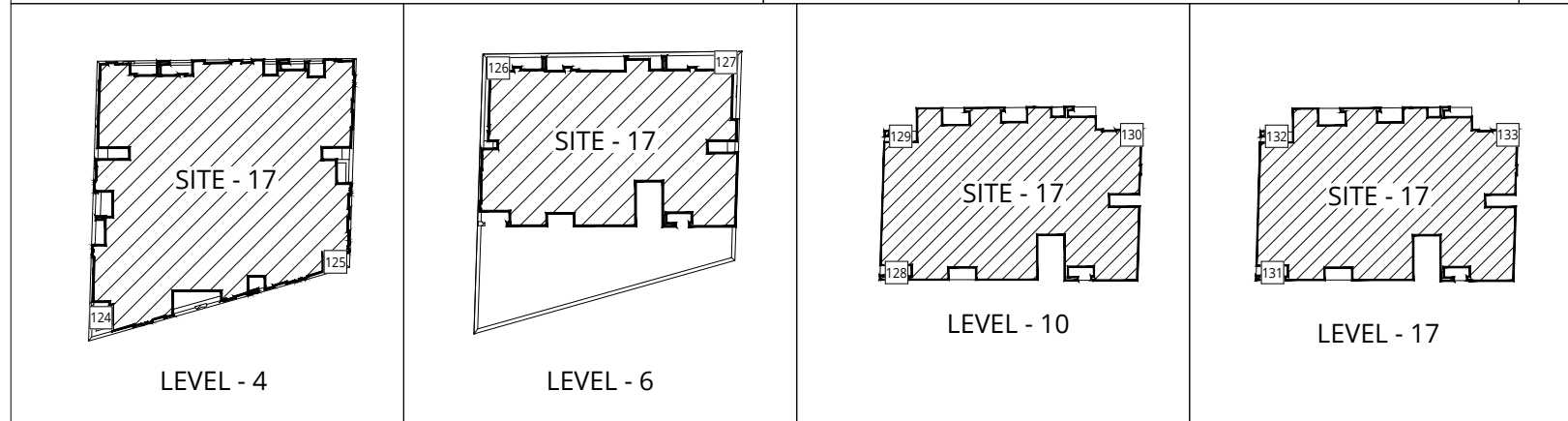
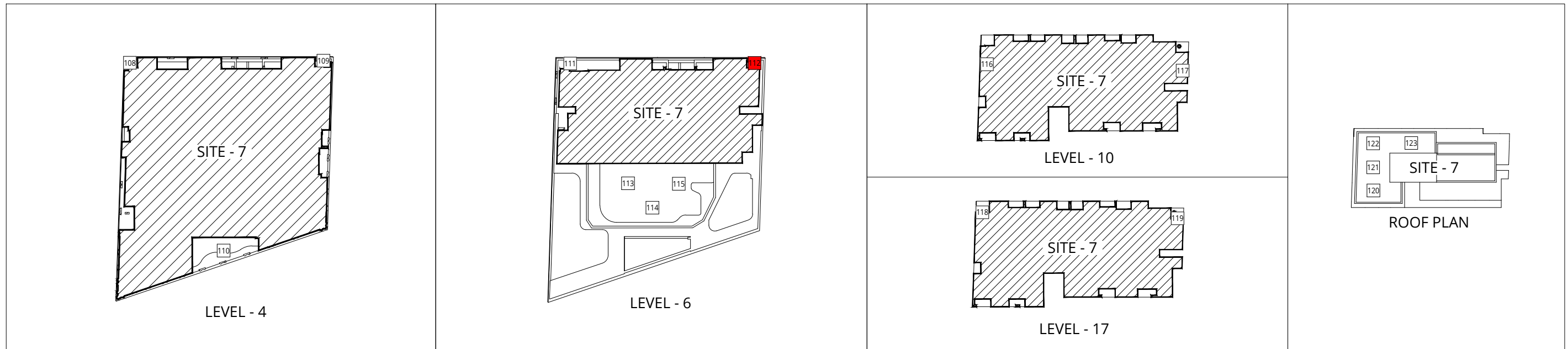
Pedestrian Wind Comfort Conditions
 Future Configuration - Grade level
 Annual (January to December, 6:00 to 22:00)
 Green Square Stage 3 - Sydney, Australia

