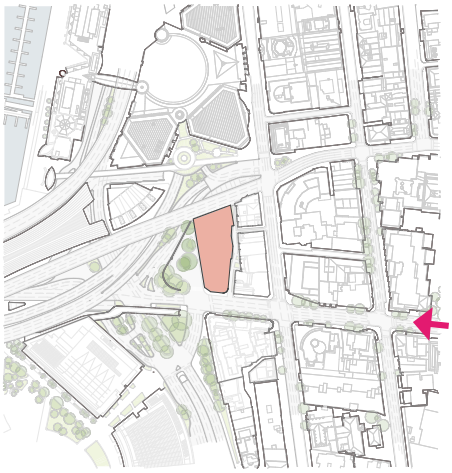
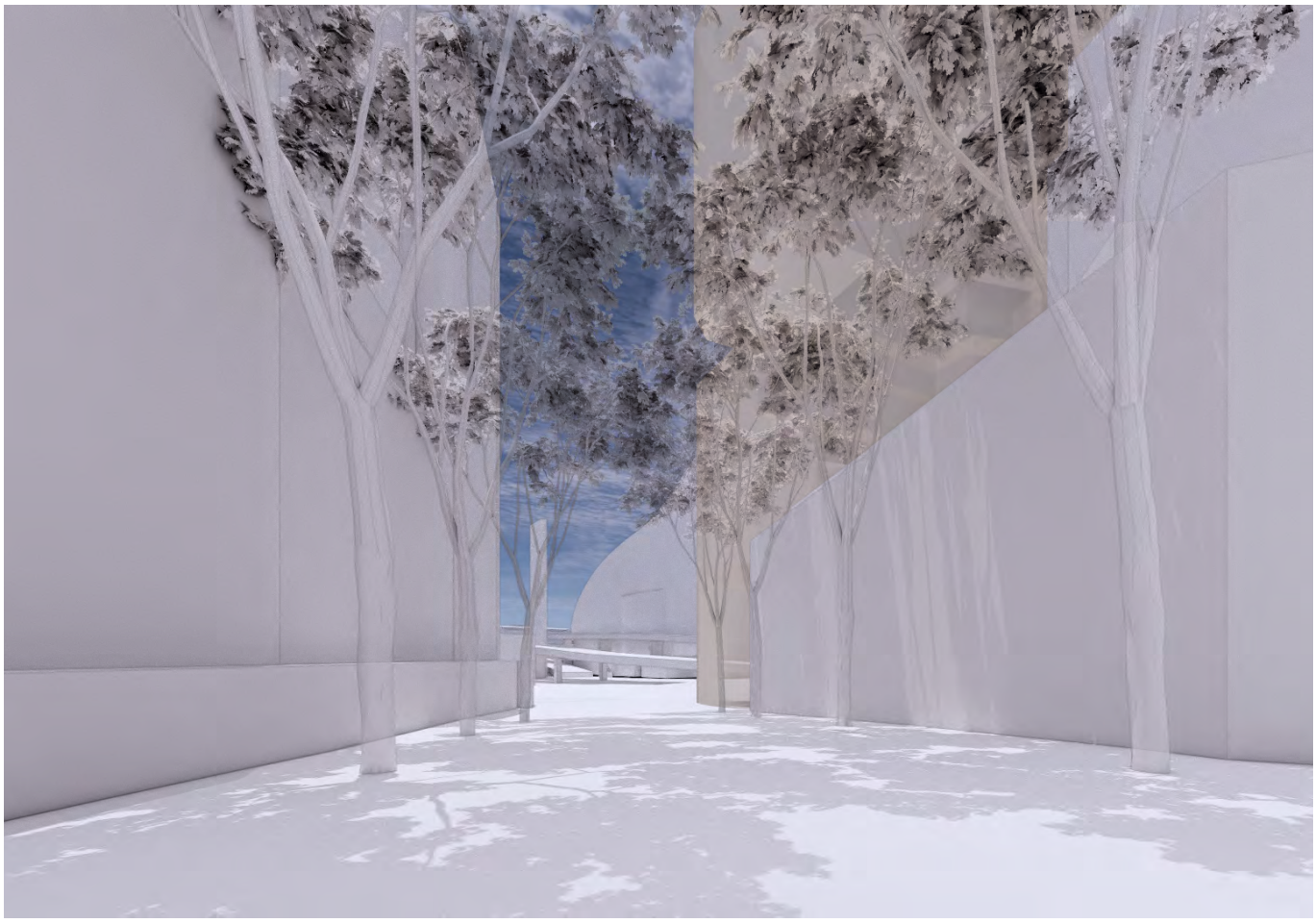
# Attachment A2

