

## PLANNING PROPOSAL URBAN DESIGN REPORT

Revision C January 22, 2019

1A - 29 Bowen St / 6 - 18 Moriarty Rd, CHATSWOOD

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### 1.1. OVERVIEW

This Urban Design Report has been prepared on behalf of Platine to inform the preparation of an amendment to the Willoughby Local Environmental Plan 2012 (WLEP 2012). The amendment relates to Nos. 1A-29 Bowen Street and 6-18 Moriarty Road, Chatswood (Subject Site) and would result in the following:

- A change in zoning from R2 Low Density Residential to R4 High Density Residential;
- A maximum allowable building height of 30m (9 storey equivalent); and
- A maximum floor space ratio (FSR) of 2.85:1.

The change in zoning arises as the site is a R2 – Low Density Residential Precinct surrounded by B5 Business to the east and R3 Medium Density Residential to the North and West. The subject site's historic zoning reflects the low scale of existing built form on the site, under the planning instrument that applied prior to the making of the Willoughby LEP 2012. The change in housing densities and types has occurred in the immediate vicinity of the site, with shop top housing along the Pacific Highway. This change is anticipated to continue to occur on the eastern side of the Pacific Highway with Council's Strategy for the Chatswood CBD, which is proposed to extend southwards to Mowbray Road.

The proposed density for the subject site will facilitate additional housing close to public transport, infrastructure and services. It will also result in a built form that addresses the site's prominent location near the major intersection of the Pacific Highway and Mowbray Road.

This report has been prepared to assist Willoughby Council to prepare a Planning Proposal for the LEP amendment. This urban design Report has been prepared with detailed inputs from the following consultants:

- Urban Planning: Urbis
- Traffic, access and transport: GTA Consultants
- Heritage: Urbis
- Surveying: TSS Total Surveying Solutions
- Architectural Input: PBD Architects

#### 1.1.1. SITE AND SURROUNDING AREA CONTEXT

The subject site is located at 1A-29 Bowen Street and 6-18 Moriarty Road, Chatswood and is 800 metres from Chatswood CBD and train station.

The site has an area of approximately 6,716sqm and encompasses 22 individual lots. The site is currently occupied by several single storey residential dwellings as well as two two-storey terrace houses located on Moriarty Road, which have been given local heritage listing. The subject site backs on to several medium scale mixed use developments with heights of 6 stories.

The site is located just outside the Chatswood CBD expansion area, which has identified land less than 70 metres from the site, on the eastern side of the Pacific Highway, as having the potential to support developments up to 90 metres tall and FSRs up to 6:1. The large site is perfectly placed to be redeveloped into a higher density development given the close proximity of services and alignment with several strategic plans.

#### 1.1.2. STRATEGIC CONTEXT

The site is located in a very strategic location, being adjacent to the intersection of the Pacific Highway and Mowbray Road, and accessible to Chatswood CBD, which is one of Sydney's largest employment centres and high density residential living areas. Chatswood CBD includes business, education and health services, shopping centres and a major railway station and transport interchange. The proposal will contribute just over 200 new dwellings to accommodate expected workers and encourage containment and 'work closer to home' initiatives.

The Greater Sydney Region Plan - A Metropolis of Three Cities, identifies Chatswood as a Strategic Centre. The key priority for the centre is to retain a commercial core for long-term employment growth but also proposes providing capacity outside the centre for additional mixed-use development, including offices, health, retail, services and housing. The proposal provides an opportunity to increase housing without impacting on the employment land in the centre.

We understand Council has endorsed an expansion of the Chatswood CBD as documented in the 'Chatswood CBD Planning and Urban Design Strategy'. The future context for the Pacific Highway Corridor will change under this strategy and will include a substantial increase in heights of buildings between the existing Chatswood CBD and Mowbray Road to the south.

The proposed heights of buildings and overall densities for the site respond to the future context which will see an extension of the Chatswood CBD south to Mowbray Road.

Council's Housing Position Paper has identified properties within 800 metres of Chatswood and Artarmon Stations (Chatswood Fringe) to be investigated for additional housing supply. It is understood Council are considering existing residential zoned land for opportunities to accommodate it's housing target.

#### 1.1.3. LOCAL PLANNING FRAMEWORK

The WLEP 2012 is the principal Environmental Planning Instrument governing and guiding development within the Willoughby LGA. The subject site is zoned R2 Low Density Residential under the WLEP 2012. Under the LEP, detached dwellings and dual occupancies are permitted with consent. However, residential flat buildings are prohibited. The local context is surrounded by shop top housing developments to the east, and a mix of residential flat buildings and attached housing to the north and south.

Further south in the Lane Cove Local Government Area is a large area of residential flat buildings, and an existing Church.

#### 1.1.4. A CASE FOR CHANGE

The current R2 Low Density Residential zoning is considered an anomaly in an area of generally medium density housing and shop top housing, and reflects the earlier designation of the site as a heritage conservation area.

Council have commenced investigations to look for opportunities to accommodate additional housing, with a focus on accommodating this growth within existing centres and areas which are accessible and well located close to urban services, including education, health, retail and employment opportunities.

Much of the area within 800 metres of the Chatswood and Artarmon Railway Stations is constrained by either sloping land, dense vegetation, heritage conservation and strata titled properties, which limit the potential to accommodate additional housing. The site is a large amalgamation of residentially zoned land within 800 metres of both train stations and is generally free of these constraints.

#### 1.1.5. PLANNING PROPOSAL OVERVIEW

A Preliminary Concept Design has been prepared for the potential redevelopment of the site (submitted in this Urban Design Report). Some key features of the Preliminary Concept Design include:

- Height: Two building forms are proposed with heights of between 6 and 9 stories.
- GFA: A total GFA of 19,140m<sup>2</sup> can be accommodated on site, which is an FSR of 2.85:1.
- Residential: Redevelopment will provide approximately 200 - 210 new dwellings.
- Heritage: Retention of Item 147 from Schedule 5 – Environmental Heritage of the WLEP 2012.



### 1.1.6. PLANNING PROPOSAL OUTCOMES

In summary, the site will achieve the following key planning outcomes:

- Consistency with State Government policy to encourage growth within walking distance of existing centres and public transport accessible areas.
- Consistency with State government housing targets.
- Sound planning practice and sustainable transport focused development.
- A high quality residential development that Platine is committed to developing.
- Appropriate built form in a prominent location.
- Landscape opportunities for well-considered landscape areas, communal open spaces and deep soil planting.
- Improved vehicle access and circulation within the local and State road network.

Overall, it is considered that the proposal will have significant benefits for the community and is in the public interest.

### 1.1.7. THE PROVISIONS TO BE INCLUDED IN THE PROPOSED LEP

The proposal seeks the following amendments to the WLEP 2012 provisions,

- A change in zoning from R2 Low Density Residential Development to R4 High Density Residential Development;
- Height of buildings: A maximum allowable building height of 30m (9 storey equivalent); and
- FSR: An increase in FSR from 0.40:1 to 2.85:1



## 2.1. PRELIMINARY

Platine Property is seeking Council's endorsement of a Planning Proposal to amend the land use zoning, heritage provisions, Height of Building and Floor Space Ratio (FSR) standards applying to land at 1A-29 Bowen Street and 6-18 Moriarty Road, Chatswood (Subject Site). The land is legally described as:

- Lots 1 and 2 in DP844161
- Lots 1 and 2 in DP580741
- Lots B1 and B2 in DP444998
- Lots 1 and 2 DP 1154938
- Lots 1 and 2 in DP597787
- Lots 1 and 2 in DP 733443
- Lot 11 in DP976473
- Lot 101 and 102 in DP1169675
- Lot A and B in DP439872
- Lot 1 in DP363053
- Lot 1 in DP915744
- Lots A, B and C in DP106994

The site is located within 800 metres of the centre of Chatswood CBD and 700 metres of Artarmon centre, and within an area identified by Willoughby City Council to be investigated for additional housing, under the Willoughby Housing Position Statement 2017.

The purpose of the Planning Proposal is threefold:

1. Amend the zoning of the site from R2 Low Density Residential to R4 High Density Residential;
2. Amend the maximum Height of Building Standard for the Site from 8.5 metres to 30 metres;
3. Amend the maximum Floor Space Ratio Standard from 0.4:1 to 2.85:1



Figure 1 - Subject site.

The site is located along the eastern side of Bowen Street and part of the southern side of Moriarty Road, 65 metres from the Pacific Highway. Source: Google Earth



3.1. LAND OWNERSHIP AND TITLE DETAILS

- Include Lot and DP
- The land is legally described as:
- Lots 1 and 2 in DP844161
  - Lots 1 and 2 in DP580741
  - Lots B1 and B2 in DP444998
  - Lots 1 and 2 DP 1154938
  - Lots 1 and 2 in DP597787
  - Lots 1 and 2 in DP 733443
  - Lot 11 in DP976473
  - Lot 101 and 102 in DP1169675
  - Lot A and B in DP439872
  - Lot 1 in DP363053
  - Lot 1 in DP915744
  - Lots A, B and C in DP106994

3.2. TOPOGRAPHY

The topography of the combined lots is relatively flat. The Moriarty Road and Bowen Street frontages both vary in level by just over 1m. The slopes within the lot are similar to those along the frontages.

This flat topography provides an excellent opportunity for development into an apartment complex with great accessibility throughout the site. The need for ramps with handrails should be limited if not avoided altogether. Connections within the site and between the street and buildings are likely to be free of obstructions.