True North

Project #2512280

Drawn by: AKA	Figure: 2.1C
Approx. Scale: 1:1000	
Date Revised: Dec. 10, 2025	

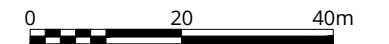




LEGEND:

SAFETY CATEGORIES:
 Pass ———— ○
 Exceeded ———— ●

SENSOR LOCATION:
 □ Balconies & Terraces



Pedestrian Wind Comfort Conditions
 Proposed Configuration - Balconies & Terraces
 Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



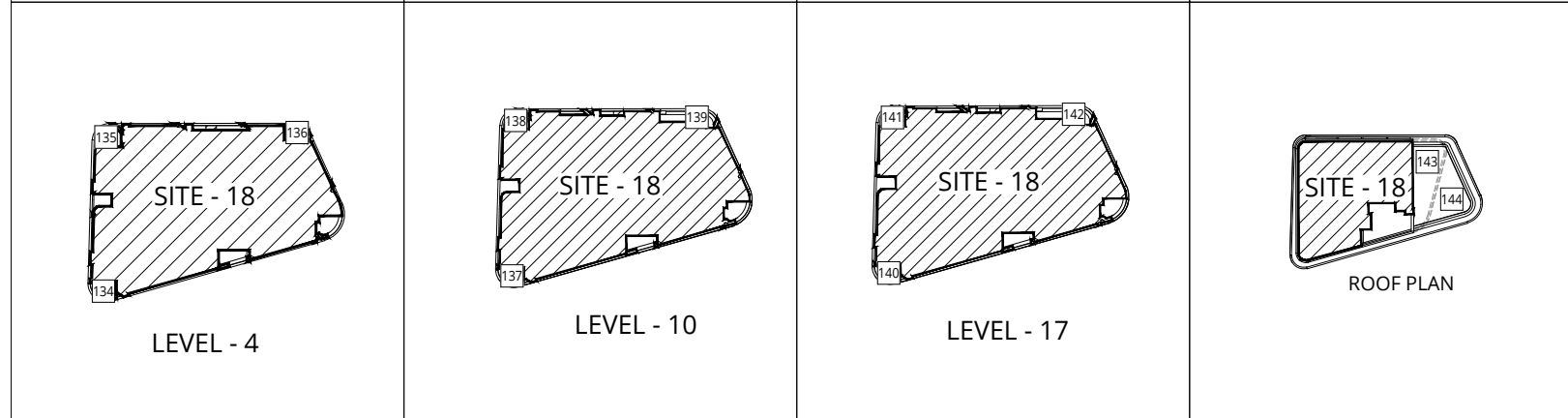
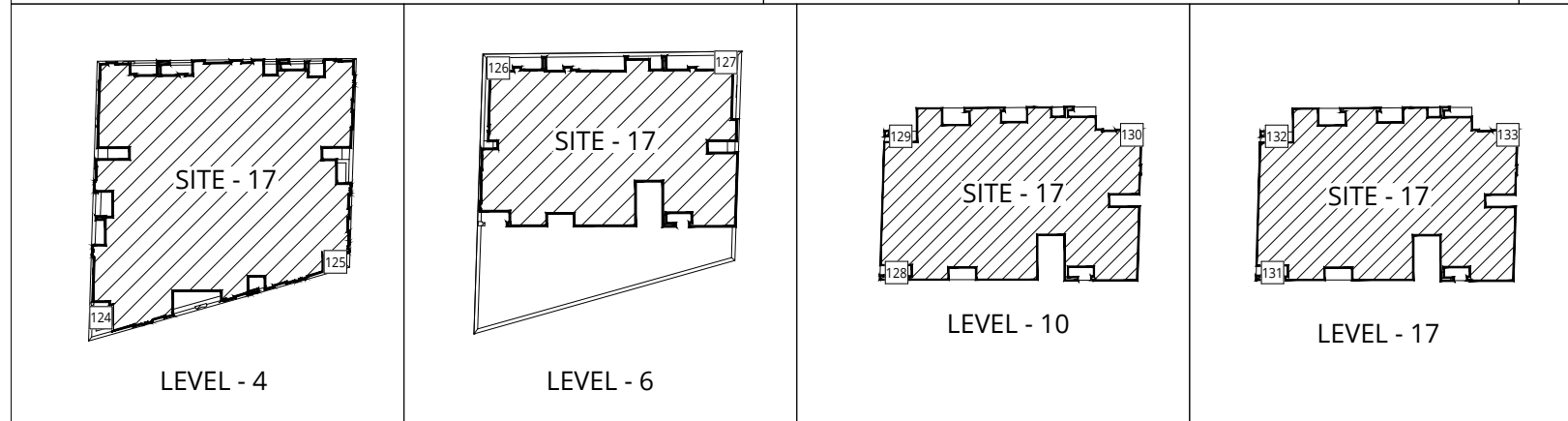
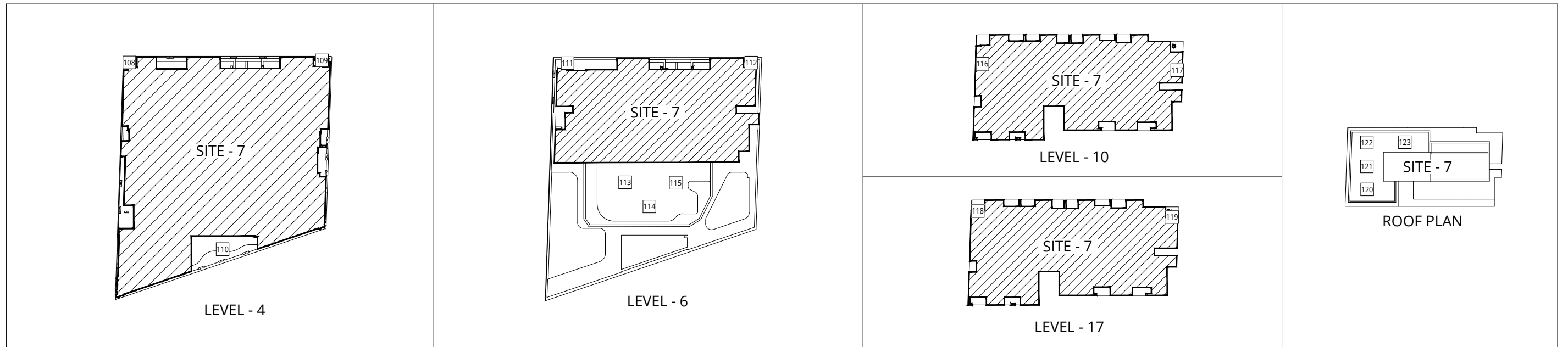
Drawn by: AKA Figure: 2.2B