## Urban design report - Part 4

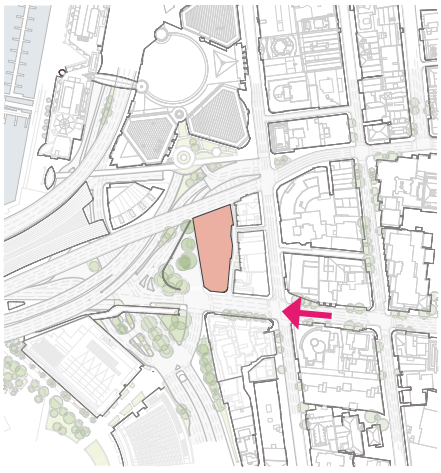
# KEY PEDESTRIAN STREET VIEWS

## George Street – Bathurst Street Intersection



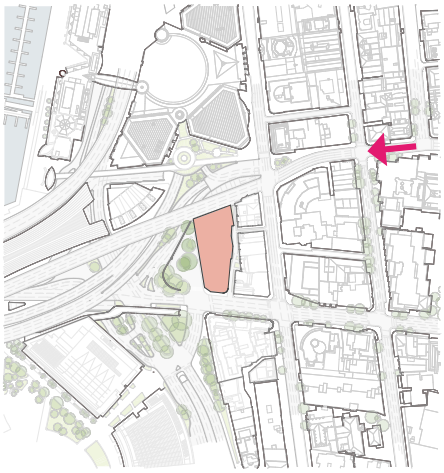



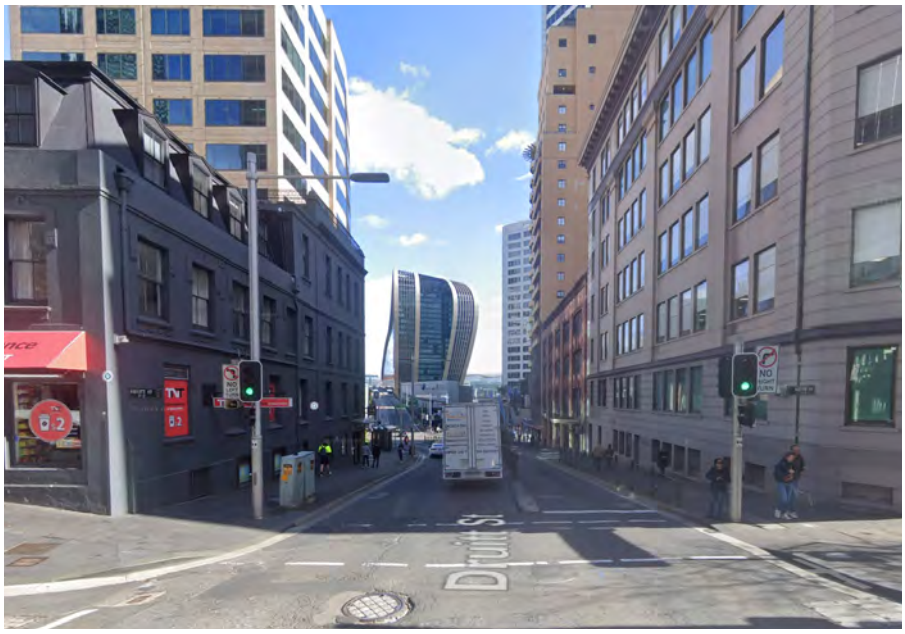

## Sussex Street – Bathurst Street Intersection

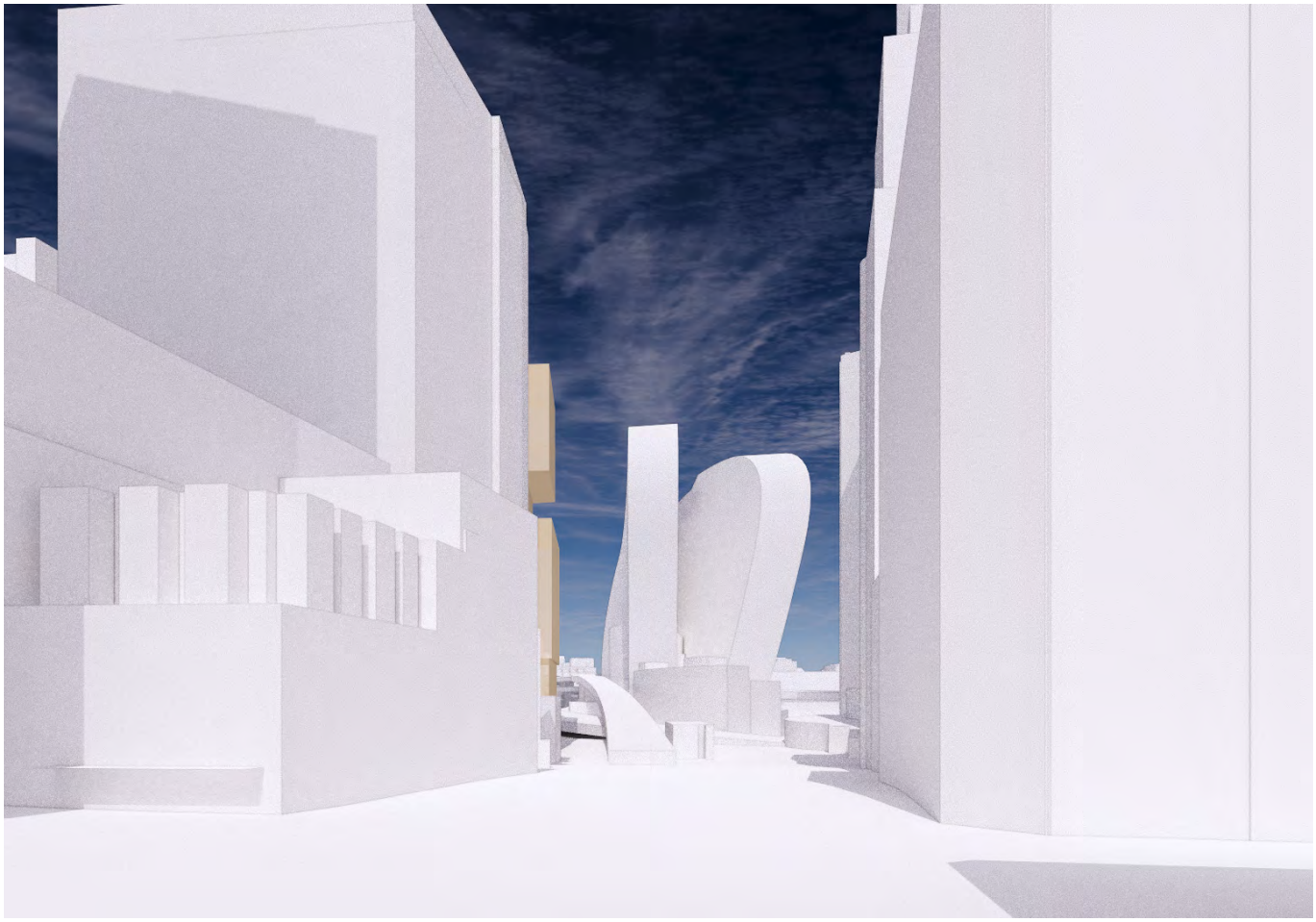


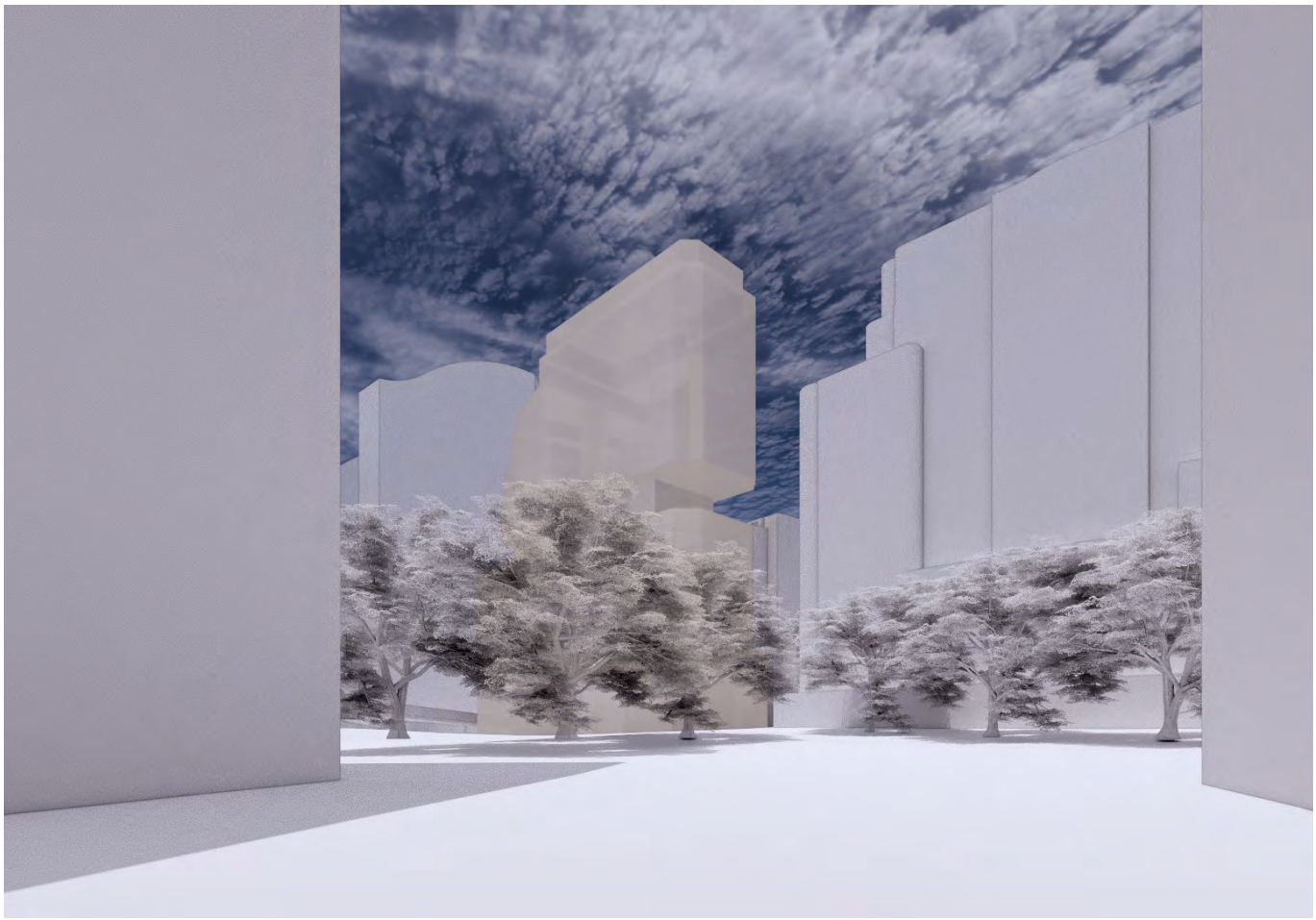
# KEY PEDESTRIAN STREET VIEWS

## Druitt Street – Kent Street Intersection

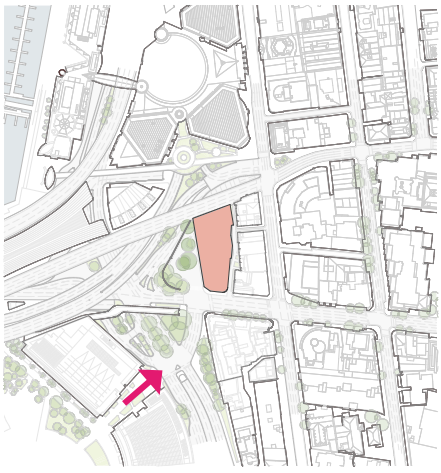




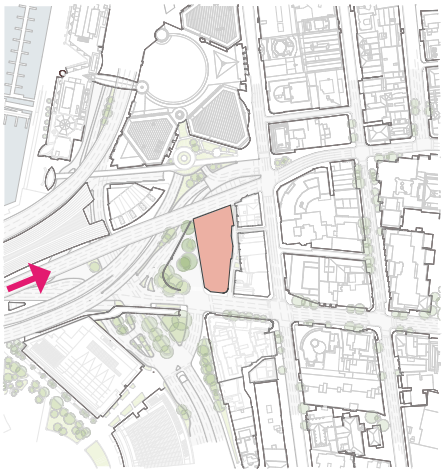


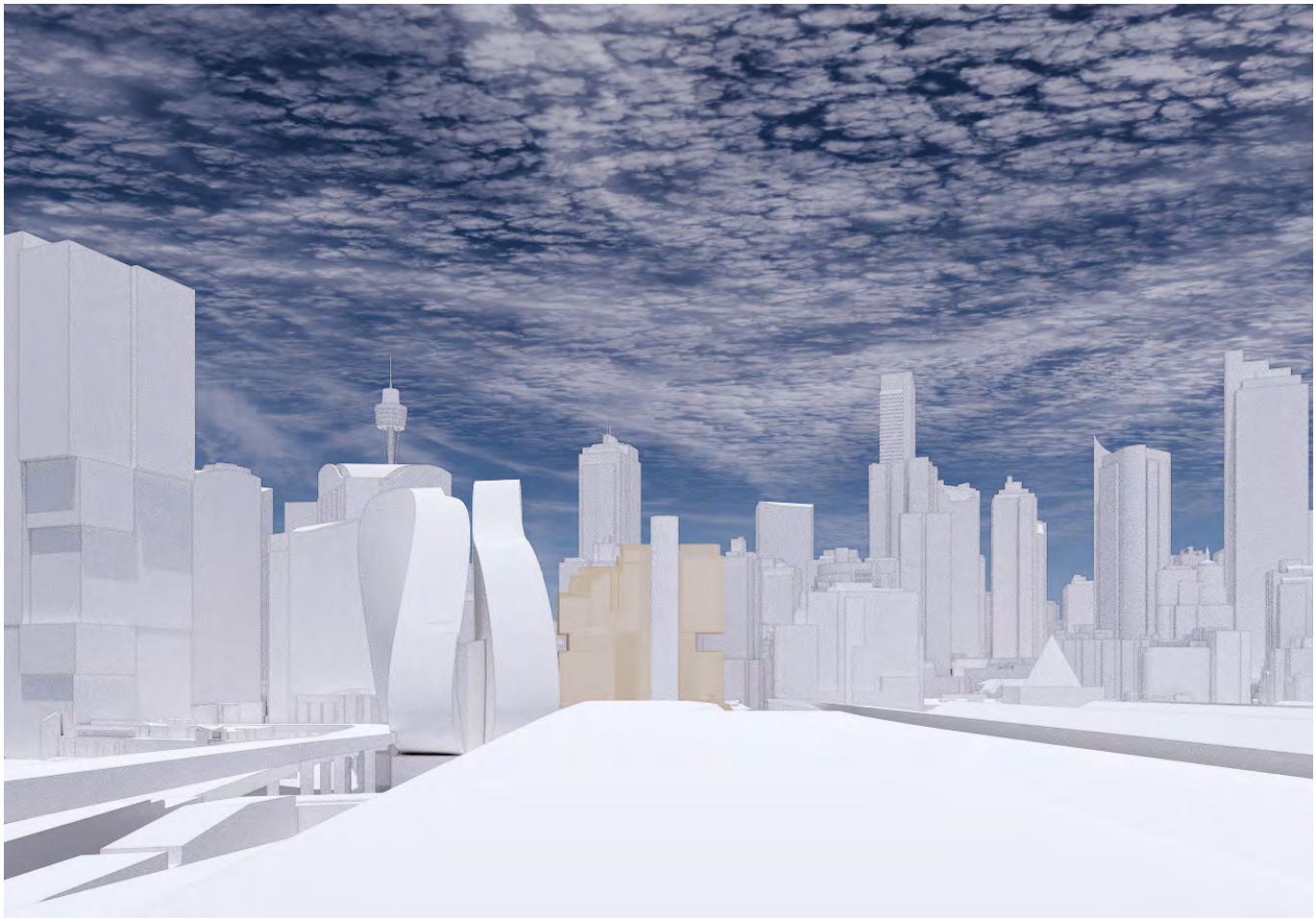
## Darling Harbour Walk

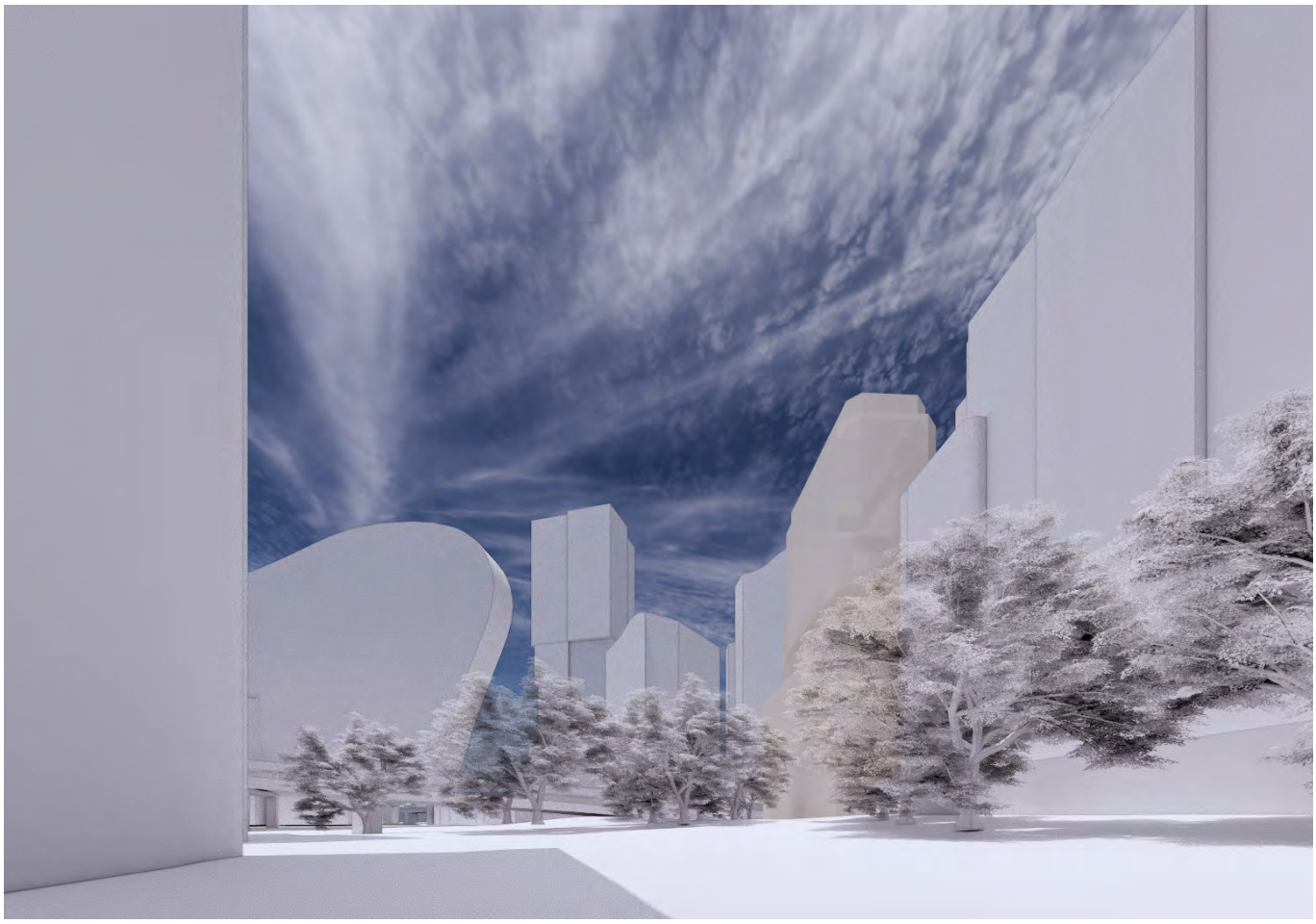


# KEY PEDESTRIAN STREET VIEWS

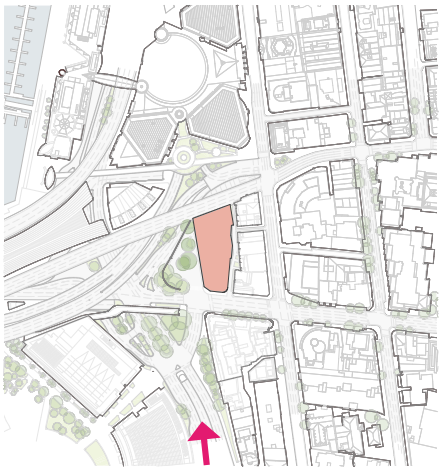
## Western Distributor







## Harbour Street

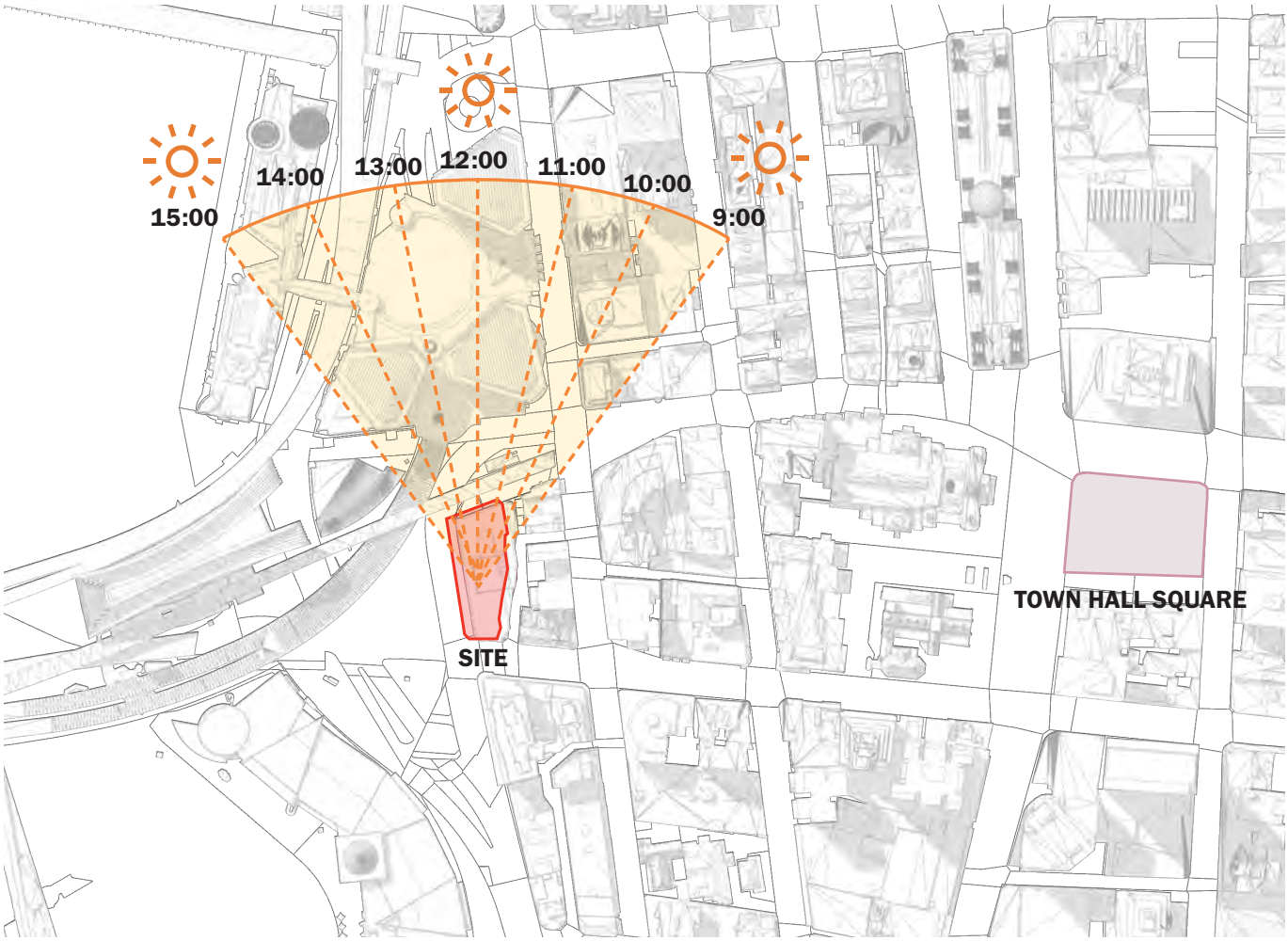


# SOLAR ANALYSIS

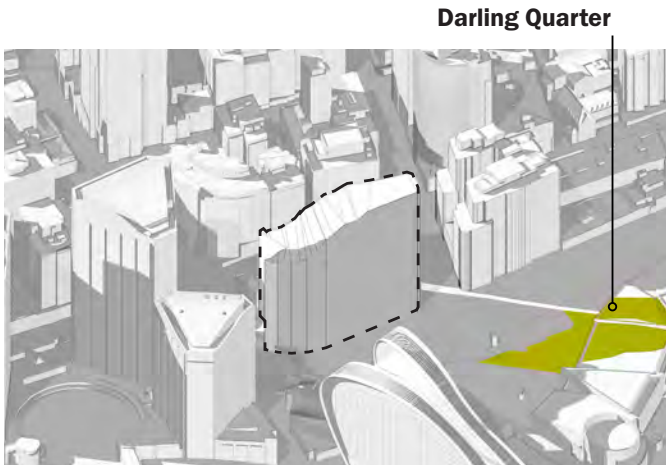
# HOW DO SHADOWS MOVE ACROSS THE SITE?

## Winter Solstice 09:00-15:00

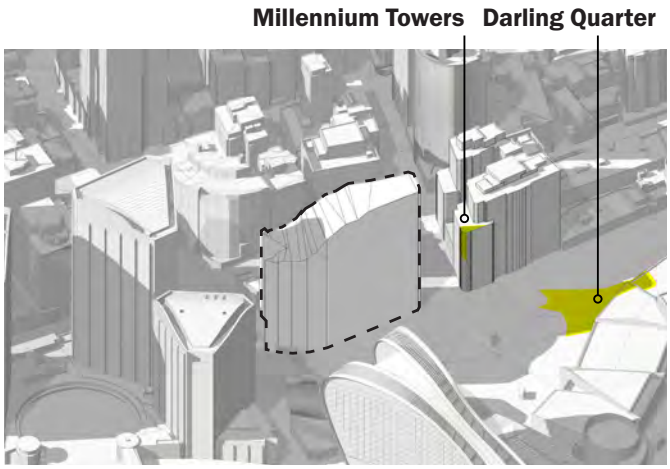