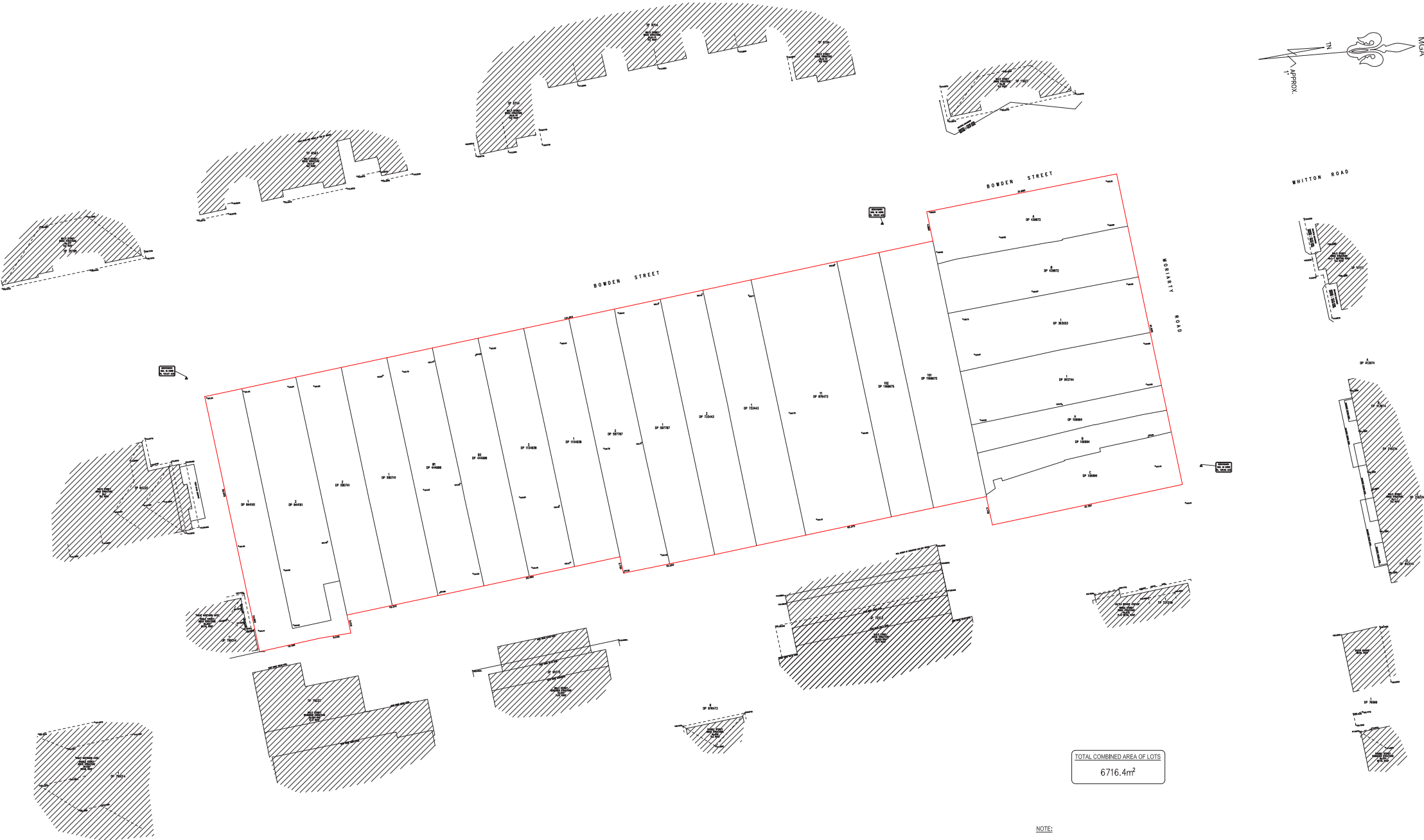


Figure 2 - Site survey prepared by TSS Total Surveying Solutions  
(Survey Not to scale)

NOTE:  
THIS DETAIL SURVEY IS NOT A "LAND SURVEY" AS DEFINED BY THE SURVEYING AND SPATIAL INFORMATION ACT, 2002. IF ANY CONSTRUCTION OR DESIGN WORK, WHICH RELIES ON CRITICAL SETBACKS FROM THE STREET OR BOUNDARIES IS PLANNED, IT WOULD BE IMPERATIVE TO CARRY OUT FURTHER SURVEY WORK TO DETERMINE THE BOUNDARY DIMENSIONS.  
  
PRIOR TO ANY CONSTRUCTION WORK, SURVEY MARKS SHOULD BE PLACED TO DEFINE THE PROPERTY BOUNDARIES.  
  
SERVICES SHOWN ARE INDICATIVE ONLY. POSITIONS ARE BASED ON SURFACE INDICATOR(S) LOCATED DURING FIELD SURVEY. CONFIRMATION OF THE EXACT POSITION SHOULD BE MADE PRIOR TO ANY EXCAVATION WORK. OTHER SERVICES MAY EXIST WHICH ARE NOT SHOWN.  
  
LEVELS ARE BASED ON AUSTRALIAN HEIGHT DATUM (AHD) USING GNSS OBSERVATIONS.  
  
RIDGE & GUTTER HEIGHTS HAVE BEEN OBTAINED BY INDIRECT METHOD AND ARE ACCURATE TO ± 0.05m.  
  
CONTOURS SHOWN DEPICT THE TOPOGRAPHY, EXCEPT AT SPOT LEVELS SHOWN THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT. THE SPOT LEVELS ARE TRUE FOR THEIR POSITION, AND ARE INTENDED TO BE USEFUL TO REPRESENT THE GENERAL TERRAIN, CARE SHOULD BE TAKEN IF EXTRAPOLATING.

LEGEND	
BENCH MARK	▲
TELSTRA PIT	TEL
ELECTRIC LIGHT POLE	LP
POWER POLE	PP
SIGN POST	SP
SEWER INSPECTION PIT	SP
SEWER VENT	SEWER
MANHOLE	MH
SEWER MANHOLE	SMH
STOP VALVE	SV
WATER HYDRANT	HYD
WATER METER	WM
GAS METER	GM
STATE SURVEY MARK	SSM

3.3. VEGETATION

The locality around the subject site has some areas of extensive vegetation in the form of remnant bushland. Closer to the site, however, substantial vegetation is more limited with significant trees most commonly found along street frontages and around apartment buildings. There are limited numbers of significant trees in amongst the lower density housing.

Along Moriarty Road there are a number of existing street trees that will remain unaffected by development of the site as outlined in the concept proposal. One of the largest street trees is to the east of the subject site and is unlikely to be affected by the proposed car park entry in the concept proposal. The existing properties fronting onto Moriarty Road contain some small trees and bushes within modest sized gardens.

The street frontage to Bowen Street has limited scale street planting. The larger street trees can be found on the west side of Bowen Street. Most of the properties fronting onto Bowen Street have limited planting. The most significant trees on these properties can be found at the rear of numbers 21 & 25 Bowen Street.



Image 1 – Existing Moriarty Rd. trees



Image 2 – Existing Moriarty Rd. tree



Figure 3 - Location of existing tree canopy

- Existing Tree Canopy
- Subject Site



3.4. EXISTING BUILT FORM

The existing built form on the various lots that make up the consolidated site can be described as a variety of semi-detached houses, terrace houses and detached houses. Most houses are only one storey tall. 6-10 Moriarty Rd are two storey terraces (8-10 currently listed as heritage items). 16-18 Moriarty Rd contain attic storeys along with 21, 5 & 3 Bowen Street.

Most houses date from the early-mid 1900's, however, they have typically been altered over the years. Very few remain as intact examples of their era.

Many properties along Bowen Street have significant front fences and/or dense landscaping that screen the main facades from the street. Many properties have parking areas forward of the building line and there is a driveway kerb crossing for each of the lots fronting onto Bowen Street.



Image 3 – 1A-1B Bowen Street. Source: Google Maps



Image 4 – 3-5 Bowen Street. Source: Google Maps

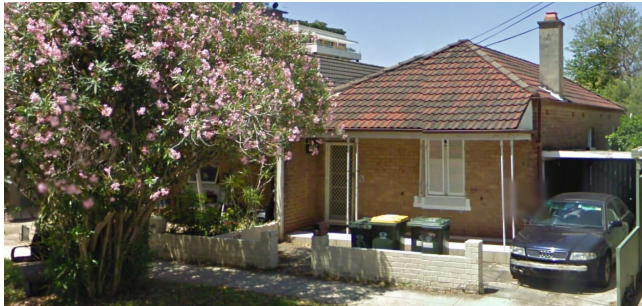


Image 5 – 7-9 Bowen Street. Source: Google Maps



Image 6 – 11-13 Bowen Street. Source: Google Maps



Image 7 – 15-17 Bowen Street. Source: Google Maps



Image 8 – 19-21 Bowen Street. Source: Google Maps



Image 9 – 25 Bowen Street. Source: Google Maps



Image 10 – 27-29 Bowen Street. Source: Google Maps



Image 11 – 6 Moriarty Road. Source: Google Maps



Image 12 – 8-10 Moriarty Road. Source: Google Maps



Image 13 – 12-14 Moriarty Road. Source: Google Maps



Image 14 – 16-18 Moriarty Road. Source: Google Maps



Figure 4 - Subject Site. Source: Nearmap



3.5. HERITAGE

As documented in the Heritage Impact Assessment to accompany this Planning Proposal, the properties at 8-10 Moriarty Road (Item I147) have been assessed with regard to their current heritage significance.

The present state heritage inventory statement of significance states:

*“Number 8 & 10 Moriarty Road appear to have been built as a pair of terrace buildings and have a traditional street elevation typical of the late Victorian period, and represent the earliest phase of development in the area. The terrace represents the earliest phase of the residential development of the local government area.”*

The outcome of the assessment has identified that:

*“The terraces have been assessed and are not considered to meet the threshold for listing. The buildings are of some limited historic and aesthetic merit as characteristic 19th century dwellings, reflecting the 1890s expansion of the area, however they are very modified and do not demonstrate fine or intact examples of the period or typology. Nevertheless, the proposal retains the principal form and facades of the terrace pair. The proposal provides for alterations and additions, including the demolition of the rear wings, which have been heavily modified and extended”*

and

*“...the proposal and indicative concept demonstrates how impacts of scale can be mitigated in the design response. The PP specifically responds to the heritage item in the creation of the two storey street podium to Moriarty Road. The podium has been developed in consultation with Urbis Heritage and particularly responds to the terrace typology as a row house, (which are characteristically not viewed in the round) by incorporating it within the lower scale podium.”*



Image 15 – 8-10 Moriarty Road - Street Facades showing modifications  
Source: Urbis Heritage Assessment Report



Image 16 – 8 Moriarty Road - Ground Floor Interior showing modifications  
Source: Urbis Heritage assessment Report



Image 17 – 8-10 Moriarty Road - Rear Facades showing modifications  
Source: Urbis Heritage Assessment Report



Image 18 – 10 Moriarty Road - Ground Floor Interior showing modifications  
Source: Urbis Heritage Assessment Report



#### 4.1. A METROPOLIS OF THREE CITIES

The Greater Sydney Region Plan - A Metropolis of Three Cities, identifies Chatswood as a Strategic Centre within the top 9 largest office markets in Sydney, with a significant influence on the greater Sydney area. The subject site is located within the Eastern Economic Corridor, which spans from Sydney Airport and Port Botany through Sydney CBD, St Leonards and Chatswood up to Macquarie Park. The corridor already contains approximately 775,000 jobs and contributed two-thirds of NSW economic growth in the 2015-2016 Financial Year, highlighting the importance and potential future growth of the area.

Sydney Metro Norwest is currently under construction and when complete will connect centres such as Norwest Business Park to Chatswood via a fast and efficient train service. The second stage of the Metro rail project will link Chatswood to Central Sydney via a second harbour crossing. The project has the potential to transform the Eastern Economic Corridor, as it will provide a more efficient service to the Sydney CBD, taking pressure off the current heavy rail North Shore line. Given the strategic location of the subject site, future development should seek to accommodate additional housing supply to realise alignment with the strategic directions of the Plan for this locality and to best utilise new transport infrastructure.