Approx. Scale: 1:1000

Date Revised: Dec. 10, 2025

Project #2512280

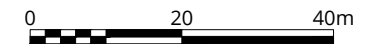




LEGEND:

SAFETY CATEGORIES:
 Pass ———— ○
 Exceeded ———— ●

SENSOR LOCATION:
 □ Balconies & Terraces



Pedestrian Wind Comfort Conditions
 Future Configuration - Balconies & Terraces
 Annual (January to December, 6:00 to 22:00)

Green Square Stage 3 - Sydney, Australia



Drawn by: AKA Figure: 2.2C

Approx. Scale: 1:1000

Date Revised: Dec. 10, 2025

Project #2512280



The page features a decorative background. In the top-left corner, there is a blue right-angled triangle. A large, light-grey circle overlaps the bottom and right sides of the page, with a thin white border separating it from the blue triangle.

TABLES

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
1	Annual	Existing	4.0	Sitting	18	Pass
		Proposed	4.3	Standing	18	Pass
		Future	3.9	Sitting	17	Pass
2	Annual	Existing	7.8	Walking	27	Exceeded
		Proposed	8.1	Uncomfortable	27	Exceeded
		Future	6.7	Walking	22	Pass
3	Annual	Existing	7.2	Walking	27	Exceeded
		Proposed	7.2	Walking	27	Exceeded
		Future	5.6	Standing	22	Pass
4	Annual	Existing	7.1	Walking	29	Exceeded
		Proposed	6.6	Walking	27	Exceeded
		Future	4.9	Standing	19	Pass
5	Annual	Existing	6.5	Walking	23	Pass
		Proposed	6.7	Walking	23	Pass
		Future	5.4	Standing	18	Pass
6	Annual	Existing	7.8	Walking	26	Exceeded
		Proposed	5.6	Standing	19	Pass
		Future	5.0	Standing	17	Pass
7	Annual	Existing	5.7	Standing	19	Pass
		Proposed	4.4	Standing	15	Pass
		Future	4.1	Standing	15	Pass
9	Annual	Existing	6.5	Walking	25	Exceeded
		Proposed	6.6	Walking	26	Exceeded
		Future	5.1	Standing	18	Pass
10	Annual	Existing	7.7	Walking	23	Pass
		Proposed	5.8	Standing	20	Pass
		Future	4.8	Standing	16	Pass
11	Annual	Existing	4.7	Standing	16	Pass
		Proposed	6.3	Walking	24	Pass
		Future	4.3	Standing	15	Pass
12	Annual	Existing	5.3	Standing	21	Pass
		Proposed	5.8	Standing	19	Pass
		Future	4.9	Standing	16	Pass
13	Annual	Existing	4.3	Standing	17	Pass
		Proposed	7.0	Walking	25	Exceeded
		Future	5.0	Standing	19	Pass
14	Annual	Existing	6.0	Standing	22	Pass
		Proposed	5.9	Standing	20	Pass
		Future	5.2	Standing	19	Pass
15	Annual	Existing	7.3	Walking	23	Pass
		Proposed	6.9	Walking	24	Pass
		Future	5.7	Standing	22	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
16	Annual	Existing	7.6	Walking	25	Exceeded
		Proposed	6.7	Walking	23	Pass
		Future	6.0	Standing	21	Pass
17	Annual	Existing	6.4	Walking	23	Pass
		Proposed	5.6	Standing	22	Pass
		Future	4.5	Standing	15	Pass
18	Annual	Existing	6.9	Walking	25	Exceeded
		Proposed	5.5	Standing	22	Pass
		Future	4.3	Standing	14	Pass
19	Annual	Existing	7.8	Walking	24	Exceeded
		Proposed	7.3	Walking	25	Exceeded
		Future	6.6	Walking	24	Pass
20	Annual	Existing	4.6	Standing	18	Pass
		Proposed	5.3	Standing	19	Pass
		Future	4.7	Standing	20	Pass
21	Annual	Existing	5.4	Standing	18	Pass
		Proposed	6.0	Standing	20	Pass
		Future	5.5	Standing	19	Pass
22	Annual	Existing	7.4	Walking	28	Exceeded
		Proposed	7.7	Walking	27	Exceeded
		Future	7.5	Walking	25	Exceeded
23	Annual	Existing	5.8	Standing	21	Pass
		Proposed	5.7	Standing	21	Pass
		Future	5.1	Standing	20	Pass
24	Annual	Existing	6.1	Walking	22	Pass
		Proposed	6.7	Walking	24	Pass
		Future	5.9	Standing	22	Pass