## Understanding Overshadowing Impact On Adjacent Buildings



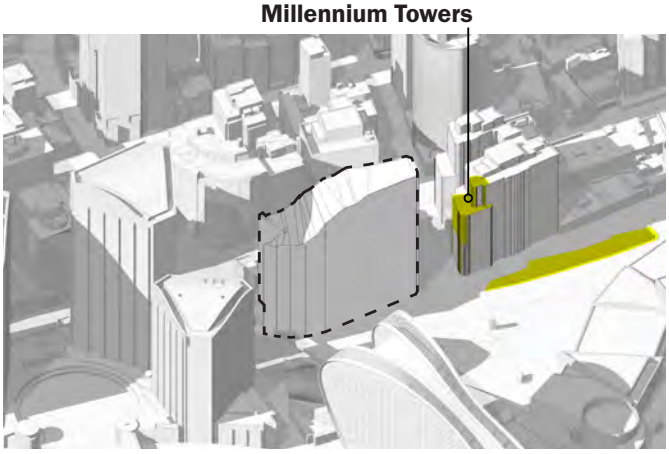

→ The site sits north of residential buildings along Bathurst street.




10:00



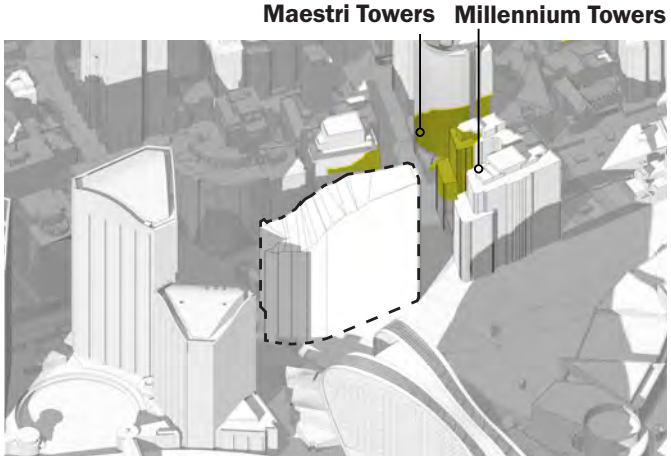

11:00




12:00


13:00


14:00




15:00

→ The Town Hall envelope massing will cast shadows on the neighbouring Millennium Towers between 11:00 AM and 3:00 PM and on Maestri Towers between 2:00 PM and 3:00 PM during the winter solstice.

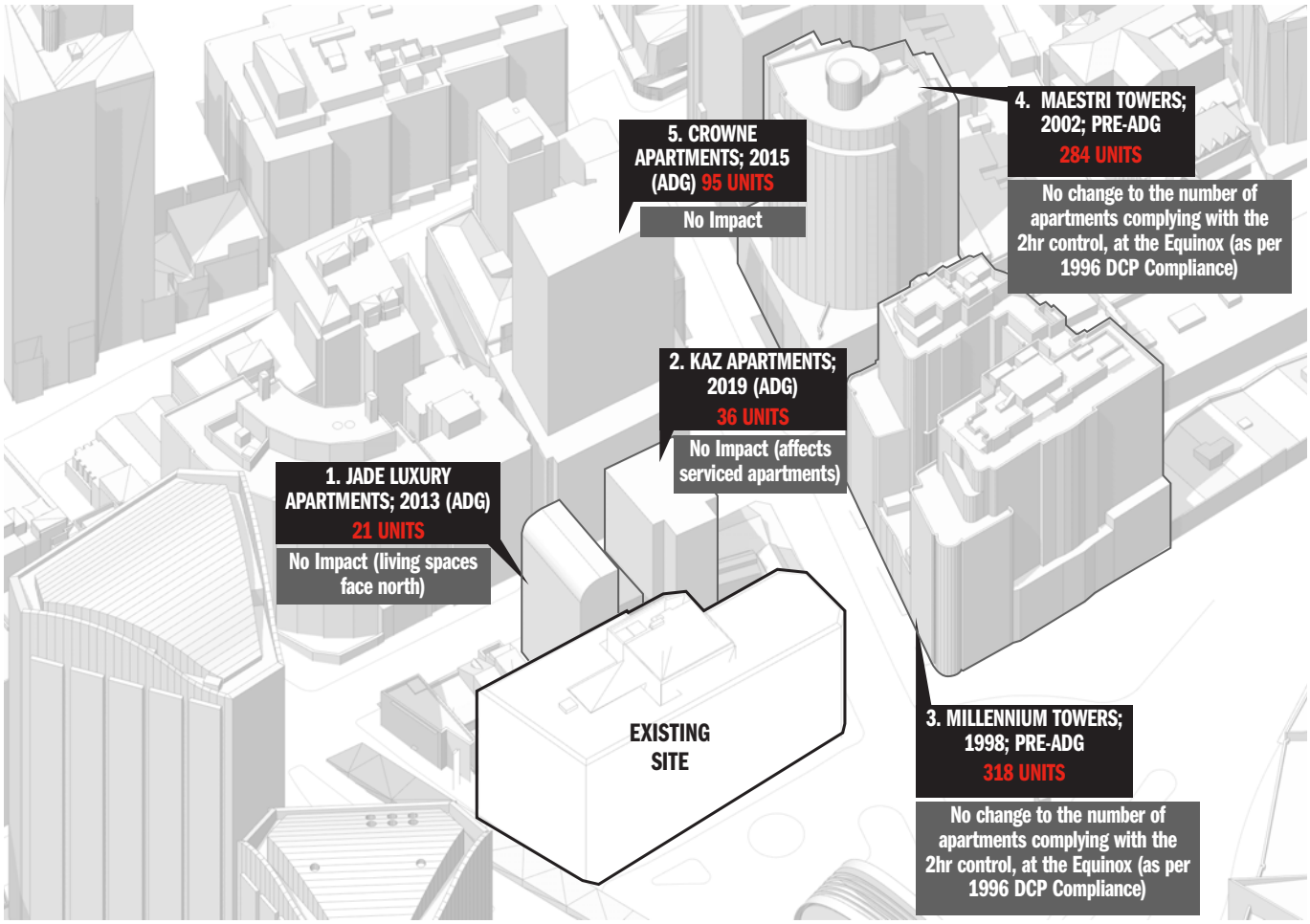
# OVERSHADOWING IMPACT

## Overshadowing Impact to Neighbouring Residential Buildings


## Future Context and Building Heights Around the Site; Changing Context Predominantly 20 Storeys+

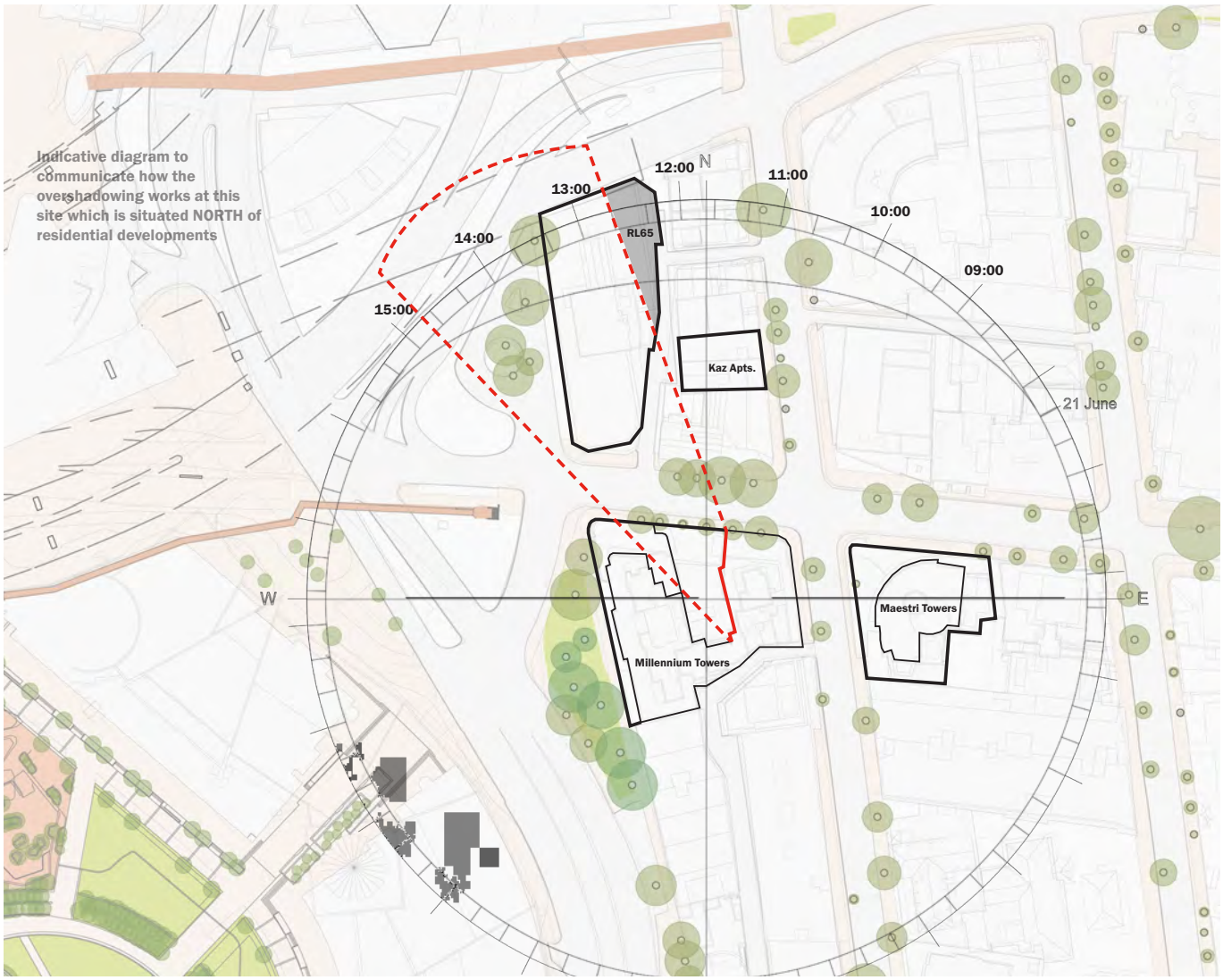
Neighbouring Developments:

1. Jade Apartments 267 Sussex St.; 12 Storeys
2. Kaz Tower 273-279 Sussex St.; 13 Storeys
3. Millennium Towers 289-295 Sussex St.; 22 Storeys
4. Maestri Towers 298 Sussex St.; 26 Storeys
5. Crowne Plaza 58 Bathurst St.; 27 Storeys
6. Cockle Bay Towers; 40 Storeys