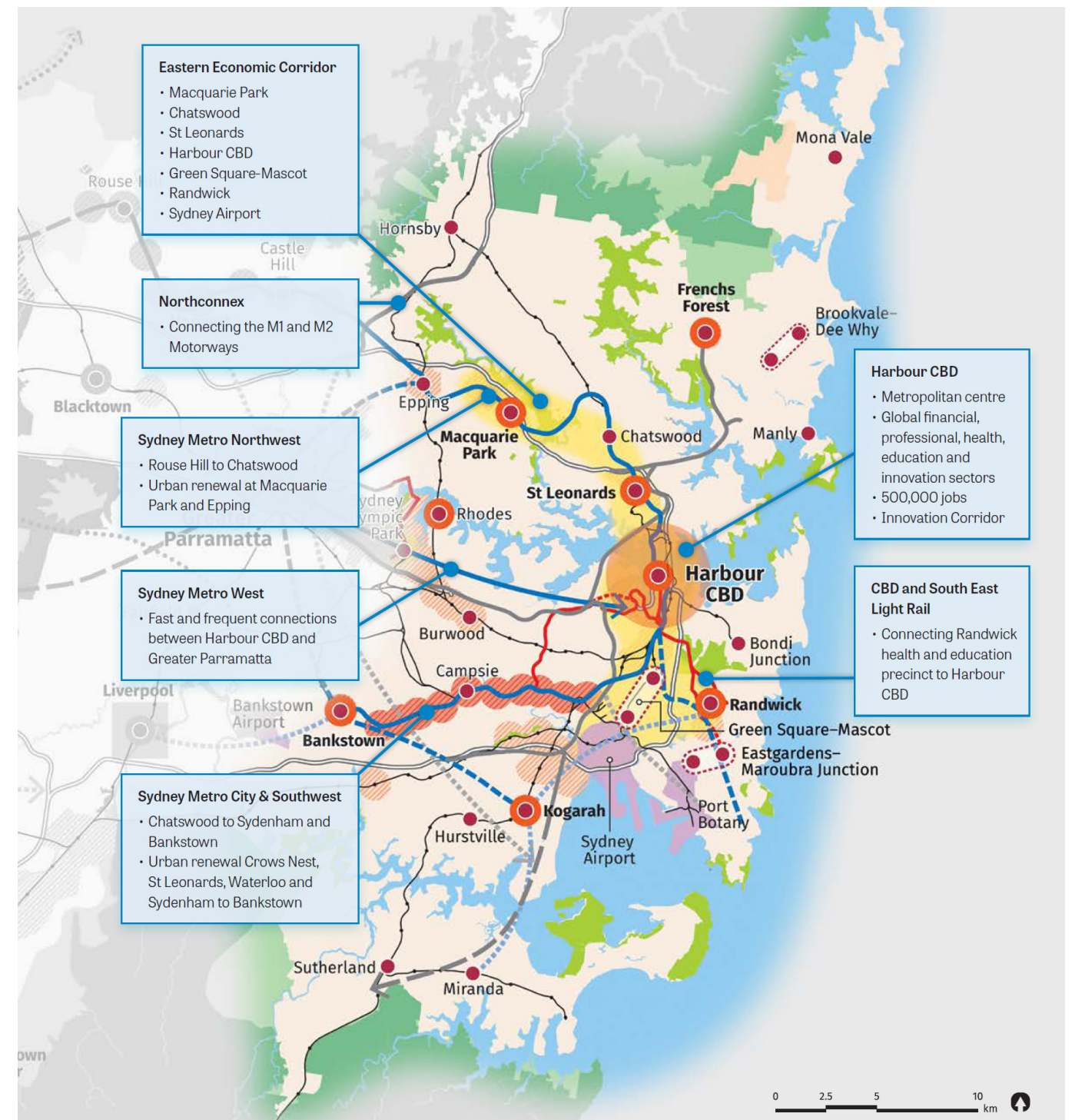


Figure 5 – The Eastern Harbour City

The Map shows the extent of the Eastern Harbour City between Hornsby and Macquarie Park to the North West, Rhodes and Bankstown to the West and Sydney Airport, Port Botany and Sutherland to the south

Source: A Metropolis of Three Cities



#### 4.2. NORTH DISTRICT PLAN

This District Plan sets out aspirations and proposals for Greater Sydney's North District, which includes the local government areas of Hornsby, Hunters Hill, Ku-ring-gai, Lane Cove, Northern Beaches, Mosman, North Sydney, Ryde and Willoughby. It has been developed by the Greater Sydney Commission.

The North District Plan has identified the Chatswood area as a Strategic Centre being one of the largest centres within the District, containing over 24,000 jobs in 2016. The centre plays a major role for the retail and commercial offerings in the district. The subject site, located within 800m from Chatswood Station and the Concourse shopping precinct and Westfield, has the potential to provide additional residential accommodation within a walkable catchment of retail and employment services. The District Plan has outlined the need for greater housing choice in the district to keep up with the forecasted population growth over the next few decades.

The North District Plan sets a target of 31,000 – 33,000 jobs by 2036 for the Chatswood Strategic Centre, an increase of 8300 jobs upon the 2016 estimate of 24,700 jobs. A five-year housing target is provided for each local government area in the North Draft. Willoughby LGA is set a target for 2016 – 2021 of 1250 additional dwellings. A target of 97,000 additional dwellings has been set as a minimum target over the next 20 years. The Draft District Plans encourage Council's to have an eye on the longer term target, as well as the 5-year housing target as the Great Sydney Commission wants to ensure that new housing capacity opportunities leverage current and future infrastructure provision whilst improving Sydney's equity and liability.

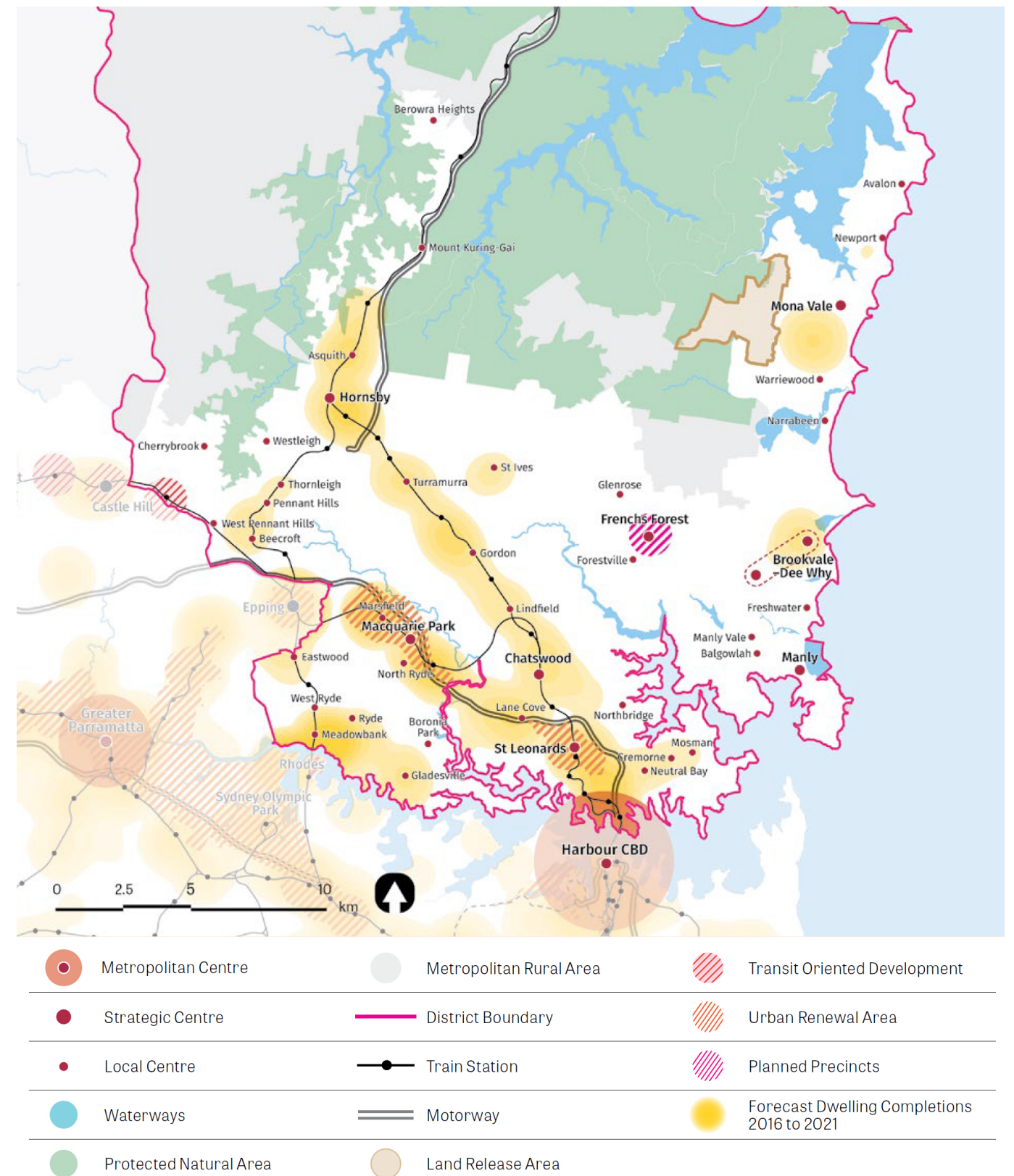


Figure 6 – North District Plan – Future Housing Supply



#### 4.3. CHATSWOOD PLANNING & URBAN DESIGN STRATEGY

The site is located outside the study area for the Chatswood CBD Planning & Urban Design Strategy, being located on the western side of the Pacific Highway. The study has identified Chatswood CBD as having the potential for substantial growth in commercial office space in the Commercial Core, supported by an expansion of the centre for higher density residential growth to the north and south.

The land between the railway line and the Pacific Highway has been identified as a future high density mixed-use precinct. This area, located approximately 70 metres from the subject site is recommended for a change in densities with high rise residential towers reaching to 90 metres with FSRs of 6:1.

Figure 7 – Location of Opportunity sites identified in the study

This map shows the location of all opportunity sites identified in Council's study within the Chatswood CBD and outside of the Chatswood CBD, including mapping strata properties. The subject site was identified as an opportunity site outside of the CBD (Source: Chatswood CBD Planning & Urban Design Strategy - Architectus).