25	Annual	Existing	6.4	Walking	24	Exceeded
		Proposed	7.3	Walking	25	Exceeded
		Future	5.8	Standing	20	Pass
26	Annual	Existing	6.6	Walking	25	Exceeded
		Proposed	7.4	Walking	26	Exceeded
		Future	6.1	Walking	22	Pass
27	Annual	Existing	6.1	Walking	24	Pass
		Proposed	6.7	Walking	23	Pass
		Future	6.0	Standing	20	Pass
28	Annual	Existing	6.4	Walking	24	Exceeded
		Proposed	6.7	Walking	23	Pass
		Future	5.9	Standing	20	Pass
29	Annual	Existing	5.7	Standing	21	Pass
		Proposed	6.1	Walking	21	Pass
		Future	4.3	Standing	16	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
30	Annual	Existing	5.9	Standing	22	Pass
		Proposed	6.3	Walking	22	Pass
		Future	4.9	Standing	16	Pass
31	Annual	Existing	5.5	Standing	19	Pass
		Proposed	6.3	Walking	20	Pass
		Future	5.8	Standing	21	Pass
32	Annual	Existing	5.2	Standing	19	Pass
		Proposed	5.0	Standing	17	Pass
		Future	5.0	Standing	17	Pass
33	Annual	Existing	5.8	Standing	21	Pass
		Proposed	5.7	Standing	21	Pass
		Future	5.6	Standing	20	Pass
34	Annual	Existing	5.6	Standing	21	Pass
		Proposed	6.1	Walking	23	Pass
		Future	5.7	Standing	20	Pass
35	Annual	Existing	4.7	Standing	17	Pass
		Proposed	5.2	Standing	19	Pass
		Future	4.3	Standing	15	Pass
36	Annual	Existing	4.7	Standing	16	Pass
		Proposed	4.5	Standing	16	Pass
		Future	4.1	Standing	14	Pass
37	Annual	Existing	4.5	Standing	17	Pass
		Proposed	4.3	Standing	15	Pass
		Future	5.2	Standing	21	Pass
38	Annual	Existing	5.0	Standing	20	Pass
		Proposed	5.0	Standing	20	Pass
		Future	5.2	Standing	20	Pass
39	Annual	Existing	5.3	Standing	22	Pass
		Proposed	5.1	Standing	20	Pass
		Future	5.4	Standing	20	Pass
40	Annual	Existing	5.6	Standing	25	Exceeded
		Proposed	5.5	Standing	25	Exceeded
		Future	5.8	Standing	23	Pass
41	Annual	Existing	6.7	Walking	27	Exceeded
		Proposed	5.8	Standing	26	Exceeded
		Future	5.3	Standing	22	Pass
42	Annual	Existing	4.5	Standing	16	Pass
		Proposed	4.0	Sitting	15	Pass
		Future	4.8	Standing	20	Pass
43	Annual	Existing	6.8	Walking	27	Exceeded
		Proposed	6.0	Standing	25	Exceeded
		Future	5.5	Standing	22	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
44	Annual	Existing	5.9	Standing	25	Exceeded
		Proposed	5.5	Standing	20	Pass
		Future	5.1	Standing	20	Pass
45	Annual	Existing	4.6	Standing	19	Pass
		Proposed	4.9	Standing	19	Pass
		Future	4.3	Standing	15	Pass
46	Annual	Existing	5.0	Standing	19	Pass
		Proposed	5.8	Standing	21	Pass
		Future	5.2	Standing	19	Pass
47	Annual	Existing	4.7	Standing	19	Pass
		Proposed	5.4	Standing	18	Pass
		Future	4.9	Standing	17	Pass
48	Annual	Existing	4.6	Standing	19	Pass
		Proposed	5.6	Standing	23	Pass
		Future	5.0	Standing	20	Pass
49	Annual	Existing	4.7	Standing	17	Pass
		Proposed	5.7	Standing	20	Pass
		Future	4.8	Standing	17	Pass
50	Annual	Existing	5.1	Standing	19	Pass
		Proposed	5.8	Standing	20	Pass
		Future	5.1	Standing	18	Pass
51	Annual	Existing	5.1	Standing	19	Pass
		Proposed	6.1	Walking	20	Pass
		Future	5.2	Standing	18	Pass
52	Annual	Existing	5.8	Standing	22	Pass
		Proposed	6.6	Walking	21	Pass
		Future	5.7	Standing	18	Pass
53	Annual	Existing	6.7	Walking	24	Pass
		Proposed	5.1	Standing	18	Pass
		Future	5.1	Standing	19	Pass
54	Annual	Existing	7.5	Walking	31	Exceeded
		Proposed	7.4	Walking	32	Exceeded
		Future	6.5	Walking	28	Exceeded
55	Annual	Existing	5.5	Standing	21	Pass