5. CROWNE APARTMENTS; 2015 (ADG) 95 UNITS
No Impact
4. MAESTRI TOWERS; 2002; PRE-ADG
284 UNITS
No change to the number of apartments complying with the 2hr control, at the Equinox (as per 1996 DCP Compliance)
2. KAZ APARTMENTS; 2019 (ADG)
36 UNITS
No Impact (affects serviced apartments)
1. JADE LUXURY APARTMENTS; 2013 (ADG)
21 UNITS
No Impact (living spaces face north)
EXISTING SITE
3. MILLENNIUM TOWERS; 1998; PRE-ADG
318 UNITS
No change to the number of apartments complying with the 2hr control, at the Equinox (as per 1996 DCP Compliance)

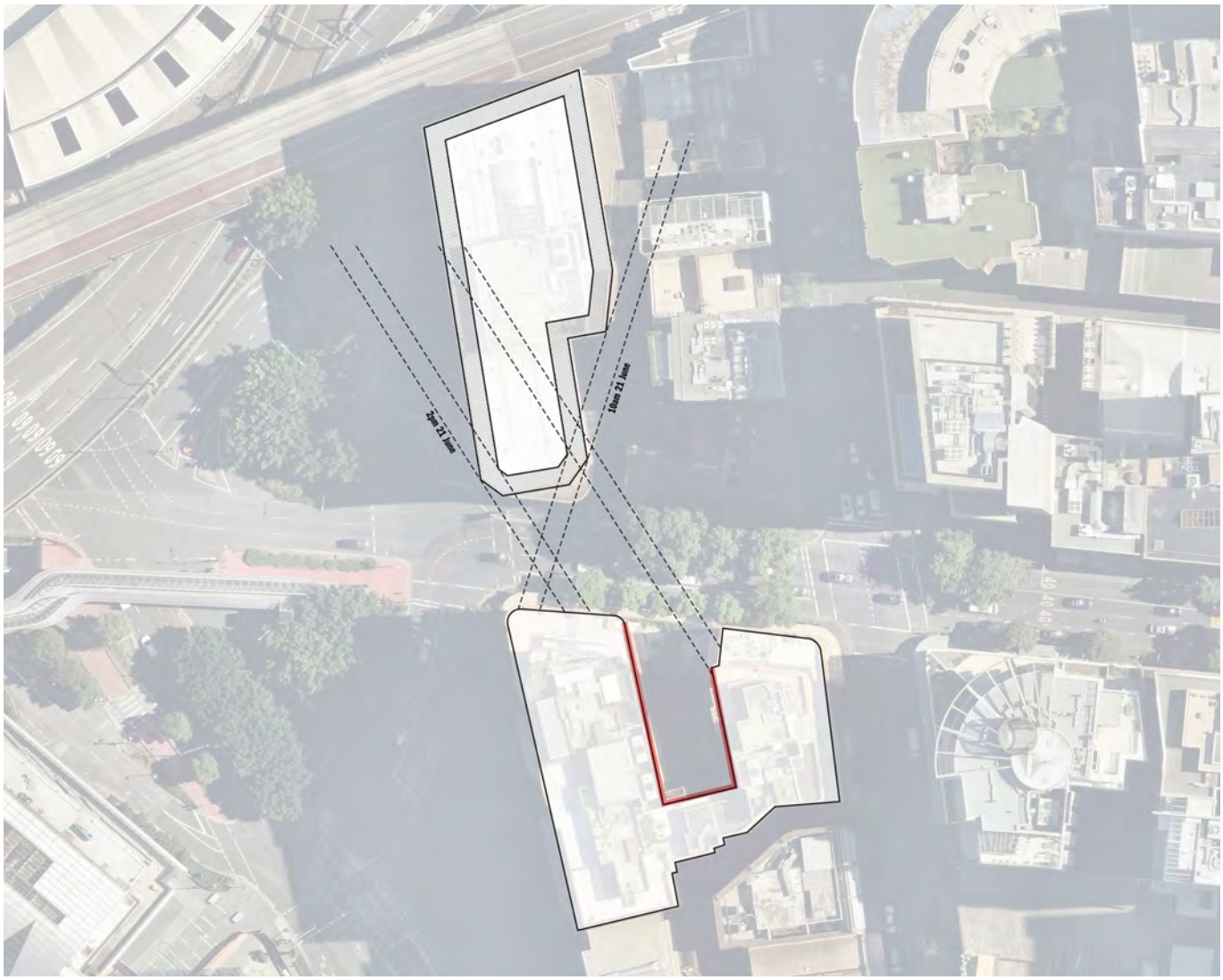
# OVERSHADOWING IMPACT

## Overshadowing Impact to Neighbouring Residential Buildings




## Sun Path Overview

- → The largest impact that 150 day street is having on residential properties is to Millennium Towers.
- → The inner courtyard of Millennium towers is overshadowed by itself during morning hours of the winter solstice dates due to the angular geometry.
- → To preserve the afternoon solar access to the millennium courtyard, the central part of the 150 Day St site must be clear of any building which is not feasible




## Approach To Setbacks

→ Proposed massing aligns to the existing building to enable all existing structure to be retained and strengthened as the building height increases.
→ Current building is reflective of a minimal width for 2 hotel rooms with a central corridor.
→ Overshadowing of the central courtyard apartments to Millennium towers is not affected by setbacks, but rather by the height of any proposal to the north.
→ Building height is impacting the overshadowing of the courtyard and has been mitigated in the schedule 11 massing development proposal.

# SOLAR SUMMARY

## This planning proposal will facilitate development that is consistent with the City's vision for Central Sydney, providing additional employment generating floor space and a new hotel while delivering design excellence and public domain improvements.

Millennium Towers and Maestri Towers, are substantially non-compliant with the ADG design criteria achieving:

- → Millennium Towers
  - → 37% of apartments achieve at least 2 hours of direct solar access in mid winter
  - → 16% of apartments have less than 15 minutes of direct solar access in mid winter
- → Maestri Towers
  - → 29% of apartments achieve at least 2 hours of direct solar access in mid winter
  - → 49% of apartments have less than 15 minutes of direct solar access in mid winter

Despite meeting the minimum building separation distances under ADG, given the existing CBD context and these buildings being located directly south of 150 Day Street, minimising overshadowing in accordance with Council's DCP and Guidelines may unduly restrict future commercial and visitor accommodation growth for the site.

Suggested amendments to DCP Controls:

Millennium Towers and Maestri Towers were both designed prior to 2000 with the relevant development

Controls pre-dating the ADG and Sydney DCP. As such, we consider it reasonable for the consideration of

Solar access controls at the time of assessment.

Maestri Towers (originally approved in 1997), was subject to the development controls of the Central Sydney Development Control Plan 1996. The relevant solar access controls applicable at the time of assessment of Maestri Towers are as follows:

- → 6.1.4. Living rooms and private open space should be the main recipients of sunlight in dwelling units. Where possible, sun access should be for a minimum of two hours per day on the equinox (March 21) measured on the main window of the rooms or at the front edge of the open space. Buildings should be designed to maximise the number of dwelling units with sun access to the principal windows.
- → 6.1.5. On west facing facades subject to direct sunlight, external shading or other energy saving measures should be integrated into the design of residential buildings and serviced apartments. Alternatively, the area of glazing should be restricted to about 2% of the floor area served, in accordance with solar design principles,
- → 6.1.6 The maximum depth of a habitable room from a window providing light and air to that room is to be 10 metres.

Millennium Towers (originally approved December 1995) pre-dates the Central Sydney Development Control

Plan 1996. Following review of Z95-00757, there does not appear to be any consideration for solar access in

The assessment of the proposed apartments. As the solar access controls in Central Sydney Development Control Plan 1996 came into effect soon after the approval of Z95-000757, and in the absence of any other solar access controls at the time of assessment, we consider it reasonable in this instance to consider the Central Sydney Development Control Plan 1996 in determining solar access to Millennium Towers.

Noting the difficulty for older residential development to satisfy current solar access requirements under the ADG and Sydney DCP, we propose that the following provisions be included within the DCP as part of the housekeeping amendment:

- → The assessment of solar access to neighbouring residential development approved prior to the commencement of the ADG, be assessed in accordance with the relevant solar access control at the time, and
- → A reduction in the number of apartments achieving solar access compliance is not reduced by more than 20% (consistent with Objective 3B-2 of the ADG).

# Where a neighbouring residential property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%.

## Millennium Towers (Equinox; Pre-ADG)

**2%**

**Average percentage reduction in solar hours access at equinox.**

NO CHANGE TO THE NUMBER OF APARTMENTS COMPLYING WITH THE 2 HOUR CONTROL

## Maestri Towers (Equinox; Pre-ADG)

**3%**

**Average percentage reduction in solar hours access at equinox.**

NO CHANGE TO THE NUMBER OF APARTMENTS COMPLYING WITH THE 2 HOUR CONTROL

## Kaz Apartments (Winter Solstice; ADG)

**6%**

**Average percentage reduction in solar hours access at equinox.**

2 OUT OF 35 APARTMENTS MOVED FROM OVER 2 HOURS TO UNDER 2 HOURS (6%)

## Jade Apartments (Winter Solstice; ADG)

**0%**

**Percentage reduction in solar hours access at equinox.**

NO CHANGE TO THE NUMBER OF APARTMENTS COMPLYING WITH THE 2 HOUR CONTROL

## Crowne Towers (Winter Solstice; ADG)

**0%**

**Percentage reduction in solar hours access at equinox.**

NO CHANGE TO THE NUMBER OF APARTMENTS COMPLYING WITH THE 2 HOUR CONTROL

# WIND ANALYSIS

# WIND TUNNEL & PEDESTRIAN IMPACT ASSESSMENT

## Massing Development Aligned to Wind Effects

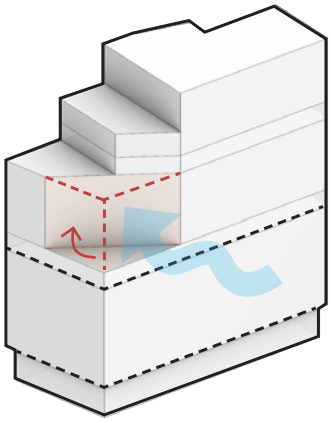
**Anytime a building height is increased, down-drafts from the facade onto the street must be assessed and considered through design. This building massing has been designed to minimise down-drafts from the taller façades.**

Through ongoing workshops with the Wind Consultant, two reports have been developed - A Pedestrian Environment Statement & A Wind Tunnel Assessment.

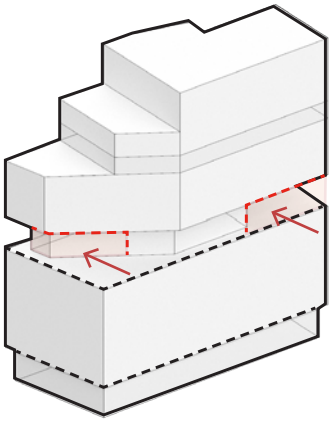
The wind consultants Pedestrian Wind Environment Statement evaluates the impact of the proposed development on local wind conditions, underscoring the necessity for design modifications such as impermeable awnings and perimeter screening. These adjustments aim to enhance pedestrian comfort in outdoor spaces, including ground-level footpaths and amenity floor terraces in the upper massing.

The initial massing of the building was iteratively tested in a Wind Tunnel Assessment to ensure alignment with existing conditions.

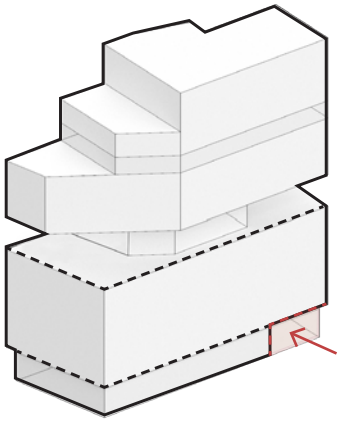
During a collaborative workshop with the wind consultant, significant massing strategies were proposed to counteract the down-wash effects of westerly winds, which have influenced the building's overall form. These strategies include an 8-meter high void across levels 11 and 12 on the northern and southerns aspect of the building enhancing both wind mitigation and the architectural character of the development.



NW winds result in recessing the corners at the north of the site to address strong winds.



To minimise down-drafts to bathurst street voids between the new and existing massing have been exaggerated.



To reduce wind speeds at the corner of Day Street and Bathurst Street, a recess at ground floor has been exaggerated.