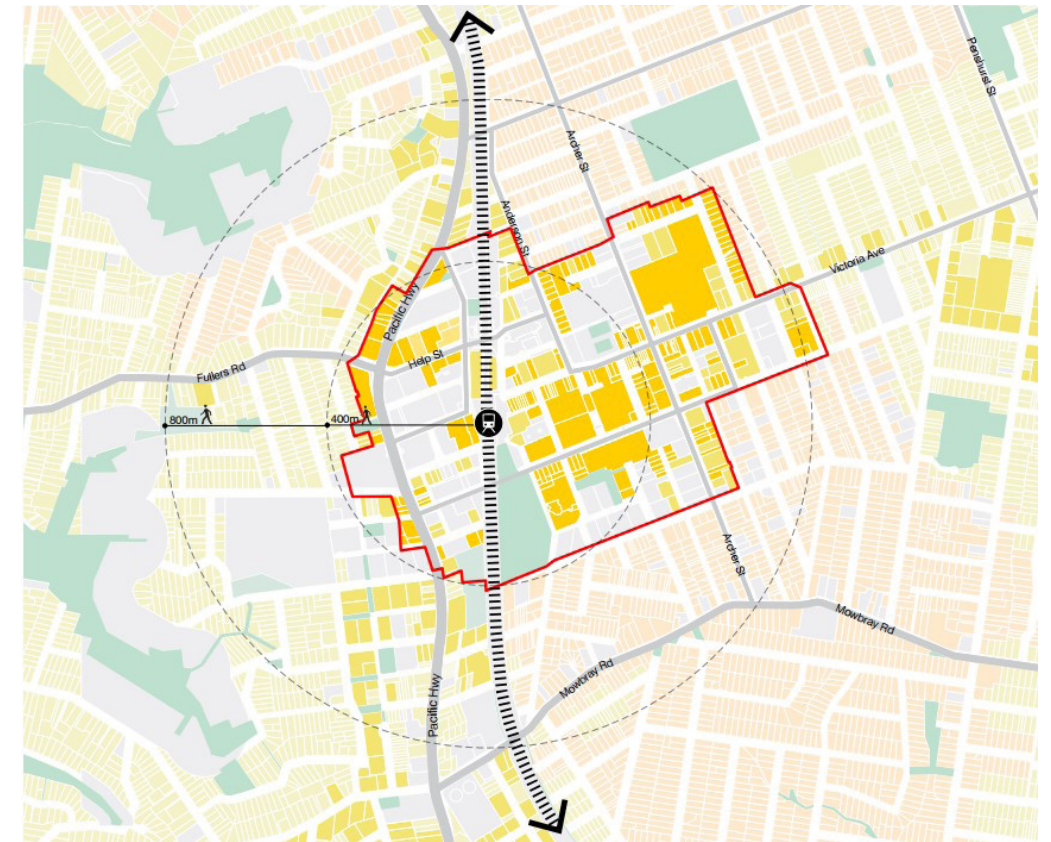
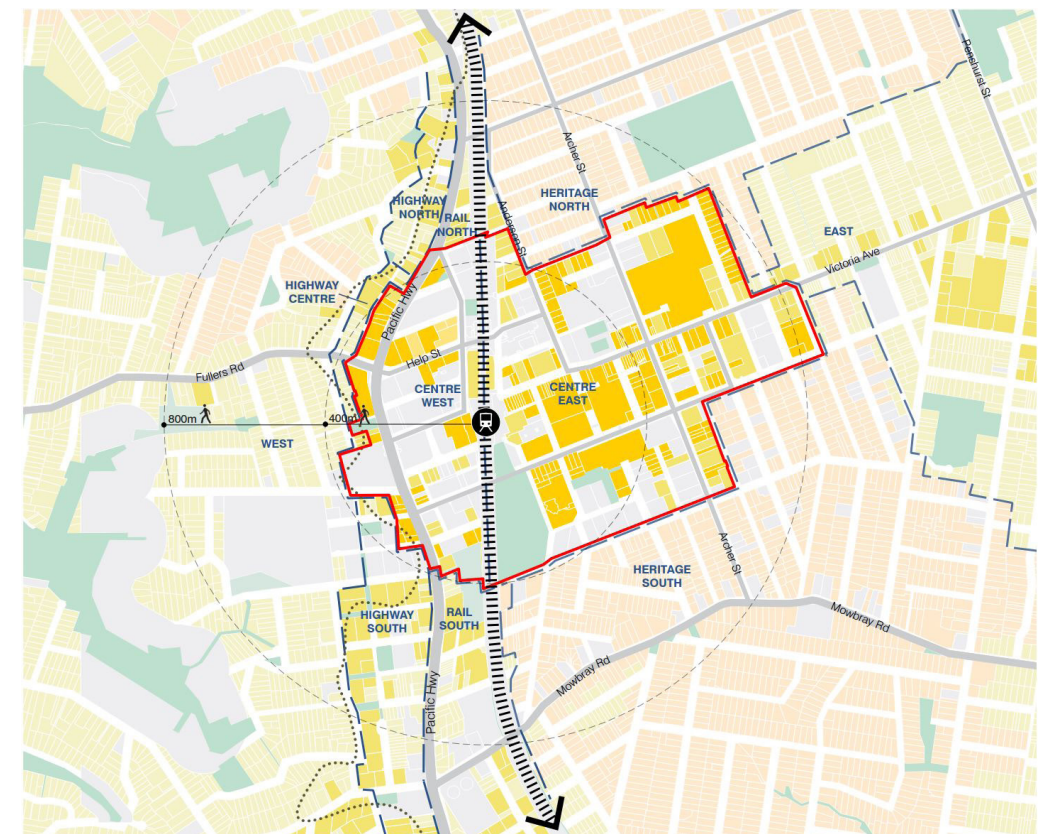


Figure 8 – Chatswood CBD Potential Areas for Growth

This Architectus map considers all areas surrounding the CBD for potential future development, identifying the opportunity sites within each area. This provides the basis for the consideration of two potential CBD boundary expansion options.





Whilst land located to the western side of the Pacific Highway is outside of the Chatswood CBD Study area, the change on the western side will have a dramatically different context than currently exists.

Architectus recommend the following approach for each of the areas identified:

- The Rail north and south areas, are well connected to the centre and should be considered appropriate for change immediately even if they are considered separate from the 'core' of the centre which focusses around retail and office uses.
- Development to the west and highway centre, north and south should be considered in the future growth of the centre once the existing centre and areas noted above are built out. These areas should be considered in tandem with improvements to pedestrian access across the Pacific Highway and steep topography
- All of these areas should be considered as having a potential contribution to the centre in the long term. They should not be permitted in the near term to develop as low to mid-rise strata apartments which may preclude this future potential.

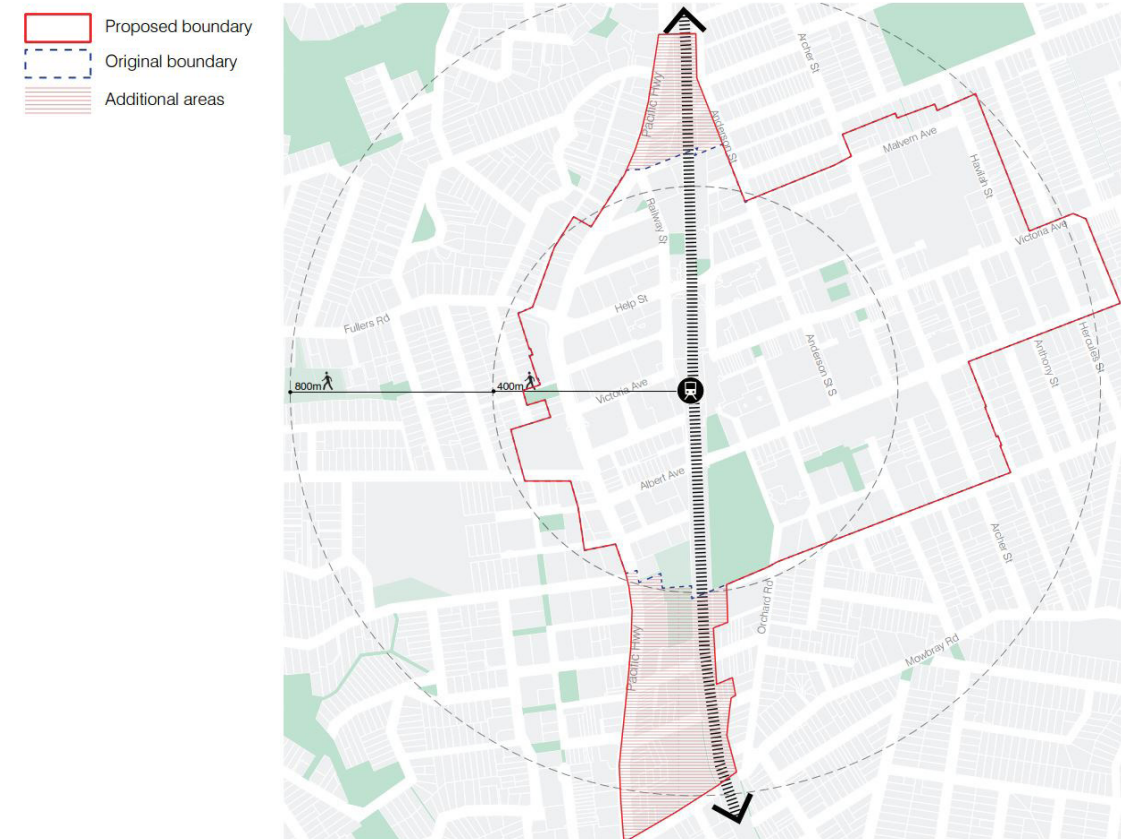


Figure 9 – Recommended CBD boundary



Figure 10 – Recommended CBD boundary with proposed height limits



#### 4.4. WILLOUGHBY HOUSING POSITION STATEMENT 2017

The Willoughby Housing Position Statement 2017 (Position Statement) highlights the need for further investigation of medium to high density developments outside of the Chatswood CBD, and within local centres with population statistics provided showing that there is a lack of available land, and with a population that is expected to continue to grow, identifies a need for more medium and high-density housing in well-connected areas. The study predicts that the largest household type will be single person households, followed by couples with children, showing that further investment in housing types is needed.

The Position Statement 2017 states that:

*This Position Statement discusses planning for the future housing needs of Willoughby City residents over the next 20 years in response to our growing and changing population.*

The purpose of the Position Statement includes:

- Provide sufficient and well-designed housing for the next 20 years;
- Provide for a mix of housing types to suit various community needs including affordable housing;
- Focus new housing growth in larger centres and areas of medium and high density with access to public transport to protect lower density neighbourhoods;
- Promote community health and wellbeing by locating new housing within walkable access (400m) to transport and other local services and amenities; and
- Respect and promote the heritage and environmental qualities of WCC in planning for new housing.