		Proposed	5.2	Standing	21	Pass
		Future	4.9	Standing	20	Pass
56	Annual	Existing	6.9	Walking	28	Exceeded
		Proposed	6.0	Standing	23	Pass
		Future	5.6	Standing	23	Pass
57	Annual	Existing	5.2	Standing	19	Pass
		Proposed	5.9	Standing	22	Pass
		Future	5.1	Standing	18	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
58	Annual	Existing	4.9	Standing	18	Pass
		Proposed	6.0	Standing	21	Pass
		Future	5.3	Standing	17	Pass
59	Annual	Existing	4.8	Standing	18	Pass
		Proposed	5.9	Standing	19	Pass
		Future	5.2	Standing	16	Pass
60	Annual	Existing	4.0	Sitting	15	Pass
		Proposed	6.0	Standing	19	Pass
		Future	5.2	Standing	16	Pass
61	Annual	Existing	4.9	Standing	18	Pass
		Proposed	6.3	Walking	20	Pass
		Future	5.3	Standing	16	Pass
62	Annual	Existing	7.4	Walking	22	Pass
		Proposed	6.3	Walking	20	Pass
		Future	5.5	Standing	18	Pass
63	Annual	Existing	6.9	Walking	25	Exceeded
		Proposed	6.2	Walking	22	Pass
		Future	5.2	Standing	18	Pass
64	Annual	Existing	7.3	Walking	24	Exceeded
		Proposed	6.6	Walking	22	Pass
		Future	5.8	Standing	20	Pass
65	Annual	Existing	7.3	Walking	31	Exceeded
		Proposed	7.5	Walking	30	Exceeded
		Future	5.4	Standing	20	Pass
66	Annual	Existing	7.1	Walking	25	Exceeded
		Proposed	7.4	Walking	25	Exceeded
		Future	6.5	Walking	22	Pass
67	Annual	Existing	6.9	Walking	22	Pass
		Proposed	8.0	Walking	25	Exceeded
		Future	6.8	Walking	22	Pass
68	Annual	Existing	7.2	Walking	23	Pass
		Proposed	5.3	Standing	19	Pass
		Future	4.6	Standing	16	Pass
69	Annual	Existing	5.3	Standing	18	Pass
		Proposed	4.1	Standing	14	Pass
		Future	3.4	Sitting	11	Pass
70	Annual	Existing	5.3	Standing	18	Pass
		Proposed	4.9	Standing	17	Pass
		Future	4.4	Standing	15	Pass
71	Annual	Existing	5.2	Standing	19	Pass
		Proposed	8.0	Walking	26	Exceeded
		Future	6.5	Walking	20	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
72	Annual	Existing	4.8	Standing	18	Pass
		Proposed	7.0	Walking	23	Pass
		Future	5.8	Standing	19	Pass
73	Annual	Existing	4.9	Standing	17	Pass
		Proposed	5.1	Standing	16	Pass
		Future	4.5	Standing	15	Pass
74	Annual	Existing	5.2	Standing	20	Pass
		Proposed	6.1	Walking	20	Pass
		Future	5.6	Standing	19	Pass
75	Annual	Existing	5.7	Standing	20	Pass
		Proposed	7.5	Walking	24	Pass
		Future	6.3	Walking	20	Pass
76	Annual	Existing	6.6	Walking	21	Pass
		Proposed	6.6	Walking	25	Exceeded
		Future	5.2	Standing	17	Pass
77	Annual	Existing	7.0	Walking	21	Pass
		Proposed	5.4	Standing	20	Pass
		Future	5.5	Standing	20	Pass
78	Annual	Existing	6.8	Walking	22	Pass
		Proposed	6.1	Walking	23	Pass
		Future	6.1	Walking	22	Pass
79	Annual	Existing	6.6	Walking	25	Exceeded
		Proposed	8.1	Uncomfortable	29	Exceeded
		Future	7.9	Walking	28	Exceeded
80	Annual	Existing	7.7	Walking	26	Exceeded
		Proposed	7.9	Walking	22	Pass
		Future	7.6	Walking	22	Pass
81	Annual	Existing	7.2	Walking	25	Exceeded
		Proposed	5.3	Standing	24	Pass
		Future	4.4	Standing	18	Pass
82	Annual	Existing	6.7	Walking	25	Exceeded
		Proposed	7.6	Walking	26	Exceeded
		Future	6.1	Walking	23	Pass
83	Annual	Existing	6.7	Walking	25	Exceeded
		Proposed	5.9	Standing	22	Pass
		Future	5.2	Standing	18	Pass
84	Annual	Existing	6.9	Walking	25	Exceeded
		Proposed	5.2	Standing	20	Pass
		Future	4.7	Standing	17	Pass
85	Annual	Existing	6.4	Walking	24	Pass
		Proposed	7.1	Walking	24	Pass