# WIND TUNNEL & PEDESTRIAN IMPACT ASSESSMENT

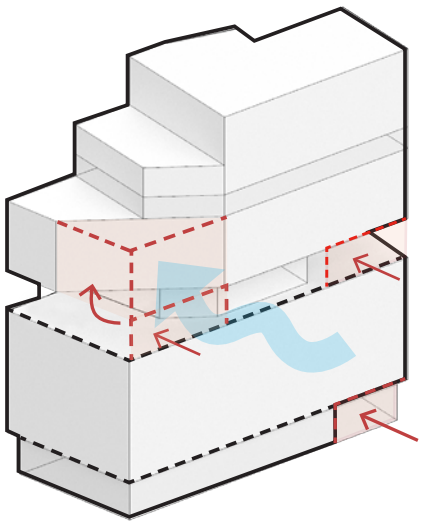
## Improved wind conditions

**We have developed multiple strategies in collaboration with our wind consultant. These strategies were iteratively tested through wind-tunnel analyses and have shown to improve the existing wind conditions at a multitude of assessment points.**

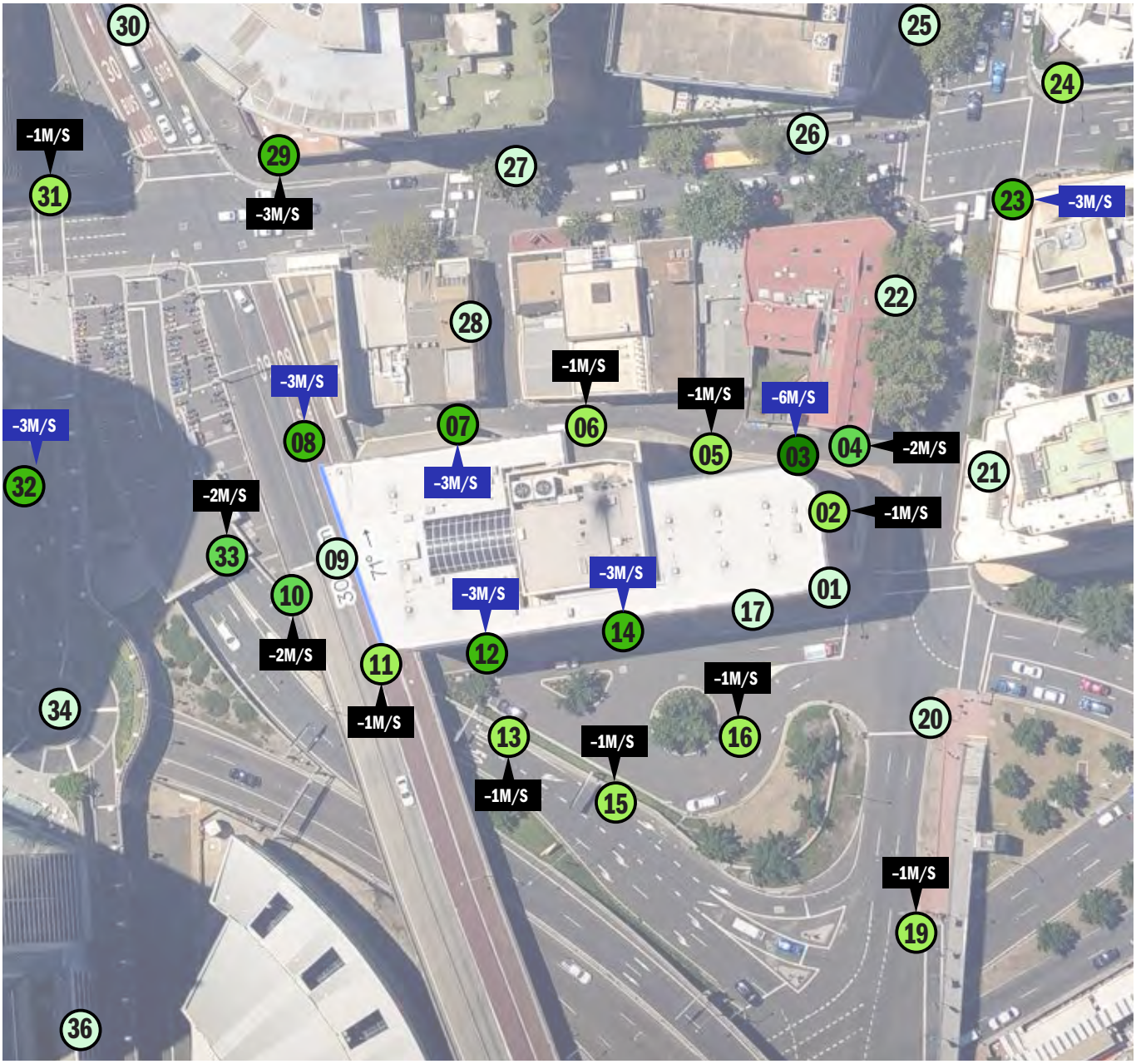
The existing site conditions were measured by Windtech during wind tunnel testing.

The results of the study indicate that wind conditions for some of the trafficable outdoor locations currently exceed the relevant criteria for comfort and/or safety as set by City of Sydney.

The proposed expansion of the existing PARKROYAL Hotel has been designed to not have any impact on existing street level conditions and in many cases improve a windy area of the city.



## Points significantly improved by the proposed envelope massing (annual gust):



# DEVELOPMENT PROPOSAL

# SUMMARY: BUILDING ENVELOPE

## Refer Appendix 3

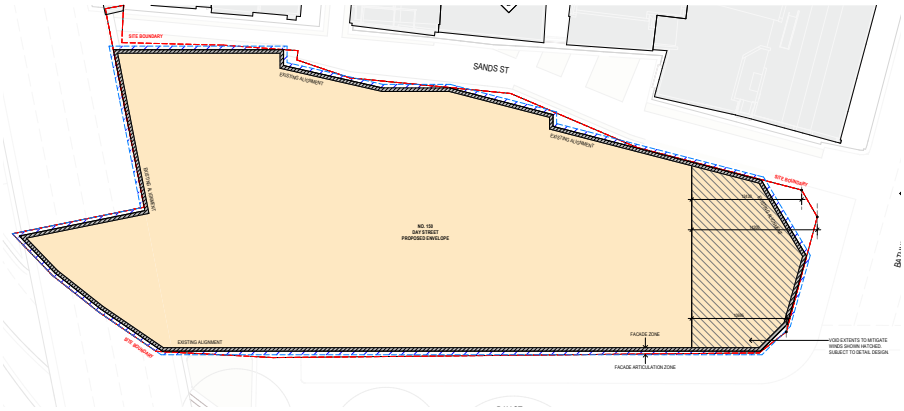
## Building Setout

The proposed building utilises the existing hotel structure to support this new massing and is therefore setout based on the location of the existing columns.

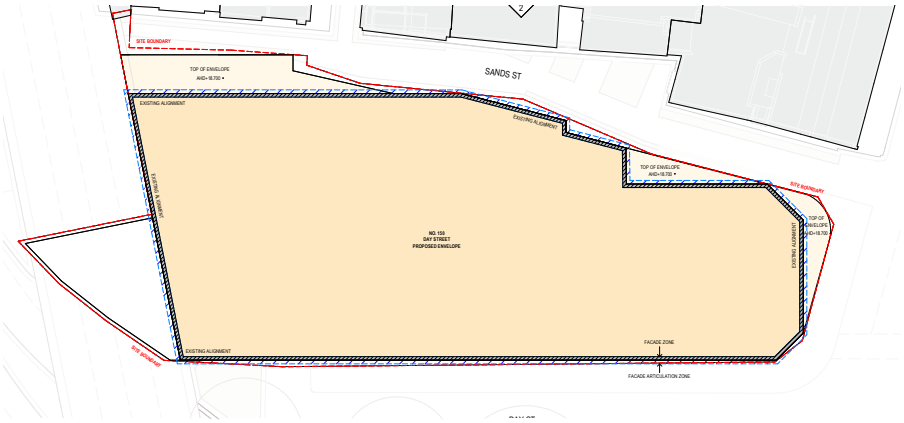
The existing podium columns are aligned to the boundary at the west, and therefore the new building is also setout to the western boundary.

The second factor defining the new building setout is the geometry of the site boundary which tapers to the south of the site. This tapering means that the building massing is defined by the width of a central corridor and a hotel room either side of this corridor - thus resulting in minimal setbacks to the south and east, following the extents of the existing building in the upper floors.

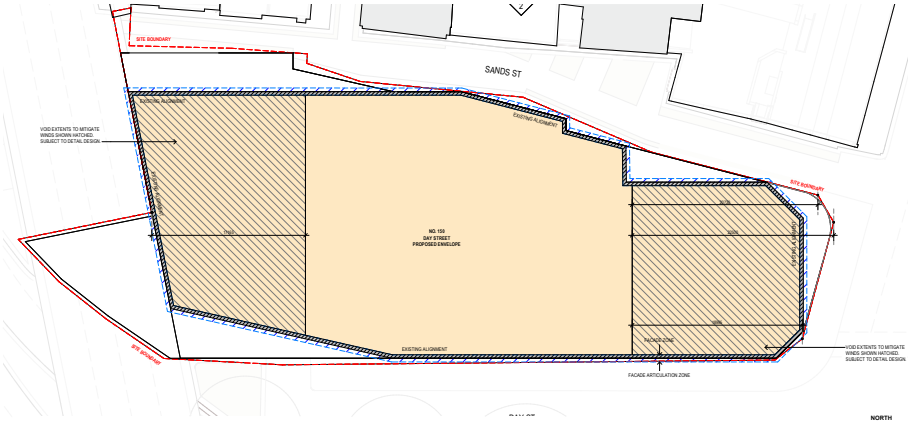
At the upper floors the building steps back at the northern boundary in response to the town hall solar plane.



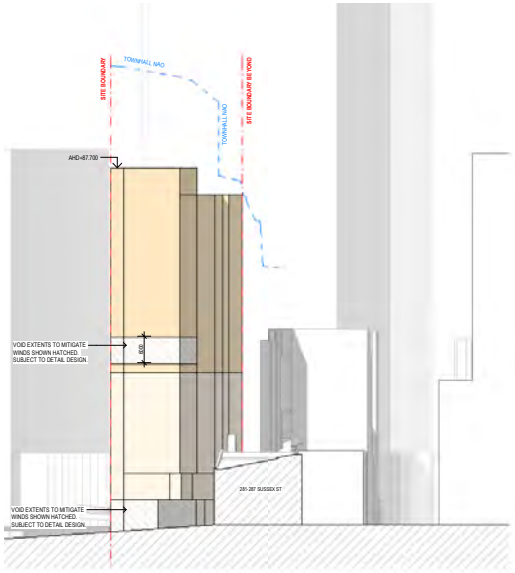

Podium Setback



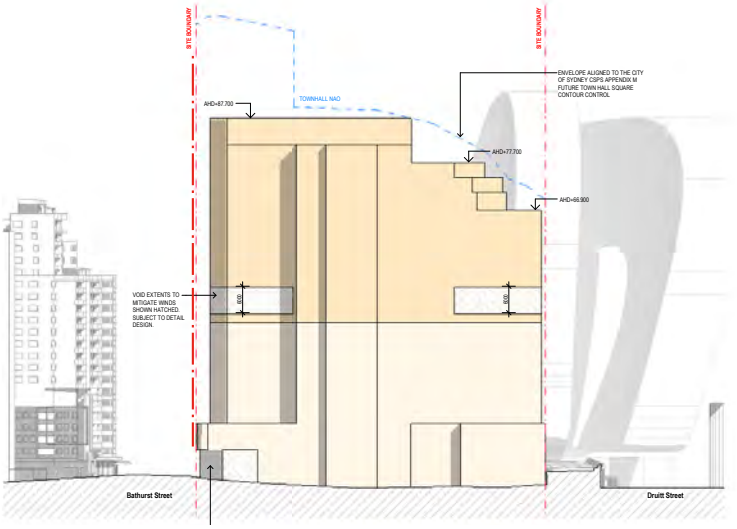

Tower Setback



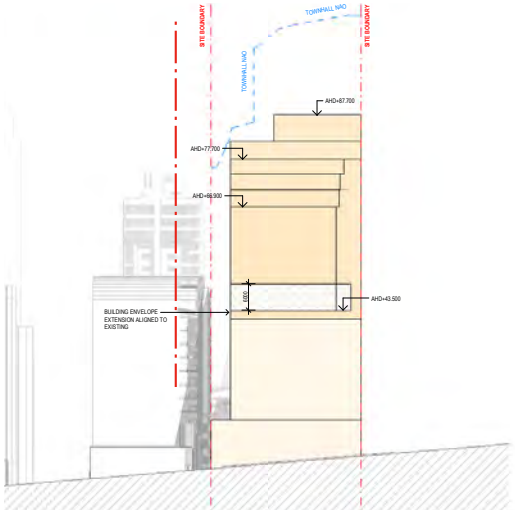

Transfer Floor Setback



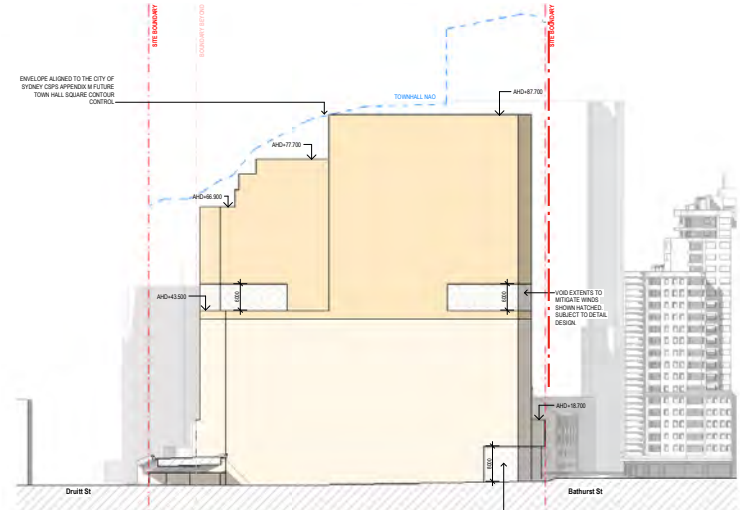

SOUTH ELEVATION




EAST ELEVATION




NORTH ELEVATION



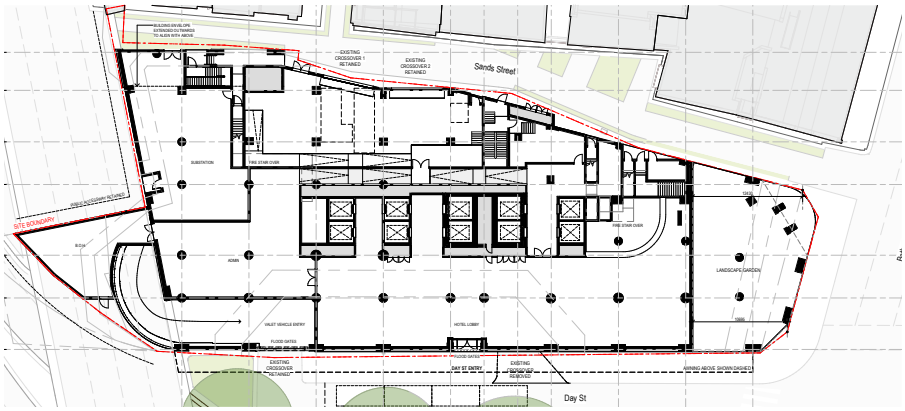

WEST ELEVATION

# SUMMARY: REFERENCE SCHEME

## Drawing List

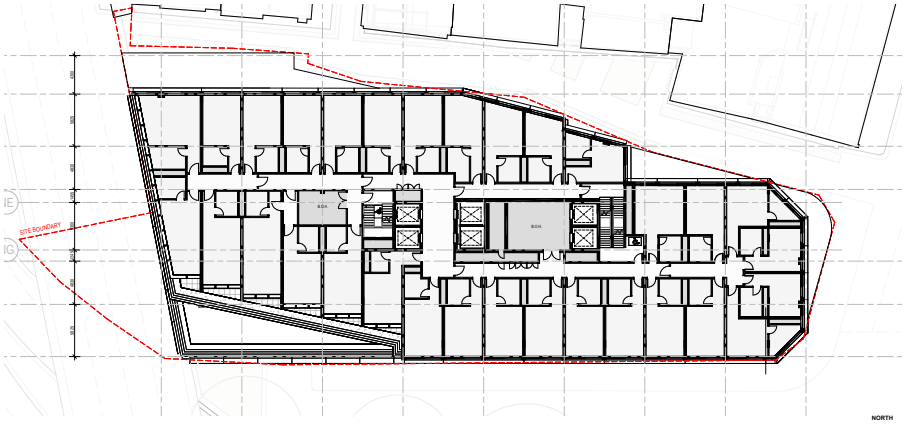
Refer to the appendix for the reference scheme drawing set.