The study has highlighted the need for future developments to:

“occur in locations that are in close proximity to adequate educational, transport, health, social, cultural and employment services. New residential development needs to be adequately serviced by infrastructure. The adequacy of existing water supply, stormwater, drainage, open space and community facilities are important considerations in permitting additional development to take place.”

The subject site falls within both the Artarmon and Chatswood study areas which have both been classified as having excellent public transport links with the Artarmon and Chatswood stations being no more than 800 metres away as well as bus connections along the Pacific Highway in a location referred to as “Chatswood Edge”.

The investigation notes that any remaining land that is not classified as R3 or R4 should be further investigated to “reality check” the relevant Willoughby Local Environmental Plan 2012 controls.

This study has highlighted how well the subject site is located and that there will be strong demand for a high-density development in that area.

In addition, the following constraints were also taken into consideration in identified areas suitable for additional housing:

- Bushfire prone land
- Heritage and conservation areas
- Topography
- Strata subdivision

The following principles are suggested in the Willoughby Housing Position Statement 2017 as important in identifying areas that may have potential to accommodate additional density:

- Offer a variety of housing types
- Located close to public transport, including train stations and major bus routes.
- Heritage significance is not compromised.
- The scenic qualities and ecological values of environmentally sensitive natural areas, including foreshores and bushland, are maintained.
- An intensification not to occur in areas of bushfire risk.
- The capacity of existing infrastructure is considered. The majority of new development should occur in locations that are in close proximity to adequate educational, transport, health, social, cultural and employment services. New residential development needs to be adequately serviced by infrastructure. The adequacy of existing water supply, stormwater, drainage, open space and community facilities are important considerations in permitting additional development to take place.
- Impacts of development on traffic movements and arterial road networks, and the improvement of public transport services need to be considered.
- Where possible, new pedestrian and cycling linkages will be required to increase accessibility both for prospective residents and residents of surrounding properties.
- Any additional density will be provided near existing business centres to support local business as recommended in the Willoughby City Strategy.
- Increase in population to be matched by social planning considerations for increased child care, open space, schools, youth services and improved infrastructure..

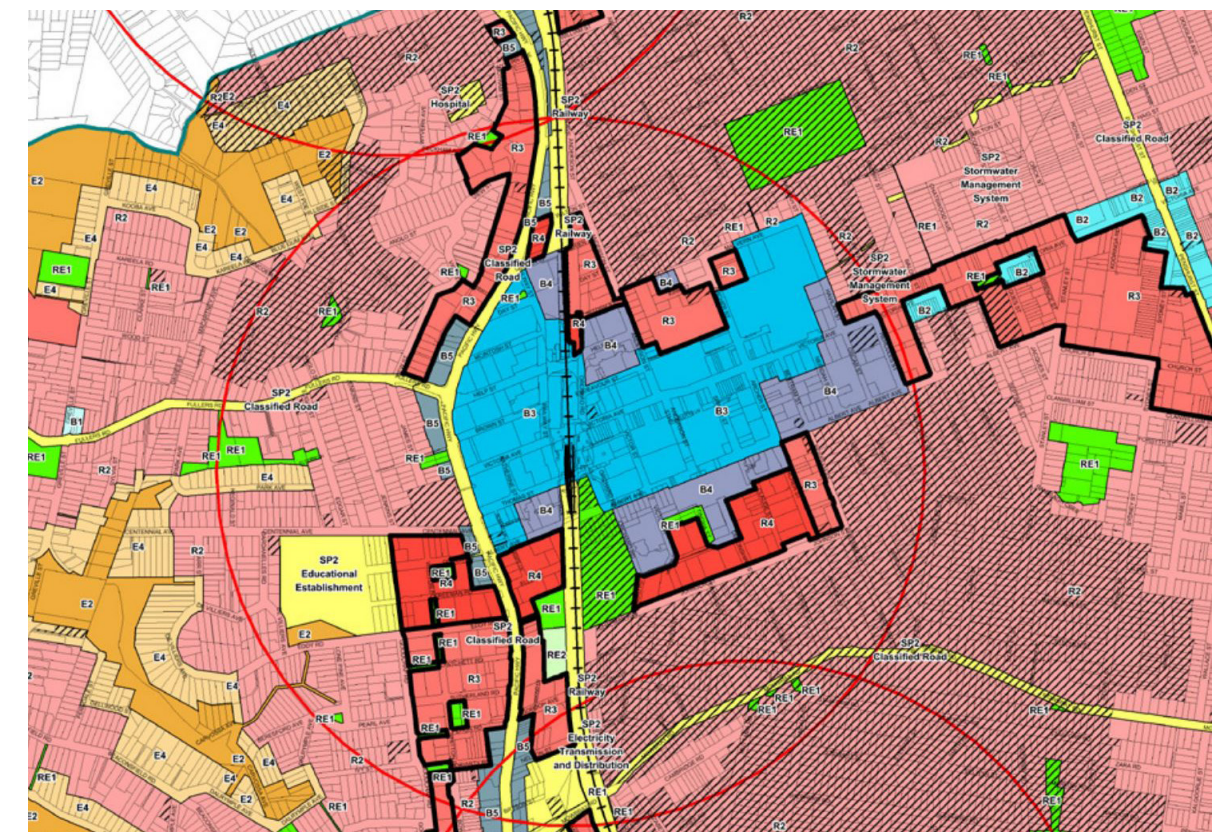


Figure 11 – Chatswood Edge (Source: Willoughby Housing Position Statement 2017)

Council's Position Statement states that for the Chatswood Edge:

*A Study is being carried out separately for Chatswood CBD. There are limited remaining residential development opportunities for Chatswood. R3 and R4 land are located on the edge of the CBD, generally west of the Pacific Highway and around the B3 zoning. All of these areas fall into the 800m catchment of either Chatswood, Roseville or Artarmon railway stations.*



### 5.1. REGIONAL AND LOCAL ROADS

The site is located along the eastern side of Bowen Street and the Southern side of Moriarty Road. Bowen Street is a cul-de-sac street with a wide laneway at the northern end connecting pedestrians to Moriarty Road. The site is located 50 metres from the Pacific Highway which is the major 3 lane arterial road within the North Shore with connections from North Sydney Via Chatswood and Wahroonga and further to the Pacific Freeway. Mowbray Road is the main west-east road in close proximity to the site and provides a mostly two lane connection between Willoughby and the M2 Motorway near North Ryde.

The M2 Motorway provides a 3 lane fast flowing road connection that connects with the M1 Motorway at Sydney CBD with the M7 Motorway at Blacktown. The Motorway has on ramps located close to the subject site at the junction of the Pacific Highway and Longueville Road.

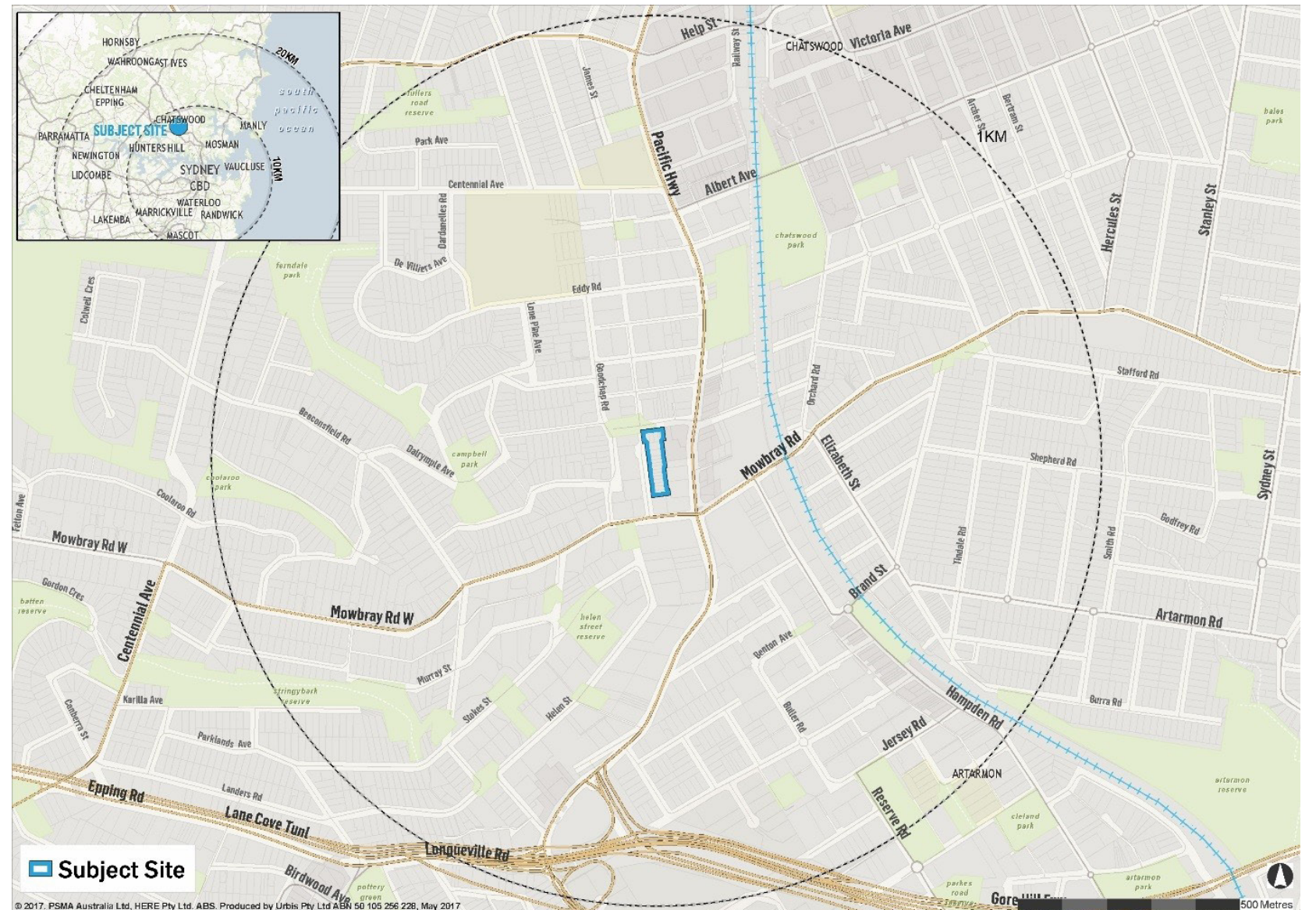


Figure 12 – Location of roads in the local vicinity  
This map shows the location of several major roads in close location to the subject site. Source: Urbis



## 5.2. TRANSPORT ACCESSIBILITY

The subject site is located within 800 metres of both Chatswood and Artarmon Stations and is serviced by regular bus services along the Pacific Highway and Mowbray Road. The new Sydney Metro station to be located at the existing Chatswood Station will also provide an alternative transport option for any future residents of the subject site to the Norwest and Sydney CBD and beyond.