		Future	6.1	Walking	19	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
86	Annual	Existing	5.7	Standing	22	Pass
		Proposed	7.0	Walking	24	Pass
		Future	5.8	Standing	19	Pass
87	Annual	Existing	5.3	Standing	20	Pass
		Proposed	6.0	Standing	23	Pass
		Future	4.6	Standing	19	Pass
88	Annual	Existing	5.3	Standing	20	Pass
		Proposed	5.7	Standing	21	Pass
		Future	5.0	Standing	19	Pass
89	Annual	Existing	5.1	Standing	19	Pass
		Proposed	5.7	Standing	21	Pass
		Future	5.0	Standing	19	Pass
90	Annual	Existing	4.7	Standing	18	Pass
		Proposed	6.1	Walking	21	Pass
		Future	5.1	Standing	16	Pass
91	Annual	Existing	4.8	Standing	18	Pass
		Proposed	5.8	Standing	20	Pass
		Future	5.2	Standing	17	Pass
92	Annual	Existing	4.9	Standing	18	Pass
		Proposed	5.5	Standing	20	Pass
		Future	4.7	Standing	17	Pass
93	Annual	Existing	5.4	Standing	21	Pass
		Proposed	5.1	Standing	19	Pass
		Future	4.9	Standing	19	Pass
94	Annual	Existing	6.4	Walking	25	Exceeded
		Proposed	4.3	Standing	17	Pass
		Future	4.5	Standing	18	Pass
95	Annual	Existing	6.4	Walking	25	Exceeded
		Proposed	5.4	Standing	20	Pass
		Future	4.8	Standing	17	Pass
96	Annual	Existing	4.6	Standing	16	Pass
		Proposed	5.7	Standing	20	Pass
		Future	5.4	Standing	19	Pass
97	Annual	Existing	5.8	Standing	19	Pass
		Proposed	6.6	Walking	21	Pass
		Future	5.5	Standing	18	Pass
98	Annual	Existing	4.9	Standing	18	Pass
		Proposed	6.5	Walking	22	Pass
		Future	5.4	Standing	17	Pass
99	Annual	Existing	4.9	Standing	17	Pass
		Proposed	5.8	Standing	20	Pass
		Future	4.6	Standing	16	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
100	Annual	Existing	4.7	Standing	16	Pass
		Proposed	7.3	Walking	24	Pass
		Future	6.1	Walking	19	Pass
101	Annual	Existing	5.4	Standing	19	Pass
		Proposed	5.7	Standing	19	Pass
		Future	5.0	Standing	18	Pass
102	Annual	Existing	4.8	Standing	17	Pass
		Proposed	6.3	Walking	19	Pass
		Future	5.4	Standing	16	Pass
103	Annual	Existing	4.5	Standing	16	Pass
		Proposed	6.2	Walking	21	Pass
		Future	5.3	Standing	17	Pass
104	Annual	Existing	5.7	Standing	22	Pass
		Proposed	6.1	Walking	22	Pass
		Future	4.9	Standing	18	Pass
105	Annual	Existing	6.3	Walking	22	Pass
		Proposed	7.5	Walking	25	Exceeded
		Future	5.8	Standing	18	Pass
106	Annual	Existing	6.5	Walking	23	Pass
		Proposed	8.1	Uncomfortable	28	Exceeded
		Future	6.7	Walking	22	Pass
107	Annual	Existing	6.5	Walking	25	Exceeded
		Proposed	8.3	Uncomfortable	27	Exceeded
		Future	6.2	Walking	20	Pass
108	Annual	Existing	-	N/A	-	N/A
		Proposed	5.1	Standing	17	Pass
		Future	4.9	Standing	16	Pass
109	Annual	Existing	-	N/A	-	N/A
		Proposed	4.9	Standing	17	Pass
		Future	4.6	Standing	16	Pass
110	Annual	Existing	-	N/A	-	N/A
		Proposed	4.1	Standing	16	Pass
		Future	3.4	Sitting	12	Pass
111	Annual	Existing	-	N/A	-	N/A
		Proposed	6.1	Walking	21	Pass
		Future	5.8	Standing	20	Pass
112	Annual	Existing	-	N/A	-	N/A
		Proposed	7.0	Walking	25	Exceeded
		Future	6.6	Walking	23	Pass
113	Annual	Existing	-	N/A	-	N/A
		Proposed	5.5	Standing	20	Pass
		Future	4.7	Standing	18	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
114	Annual	Existing	-	N/A	-	N/A
		Proposed	5.8	Standing	21	Pass
		Future	5.1	Standing	18	Pass
115	Annual	Existing	-	N/A	-	N/A
		Proposed	5.4	Standing	20	Pass
		Future	4.9	Standing	18	Pass