| | |
|---|---|
| Site Conditions | |
| RS-020 | Existing North & South Elevation |
| RS-021 | Existing East Elevation |
| RS-022 | Existing West Elevation |
| RS-050 | Proposed Site Plan |
| | |
| GA Plans | |
| RS-098 | Basement 01 Plan |
| RS-099 | Basement 02 Plan |
| RS-100 | Level 00 Plan |
| RS-101 | Level 01 Plan |
| RS-102 | Level 02 Plan |
| RS-103 | Level 03 Plan |
| RS-104 | Level 04 Plan |
| RS-105 | Level 05 Plan |
| RS-106 | Level 06 Plan |
| RS-107 | Level 07 Plan |
| RS-108 | Level 08 Plan |
| RS-109 | Level 09 Plan |
| RS-110 | Level 10 Plan |
| RS-111 | Level 11 Plan |
| RS-112 | Level 12 Plan |
| RS-113 | Level 13 Plan |
| RS-114 | Level 14 Plan |
| RS-115 | Level 15 Plan |
| RS-116 | Level 16 Plan |
| RS-117 | Level 17 Plan |
| RS-118 | Level 18 Plan |
| RS-119 | Level 19 Plan |
| RS-120 | Level 20 Plan |
| RS-121 | Level 21 Plan |
| RS-122 | Level 22 Plan |
| RS-123 | Level 23 Plan |
| | |
| GA Elevations | |
| RS-200 | Proposed North & South Elevation |
| RS-201 | Proposed East Elevation |
| RS-202 | Proposed West Elevation |
| | |
| GFA Plans | |
| RS-800 | Proposed GFA Plans & Schedule |

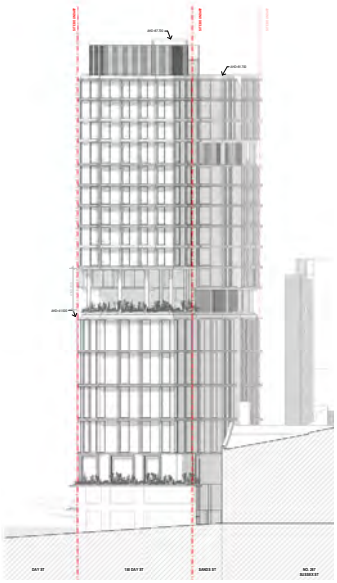



Ground Floor Plan

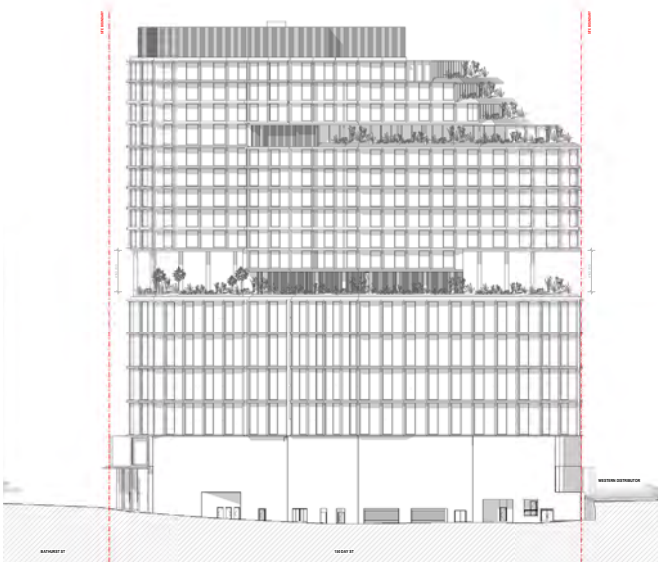

Typical Existing Hotel Floor Plan



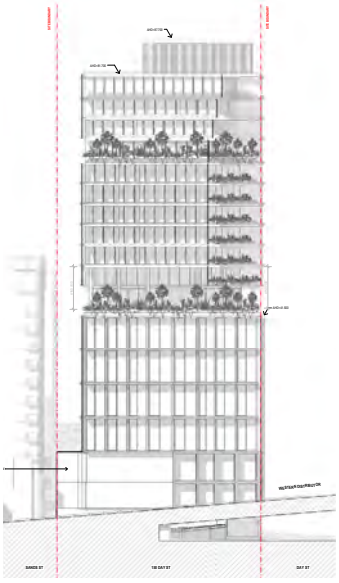

Typical New Hotel Floor Plan



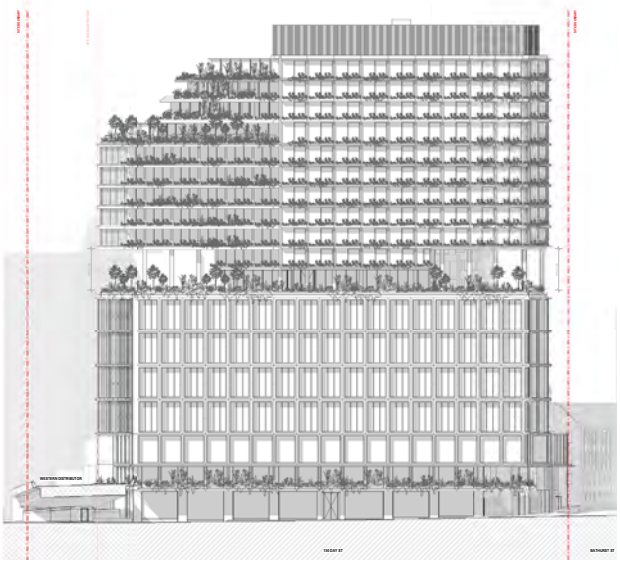
PROPOSED SOUTH ELEVATION



PROPOSED EAST ELEVATION



PROPOSED NORTH ELEVATION



PROPOSED WEST ELEVATION

# INDICATIVE SCHEME FSR PROPOSAL

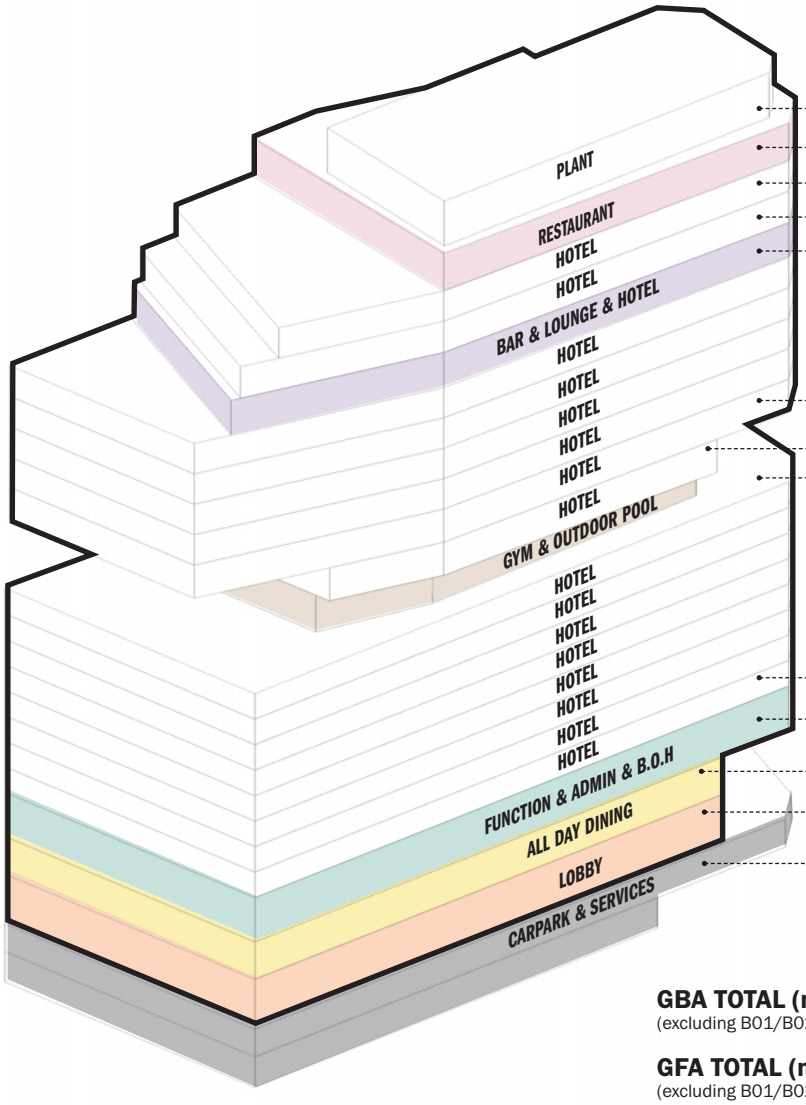
## Current Planning Controls: DCP Design Excellence Strategy

Although the site is not located in tower cluster, the proposed reference scheme demonstrates compliance against Section 3.3.8 City of Sydney DCP.

- The proposed development retains the existing building. The existing facade is built to the boundary & a new massing is aligned above structurally.
- The additional floors complies with the design excellence standards listed.

| | | |
|---|---|---|
| 15m Architectural Roof Feature Zone | ✓ | |
| 5m Clear floor to floor for ground & first floors & allowances for new pedestrian links & public domain improvements supported by urban design analysis. | ✓ | Existing building retained:<br>L00 = 5.4m<br>L01 = 4.3m<br>L02 = 5m |
| 3.3m floor to floor for typical hotel floors | ✓ | New hotel = 3.4m |
| A full plant level at least for every 20 occupied levels at minimum 6m floor to floor should be provided for plant equipment with no floor space | ✓ | Every 10 levels, with flexible use floor space |
| A minimum proportion of the entire design envelope for architectural articulation and external façade depth and external sun shading (not occupied by floor space) of 8.0% up to a maximum value of 16% articulation. | ✓ | |
| Minimum 16% floor space exclusions allocated to building core and other internal non-floor space elements. | ✓ | Average 21% achieved across all floors existing and proposed. |
| Vehicle access, servicing, services, balconies, voids or other areas are not counted as floor space. | ✓ | |

| Existing / Proposed | Hotel Operator | Level | Use | GBA (m2) | GFA (m2) | Keys | F2F (m) | Height RL (m) | AHD (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Lift Overrun | | | | | 84.1 | 87.70 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 22 | Plant | 898.0 | 36 | | 6.00 | 78.1 | 81.70 |
| *Proposed* | *Leased Restaurant* | Level 21 | Leased Restaurant | 1465.0 | 1096 | | 4.00 | 74.1 | 77.70 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 20 | Hotel | 1529.0 | 1167 | 24 | 3.40 | 70.7 | 74.30 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 19 | Hotel | 1592.0 | 1232 | 26 | 3.40 | 67.3 | 70.90 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 18 | Hotel Amenity, BOH + Plant | 1807.0 | 1249 | 13 | 4.00 | 63.3 | 66.90 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 17 | Hotel | 1807.0 | 1496 | 31 | 3.40 | 59.9 | 63.50 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 16 | Hotel | 1807.0 | 1496 | 31 | 3.40 | 56.5 | 60.10 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 15 | Hotel | 1807.0 | 1496 | 31 | 3.40 | 53.1 | 56.70 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 14 | Hotel | 1807.0 | 1496 | 31 | 3.40 | 49.7 | 53.30 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 13 | Hotel | 1807.0 | 1496 | 31 | 3.40 | 46.3 | 49.90 |
| *Proposed* | *Pan Pacific Hotel Group* | Level 12 | Hotel | 1565.0 | 771 | 11 | 3.40 | 42.9 | 46.50 |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | Level 11 | Hotel Amenity, BOH + Plant | 1841.0 | 544 | | 5.00 | 37.9 | 41.50 |
| *Existing Structure* | *Park Royal* | Level 10 | Hotel + Pool Plant | 1928.0 | 1462 | 34 | 2.85 | 35.1 | 38.65 |
| *Existing Structure* | *Park Royal* | Level 09 | Hotel | 1928.0 | 1612 | 38 | 2.85 | 32.2 | 35.80 |
| *Existing Structure* | *Park Royal* | Level 08 | Hotel | 1928.0 | 1590 | 38 | 2.85 | 29.4 | 32.95 |
| *Existing Structure* | *Park Royal* | Level 07 | Hotel | 1928.0 | 1612 | 38 | 2.85 | 26.5 | 30.10 |
| *Existing Structure* | *Park Royal* | Level 06 | Hotel | 1928.0 | 1590 | 38 | 2.85 | 23.7 | 27.25 |
| *Existing Structure* | *Park Royal* | Level 05 | Hotel | 1928.0 | 1612 | 38 | 2.85 | 20.8 | 24.40 |
| *Existing Structure* | *Park Royal* | Level 04 | Hotel | 1928.0 | 1590 | 38 | 2.85 | 18.0 | 21.55 |
| *Existing Structure* | *Park Royal* | Level 03 | Hotel | 1928.0 | 1612.0 | 38 | 2.85 | 15.1 | 18.70 |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | Level 02 | Hotel Amenity, BOH + Plant | 2079.0 | 1686.0 | | 5.00 | 10.1 | 13.70 |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | Level 01 | Hotel Amenity, BOH + Plant | 2030.0 | 1477.0 | | 4.30 | 5.8 | 9.40 |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | Level 00 (Ground) | Hotel Lobbies, BOH, Loading, Plant | 2016.0 | 989.0 | | 5.40 | 0.4 | 4.00 |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | BASEMENT 01 | Valet Carpark + Plant | 2031.0 | 213.0 | | 3.10 | | |
| *Existing Structure* | *Park Royal & Pan Pacific Hotel Group* | BASEMENT 02 | BOH + Plant | 1412.0 | 0.0 | | 3.40 | | |
| | | **GBA TOTAL (m2)** | | 44724.0 | | | | | |
| | | **GFA TOTAL (m2)** | | | 30617 | | | | |
| | | **SITE AREA (m2)** | | | 2281 | | | | |
| | | **FSR** | | | 13.5 | | | | |




| LEVEL | GFA |
|---|---|
| L22 | 36m² |
| L21 | 1096m² |
| L20 | 1167m² |
| L19 | 1232m² |
| L18 | 1249m² |
| L13-17 | 1496m² |
| L12 | 771m² |
| L11 | 544m² |
| L03-10 | ~1600m² |
| L02 | 1686m² |
| L01 | 1477m² |
| L00 | 989m² |
| B01 | 213m² |

| | |
|---|---|
| **GBA TOTAL (m²)** (excluding B01/B02) | **44,724m²** |
| **GFA TOTAL (m²)** (excluding B01/B02) | **30,617m²** |
| **SITE AREA (m²)** | **2,281m²** |
| **FSR** | **13.5** |