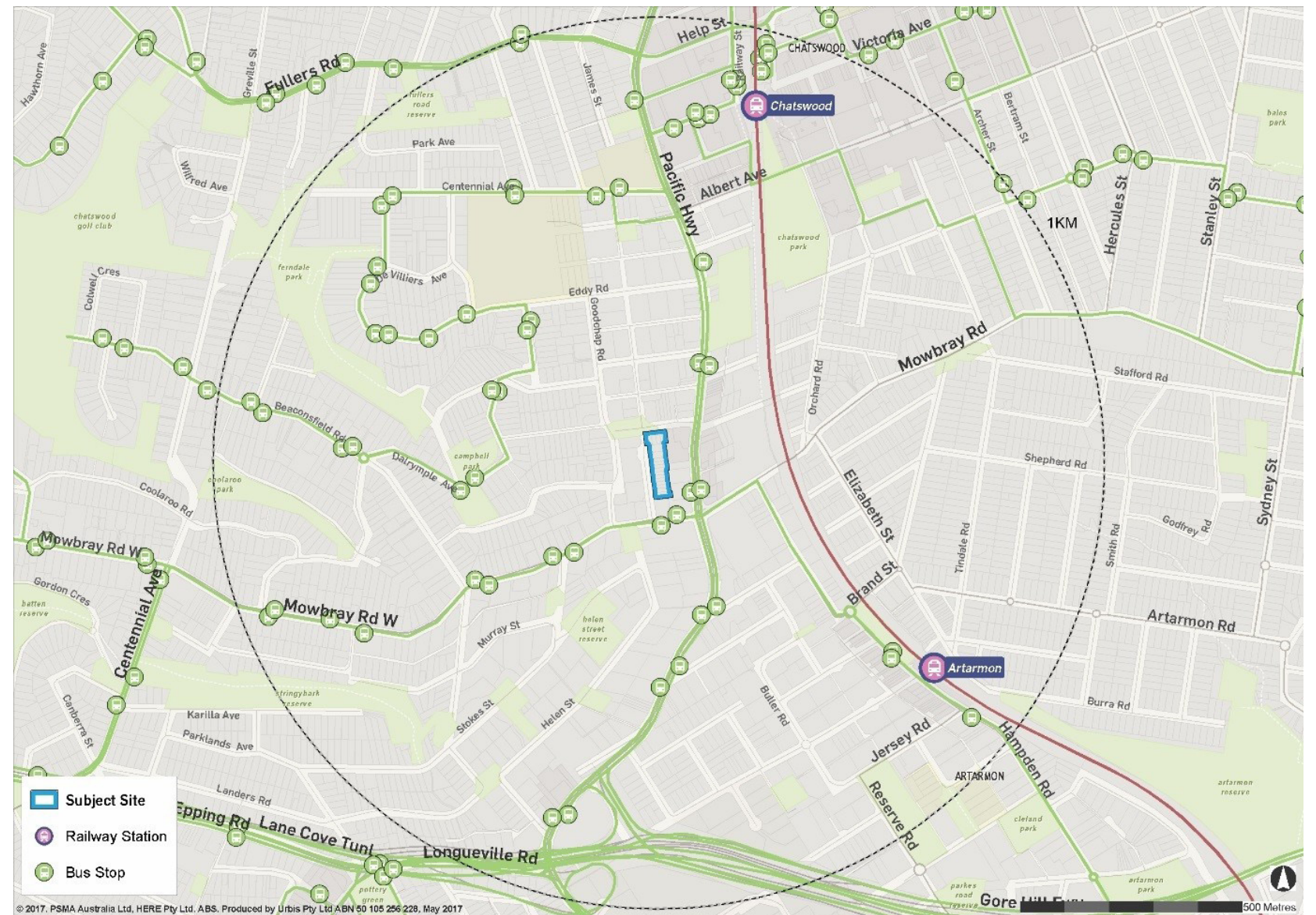


Figure 13 – Location of roads in the local vicinity  
This map shows the location of several major roads in close location to the subject site. Source: Urbis



### 5.3. LAND USE ZONING

The subject site is zoned R2 Low Density Residential and is surrounded by B5 Business Development and R3 Medium Density Residential and is located close to Lane Cove LGA. The area also included several areas zoned RE1 Public Recreation in the form of parks as well as large areas zoned SP2 Infrastructure which includes a water supply system and Chatswood Public School.

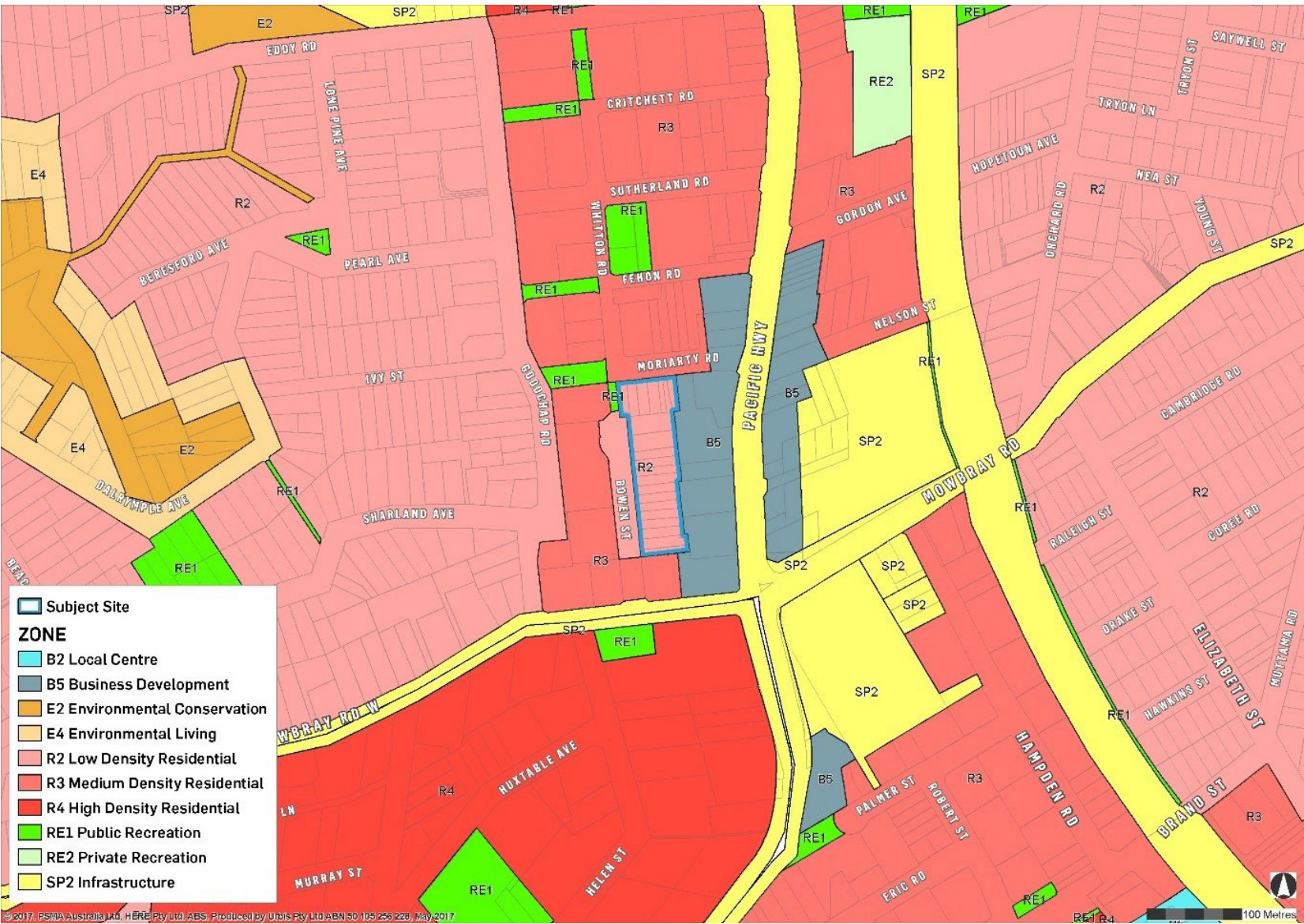


Figure 14 – Land Use Zone  
This WLEP2012 land use zoning map shows the site is zoned R2 Low density residential. In comparison, all blocks around the subject site are zoned R3 and B5. Source: WLEP2012



### 5.4. FLOOR SPACE RATIO

The Floor Space Ratio (FSR) of the subject site is determined by the controls outlined in Clause 4.4A of WLEP2012, whereby it gives a rundown of different controls depending on site area. Given this, the combined site area is 6,500sqm and therefore the 800m plus control applies, giving the site a 0.40:1 ratio.



Figure 15 – FSR control map  
This map shows the FSR controls in regards to the site and immediate area, the site has an FSR ratio of 0.40:1. In comparison, land neighbouring the site have an FSR of 0.9:1 and 2.5:1. Source: WLEP2012



## 5.5. MAXIMUM HEIGHT OF BUILDINGS

The maximum height of buildings for the subject site is 8.5 metres. In comparison, high limits for neighbouring land range from 12 metres opposite the site on Bowen Street and Moriarty Road to 20 metres fronting Pacific Highway.



Figure 16 – Maximum building height.



### 5.6. HEIGHTS OF EXISTING BUILDINGS

This map shows the heights of the buildings in the immediate area on the western side of the Pacific Highway. As shown, there is a substantial number of buildings that are higher than the respective maximum Height of Building standard.