116	Annual	Existing	-	N/A	-	N/A
		Proposed	6.1	Walking	21	Pass
		Future	5.8	Standing	21	Pass
117	Annual	Existing	-	N/A	-	N/A
		Proposed	6.8	Walking	21	Pass
		Future	6.4	Walking	20	Pass
118	Annual	Existing	-	N/A	-	N/A
		Proposed	3.7	Sitting	13	Pass
		Future	3.5	Sitting	13	Pass
119	Annual	Existing	-	N/A	-	N/A
		Proposed	6.5	Walking	21	Pass
		Future	6.2	Walking	20	Pass
120	Annual	Existing	-	N/A	-	N/A
		Proposed	6.0	Standing	23	Pass
		Future	4.9	Standing	17	Pass
121	Annual	Existing	-	N/A	-	N/A
		Proposed	5.7	Standing	22	Pass
		Future	4.8	Standing	19	Pass
122	Annual	Existing	-	N/A	-	N/A
		Proposed	5.5	Standing	24	Pass
		Future	4.6	Standing	20	Pass
123	Annual	Existing	-	N/A	-	N/A
		Proposed	4.7	Standing	16	Pass
		Future	4.6	Standing	16	Pass
124	Annual	Existing	-	N/A	-	N/A
		Proposed	5.8	Standing	20	Pass
		Future	5.3	Standing	21	Pass
125	Annual	Existing	-	N/A	-	N/A
		Proposed	4.9	Standing	18	Pass
		Future	4.0	Sitting	16	Pass
126	Annual	Existing	-	N/A	-	N/A
		Proposed	4.4	Standing	15	Pass
		Future	4.2	Standing	14	Pass
127	Annual	Existing	-	N/A	-	N/A
		Proposed	6.2	Walking	22	Pass
		Future	5.8	Standing	21	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
128	Annual	Existing	-	N/A	-	N/A
		Proposed	4.6	Standing	19	Pass
		Future	3.7	Sitting	15	Pass
129	Annual	Existing	-	N/A	-	N/A
		Proposed	4.1	Standing	14	Pass
		Future	3.9	Sitting	13	Pass
130	Annual	Existing	-	N/A	-	N/A
		Proposed	4.4	Standing	15	Pass
		Future	4.1	Standing	14	Pass
131	Annual	Existing	-	N/A	-	N/A
		Proposed	4.6	Standing	18	Pass
		Future	4.1	Standing	16	Pass
132	Annual	Existing	-	N/A	-	N/A
		Proposed	4.6	Standing	18	Pass
		Future	4.2	Standing	14	Pass
133	Annual	Existing	-	N/A	-	N/A
		Proposed	5.0	Standing	16	Pass
		Future	4.6	Standing	15	Pass
134	Annual	Existing	-	N/A	-	N/A
		Proposed	4.2	Standing	19	Pass
		Future	2.7	Sitting	12	Pass
135	Annual	Existing	-	N/A	-	N/A
		Proposed	3.7	Sitting	13	Pass
		Future	3.4	Sitting	12	Pass
136	Annual	Existing	-	N/A	-	N/A
		Proposed	2.9	Sitting	11	Pass
		Future	2.7	Sitting	10	Pass
137	Annual	Existing	-	N/A	-	N/A
		Proposed	4.5	Standing	17	Pass
		Future	4.0	Sitting	15	Pass
138	Annual	Existing	-	N/A	-	N/A
		Proposed	3.7	Sitting	12	Pass
		Future	3.5	Sitting	12	Pass
139	Annual	Existing	-	N/A	-	N/A
		Proposed	3.8	Sitting	14	Pass
		Future	3.4	Sitting	13	Pass
140	Annual	Existing	-	N/A	-	N/A
		Proposed	4.5	Standing	20	Pass
		Future	3.9	Sitting	18	Pass
141	Annual	Existing	-	N/A	-	N/A
		Proposed	3.7	Sitting	16	Pass
		Future	3.9	Sitting	16	Pass



Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Season	Configuration	Wind Comfort		Wind Safety	
			Speed (m/s)	Rating	Speed (m/s)	Rating
142	Annual	Existing	-	N/A	-	N/A
		Proposed	3.2	Sitting	11	Pass
		Future	3.2	Sitting	10	Pass
143	Annual	Existing	-	N/A	-	N/A
		Proposed	4.9	Standing	16	Pass
		Future	4.5	Standing	15	Pass
144	Annual	Existing	-	N/A	-	N/A
		Proposed	4.6	Standing	15	Pass
		Future	4.5	Standing	14	Pass

Seasons	Months	Hours	Wind Comfort (m/s)		Wind Safety (m/s)	
Annual	January - December	6:00 - 22:00	≤ 4	Sitting	≤ 24	Pass
			≤ 6	Standing	> 24	Exceeded
			≤ 8	Walking		
			> 8	Uncomfortable		

Configurations

- Existing** Existing site and surroundings
- Proposed** Project with existing surroundings
- Future** Project with future surroundings