**KEYS**

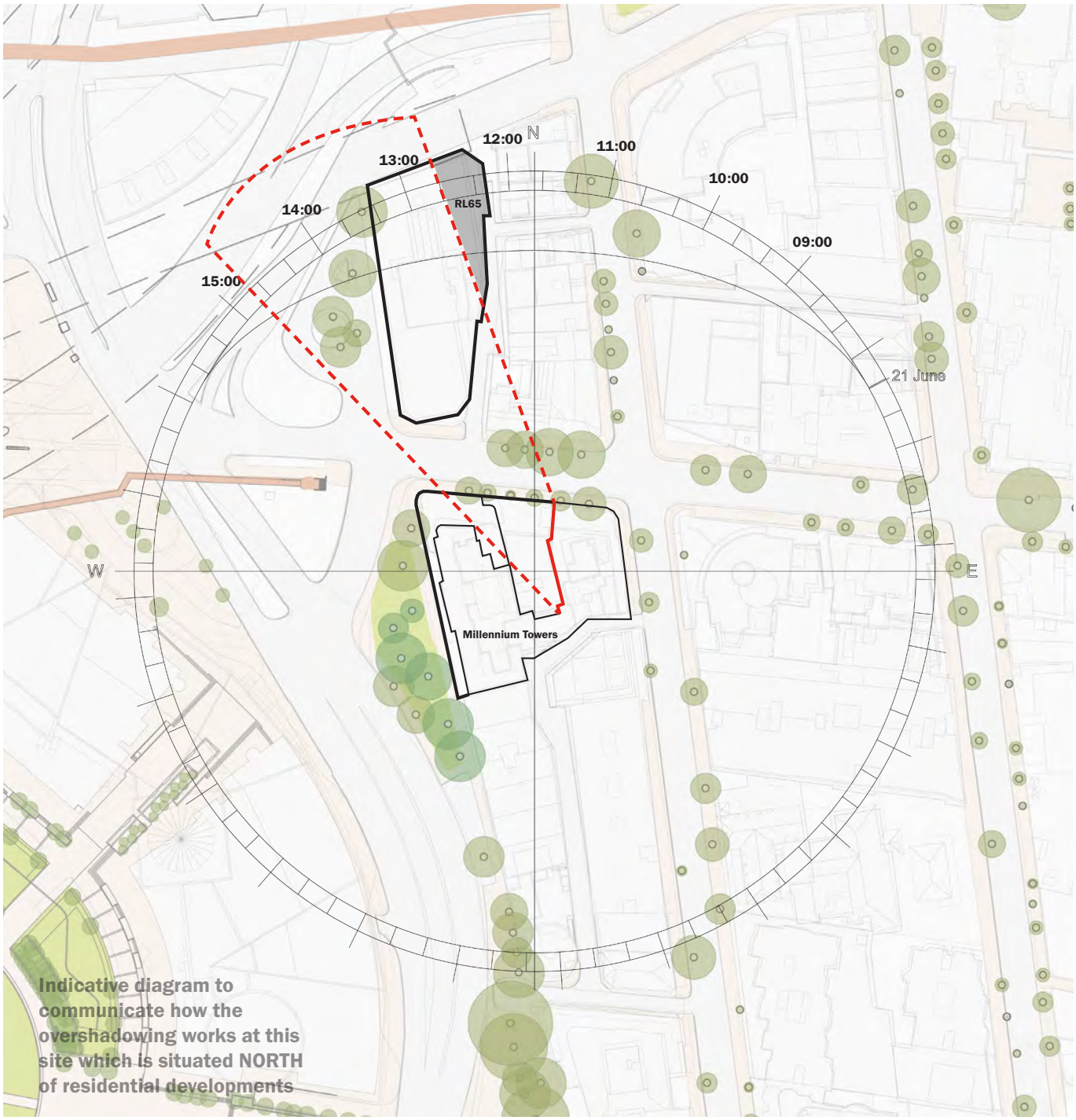
| | |
|---|---|
| PARKROYAL KEYS | 300 |
| PAN PACIFIC HOTEL GROUP | 229 |
| **HOTEL KEYS TOTAL** | **529*** |

***Key number to be confirmed and reduced once larger suites are located.**

# ATTACHMENT A: SOLAR ANALYSIS

# MILLENNIUM TOWERS

# OVERSHADOWING OVERVIEW



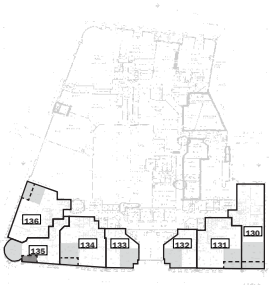

- → Millennium Tower sits directly south of 150 Day st and it is therefore affected by the proposed development.
- → The building contains 318 apartments on 20 floors.
- → The impact on Millennium tower occurs in the afternoon between 12.30 and 3 pm.
- → Because the site sits directly north of Millennium tower, additional setbacks have small impact on the overshadowing whilst the height directly affects the overshadowing into the courtyards apartments.
- → The overshadowing impact is greater during the Winter solstice and is greatly reduced by the equinox time as the building was designed to perform at equinox as per the pre-ADG guidance.

# APARTMENTS CONFIGURATION

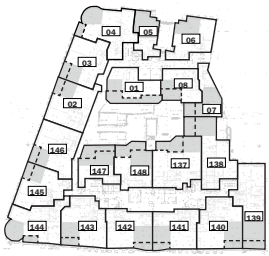
## DA1995

### Living Areas Windows (3D Analysis)

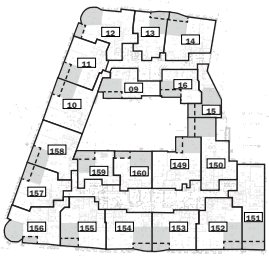
### Level 1



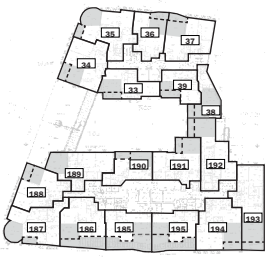

### Level 2



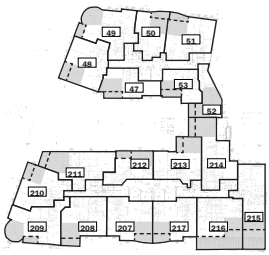

### Level 3-5



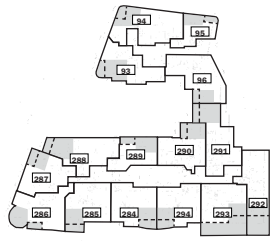

### Level 6




### Level 8-14

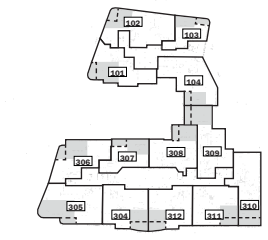



### Level 15

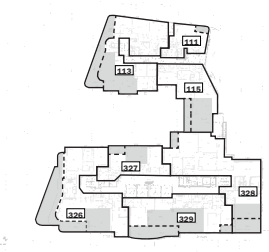



### Level 16

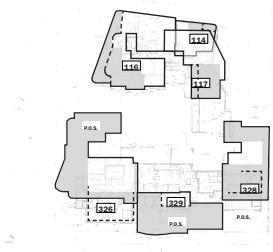

### Level 17-19




### Level 20



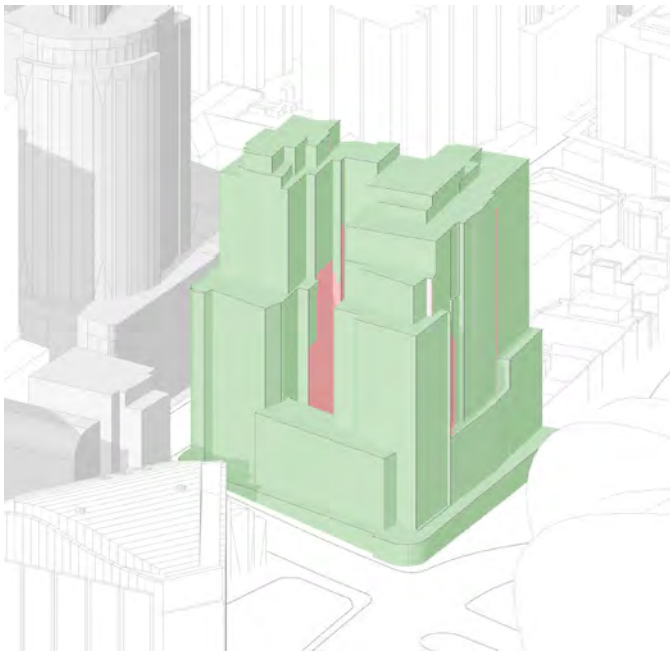

### Level 21



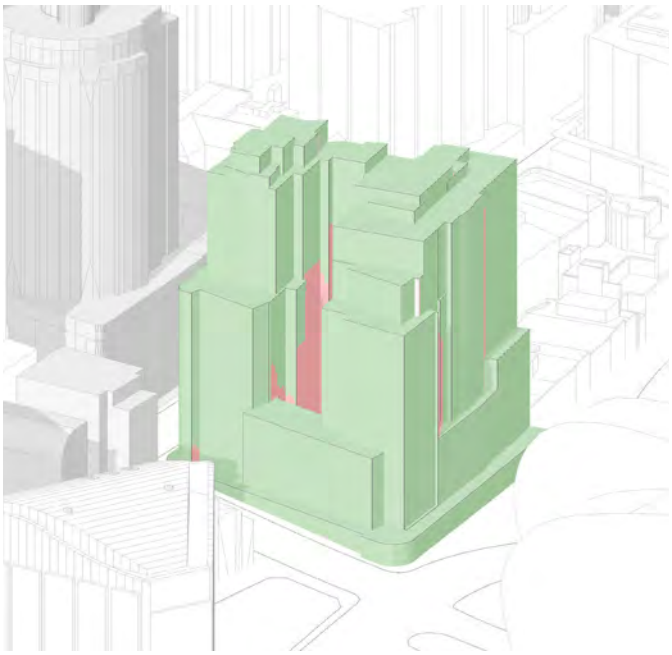
# OVERSHADOWING: MARCH (EQUINOX)

## Existing Vs. Proposed

**March Existing**



**March Proposed**



Receives Sunlight > 2 Hours

Receives Sunlight < 2 Hours

| Average Change Per Apartment(%) | Existing Above 2 Hours | Proposed Above 2 Hours | x>2 to x<2 |
|---|---|---|---|
| | 92/318 | 92/318 | 0 |
| -2% | 29% | 29% | 0% |

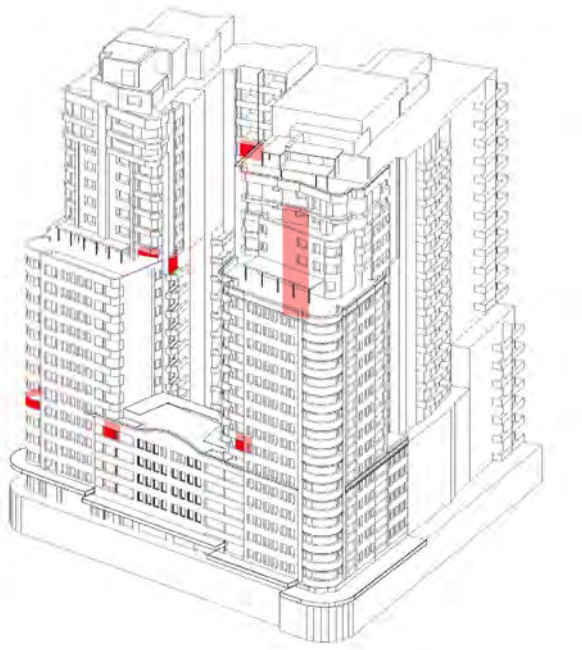
**ALL COMPLIANT 2HR+ UNITS REMAIN 2HR+**