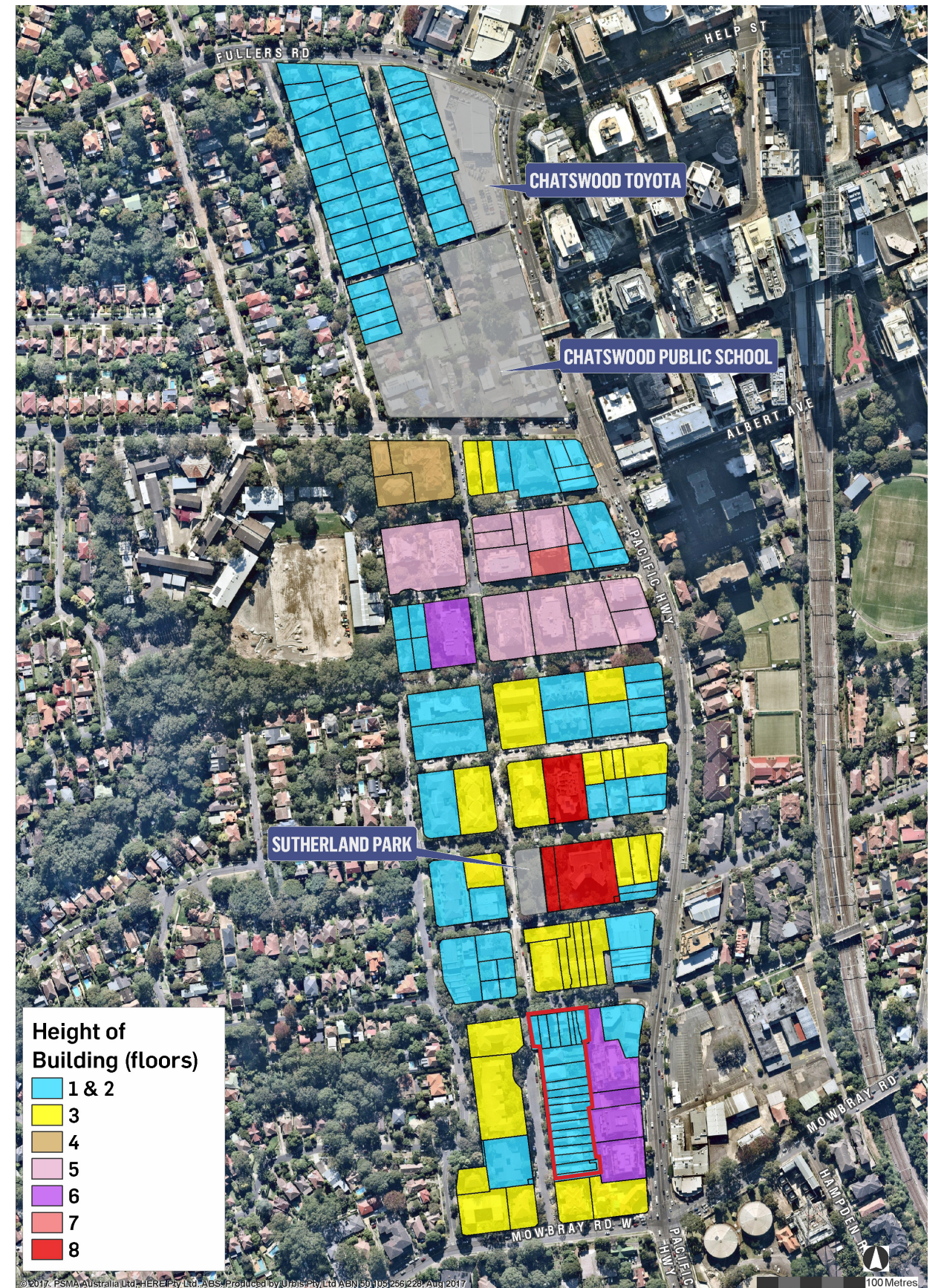


Figure 17 – Height of buildings in the immediate area (number of floor levels). Source: Urbis



### 5.7. HERITAGE ITEMS

The site contains one local heritage listed item. The item (I147) is a pair of two storey terrace houses located on Moriarty Road at No's 8 & 10. A Heritage Assessment Report has been prepared by Urbis and accompanies this Planning Proposal submission.

The Great Northern Hotel, although not located within the subject site, is another local heritage item and is located adjacent to the site on the corner of the Pacific Highway and Mowbray Road.



Figure 18 – Heritage Map and listed heritage item Source: WLEP2012.  
This map shows the location of heritage items and Heritage Conservation areas in relation to the site.



### 5.8. BUSHLAND AND OPEN SPACE

The site is located within 500 metres of several parks and green open spaces. Sutherland Park, located less than 50 metres away on Sutherland Street, provides a small children's playground as well as landscaped gardens and green open space. Chatswood Park, located 400 metres from the site, on the eastern side of the Pacific Highway and railway line, is a large playing field and open park that accommodates small sporting games and areas of open spaces and landscaped gardens. The park connects to the southern end of Chatswood CBD.

The streets located close to the site have some small pocket parks as part of the streetscape that provide areas of lawn and seating.

Ferndale Park, located 500 metres to the west of the site, is a large natural park that follows Swains Creek. The park provides picnic areas and walking tracks along the creek.

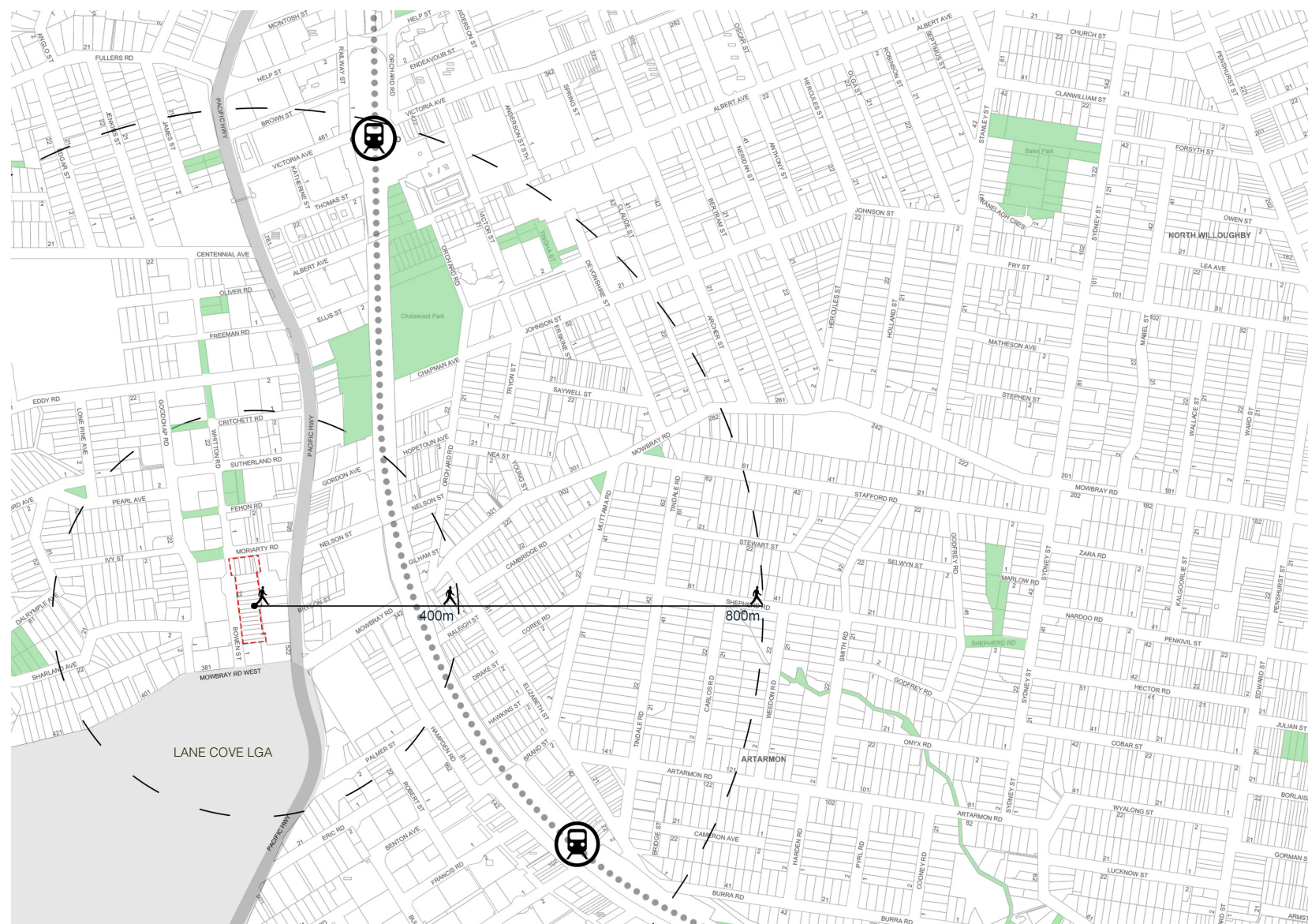


Figure 19 – Location of green open space.  
This map shows the location of all green space located close to the subject site.

- Recreational Space
- Railway
- T Train Stop
- Project Site



### 6.1. INTRODUCTION

This section of the report describes each of the key constraints to increasing housing supply within an 800 metre catchment of Chatswood and Artarmon Stations, in terms of:

- Existing zoning
- Strata titled properties
- Heritage Conservation
- Topography

### 6.2. EXISTING ZONING

As explained by Council in the Position Statement, there are limited remaining residential development opportunities for Chatswood. R3 and R4 zoned land is located on the edge of the CBD, generally west of the Pacific Highway and around the B3 zoning. As shown in the mapping of Strata titled properties, much of the R3 and R4 zoned land within the walkable catchment of these areas has been redeveloped for housing.