**TOTAL AVERAGE IMPACT IS 2% ACROSS 318 APARTMENTS**

# OVERSHADOWING: JUNE (WINTER SOLSTICE)

## Existing Vs. Proposed

**12 Units Moved Into Below 2hrs (4%)**

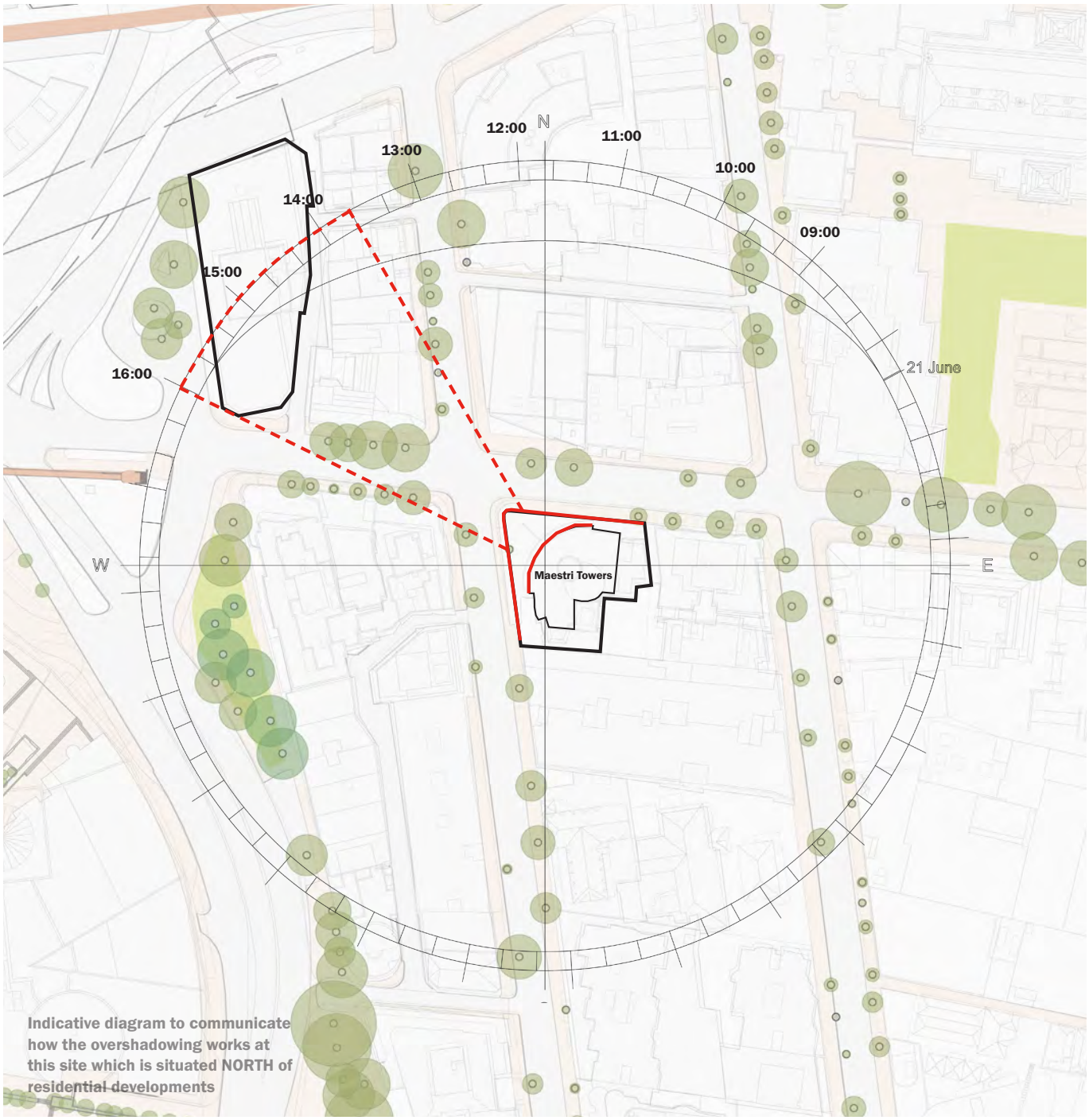


| Average Change Per Apartment(%) | Existing Above 2 Hours | Proposed Above 2 Hours | x>2 to x<2 |
|---|---|---|---|
| | 118/318 | 106/318 | 12 |
| -18% | 37% | 33% | 4% |

**TOTAL AVERAGE IMPACT IS 18% ACROSS 318 APARTMENTS (BELOW 20%)**

# MAESTRI TOWERS

# OVERSHADOWING OVERVIEW




- → Maestri Tower sits south east of 150 Day st and it is therefore affected by the proposed development.
- → The building contains 284 apartments on 26 floors.
- → The impact on Maestri tower occurs in the afternoon between 13.30 and 15.00.
- → Because of the distance to the proposed building on 150 Day St, the overshadowing only impacts the west facing portion of the podium and the first 2 floors of the base of the tower.
- → The overshadowing impact is greater during the Winter solstice and is greatly reduced by the equinox time as the building was designed to perform at equinox as per the pre-ADG guidance.

# APARTMENT CONFIGURATION

## DA1998 13/10

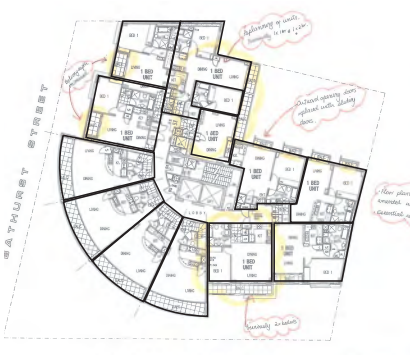
**Level 1**

**Level 2**

**Level 3 to 7**

**Level 8**

**Level 9**



**Level 10/12/14...24**

**Level 11/13/15...23**

**Level 25**

# OVERSHADOWING: MARCH (EQUINOX)

## Existing Vs. Proposed

**March Existing**

**March Proposed**

Receives Sunlight > 2 Hours

Receives Sunlight < 2 Hours

| Average Change Per Apartment(%) | Existing Above 2 Hours | Proposed Above 2 Hours | x>2 to x<2 |
|---|---|---|---|
| | 89/284 | 89/284 | 0 |
| -3% | 31% | 31% | 0% |

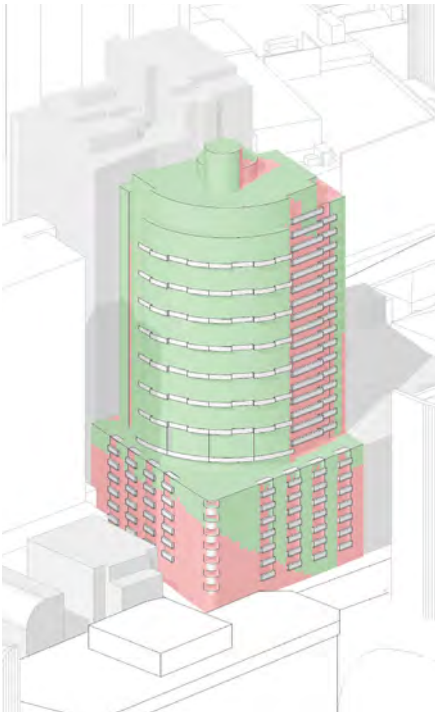
**ALL COMPLIANT 2HR+ UNITS REMAIN 2HR+**

**TOTAL AVERAGE IMPACT IS 3% ACROSS 284 TOTAL APARTMENTS**

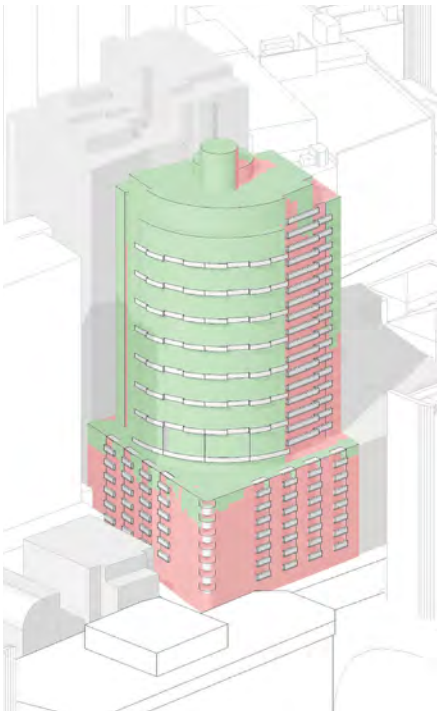
# OVERSHADOWING: JUNE (WINTER SOLSTICE)

## Existing Vs. Proposed

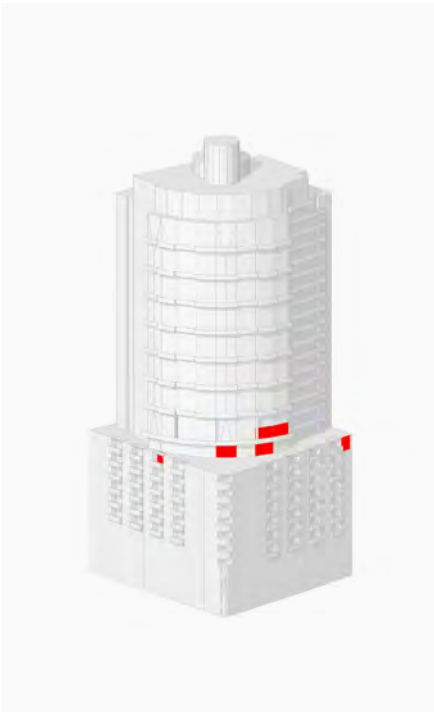
June Existing



June Proposed



6 Units Moved To Below 2hrs (2%)



Receives Sunlight > 2 Hours

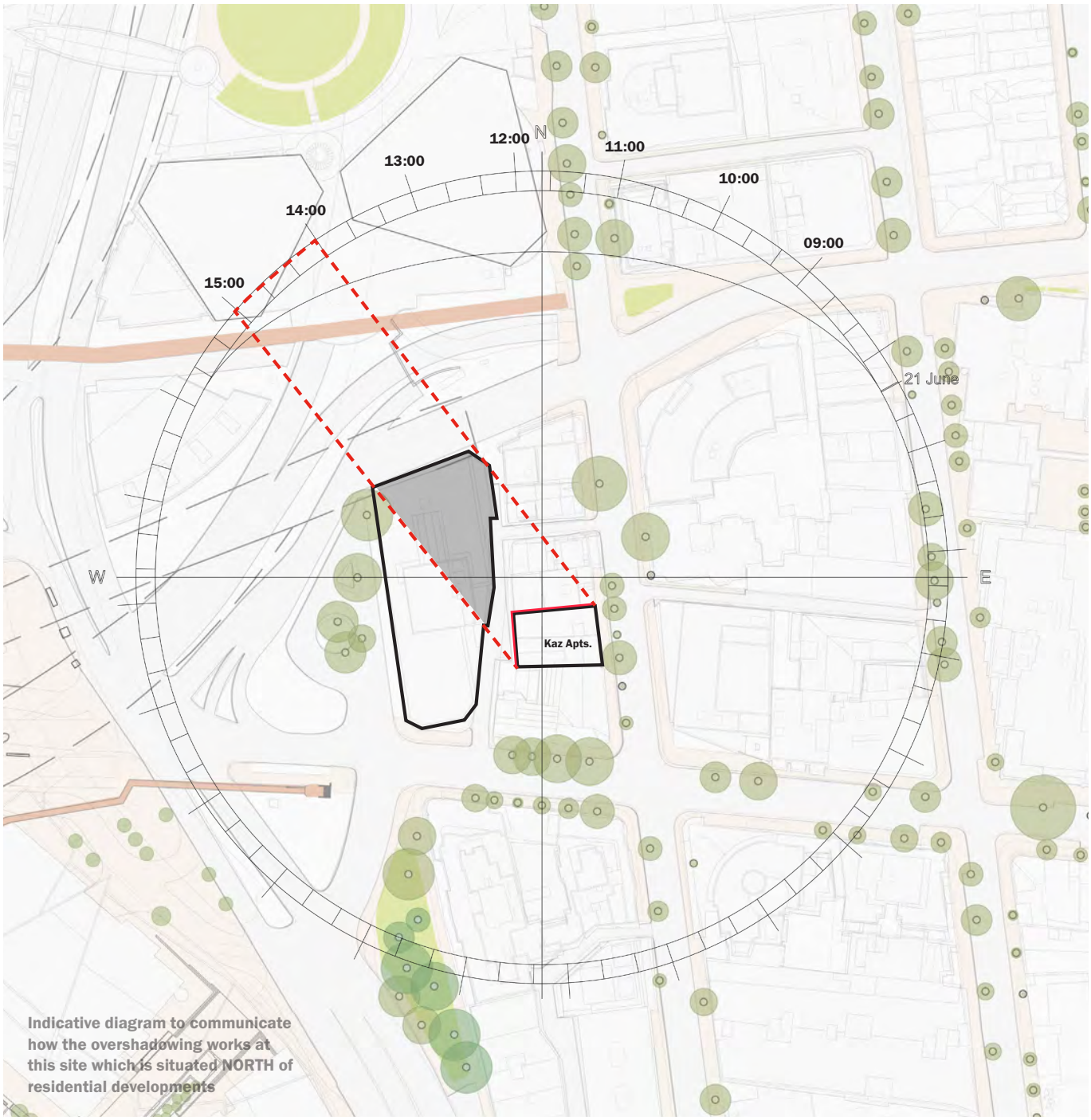
Receives Sunlight < 2 Hours

| Average Change Per Apartment(%) | Existing Above 2 Hours | Proposed Above 2 Hours | x>2 to x<2 |
|---|---|---|---|
| | 83/284 | 77/284 | 6 |
| -8% | 29% | 27% | 2% |

**TOTAL AVERAGE IMPACT IS 8% ACROSS 284 TOTAL APARTMENTS**

# KAZ TOWER

# OVERSHADOWING OVERVIEW




- → Kaz Tower sits east of 150 Day st and it is therefore affected by the proposed development.
- → The building contains 36 apartments on 13 floors.
- → The impact on Kaz tower occurs in the afternoon between 14.00 and 15.00.
- → Because the existing building is already affecting Kaz tower, the additional overshadowing is minimal.
- → The overshadowing impact is greater during the Winter solstice but remains fairly consistent through out the year.