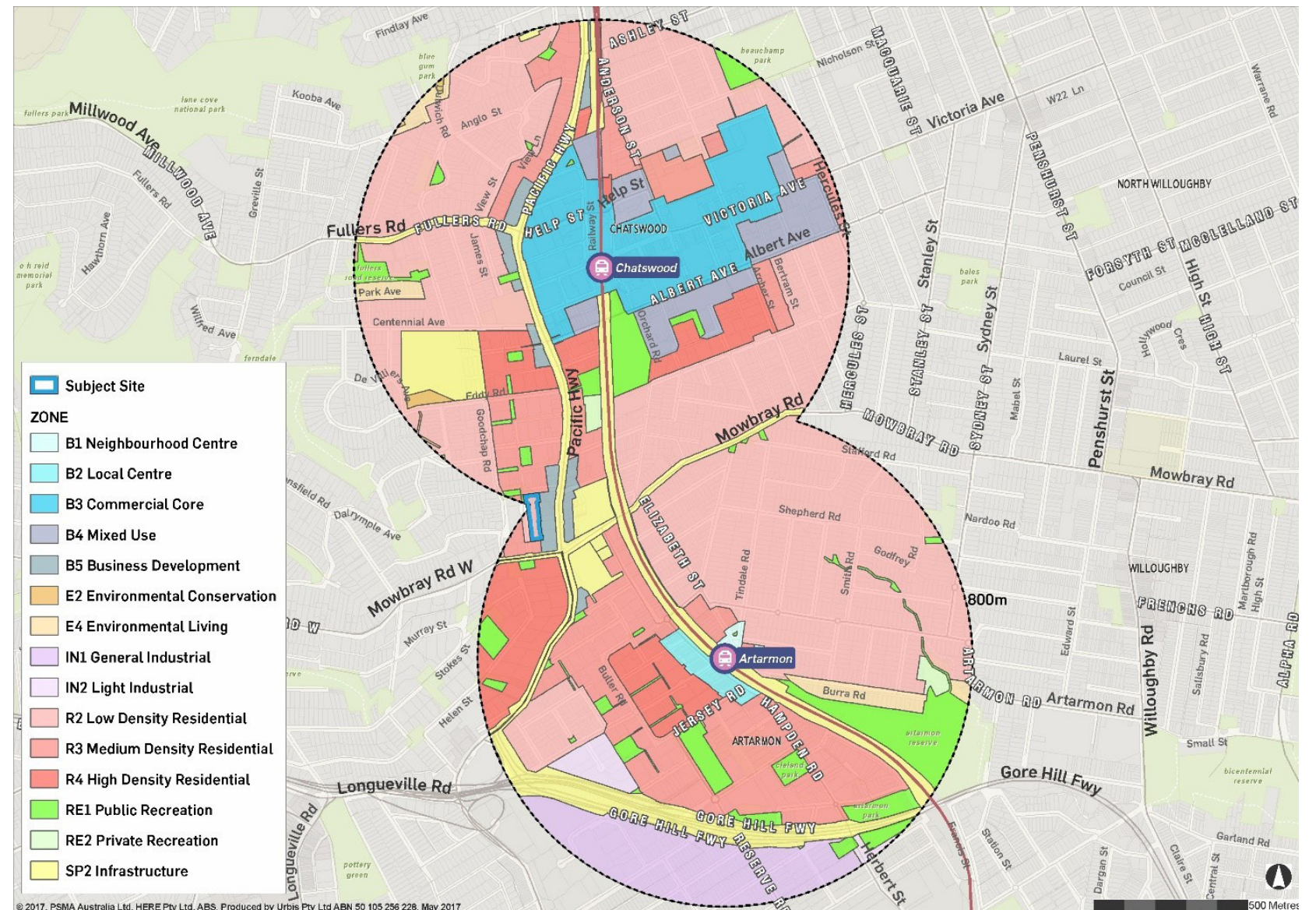


Figure 20 – Zoning within 800 metre catchments of Chatswood and Artarmon Railway Stations



6.3. STRATA TITLED PROPERTIES

The location of Strata titled lots within the walkable catchment of Chatswood and Artarmon Station has been mapped in Figure 21. This map indicates that much of the existing R3 and R4 zoned lands within the walkable catchment have already been developed. Notwithstanding changes to strata laws that seek to encourage redevelopment of older housing stock, existing strata titled properties present a significant constraint to consolidated and coordinated delivery of new housing in the short to medium term.

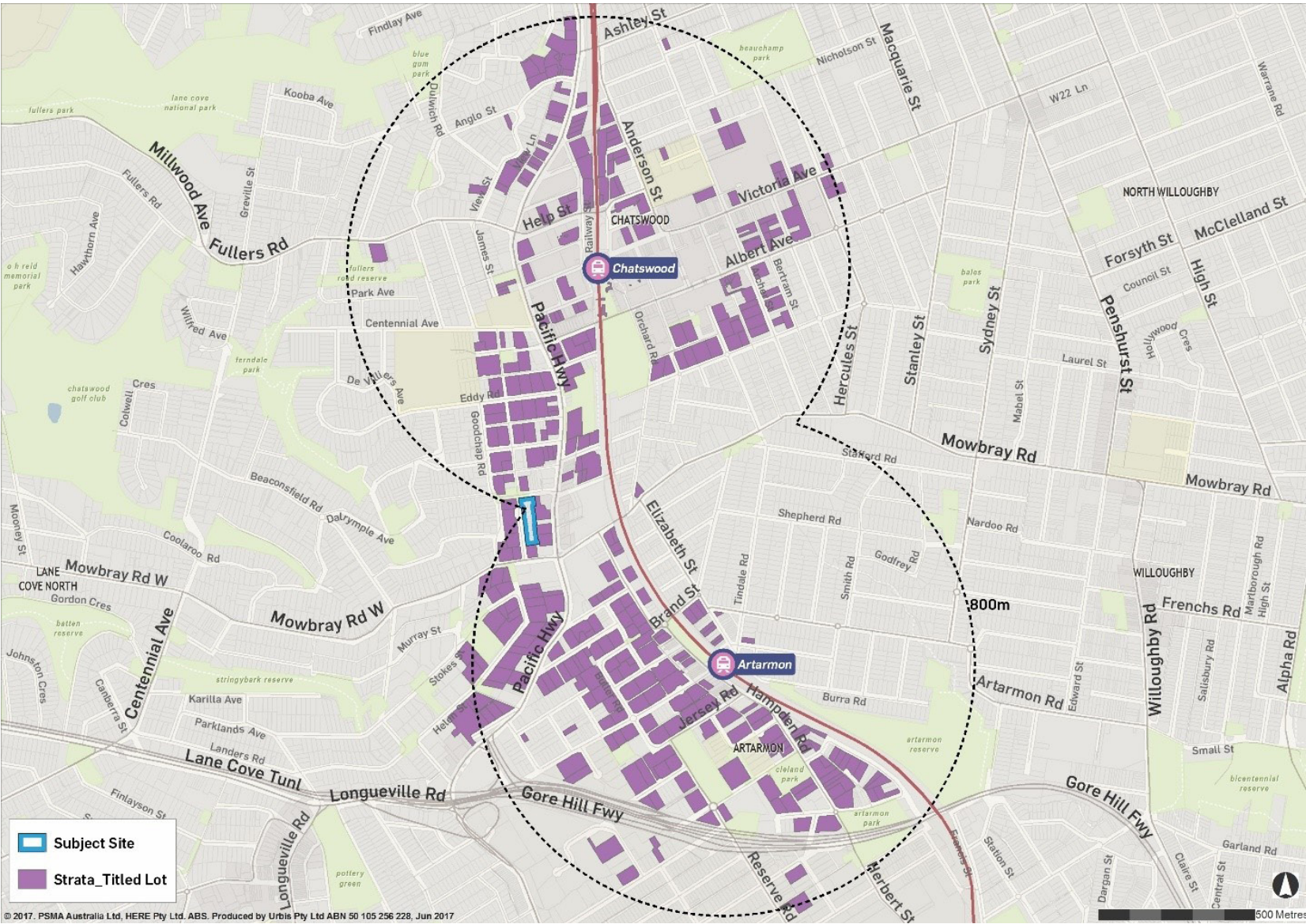


Figure 21 – Strata-titled property within 800 metres of Chatswood and Artarmon Train Stations (source: Urbis)  
The subject site does not contain any Strata titled properties.



6.4. HERITAGE CONSERVATION

State and local Items of Heritage Significance and Heritage Conservation Areas within 800 metres of Chatswood and Artarmon Train Stations are mapped on the right. Heritage conservation areas make up large areas to the north, north east and south east of the 800m radius around Chatswood Trains Station. Heritage Conservation Areas also take up large parts of the walkable catchment to the east, north east and south east of the Artarmon Train Station

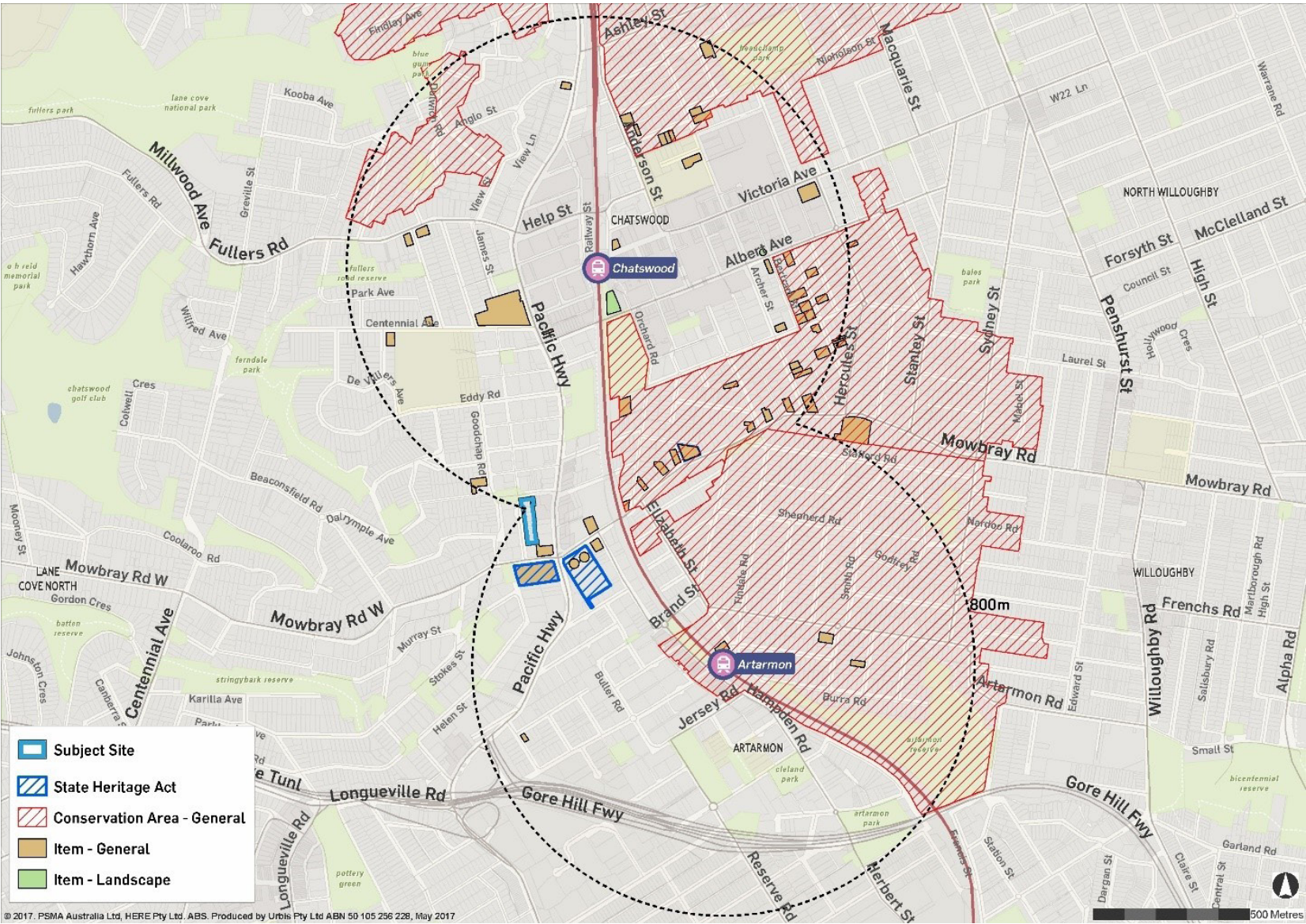


Figure 22 – Heritage Conservation Areas and Items of Heritage Significance (source: Urbis)  
The subject site is not located within a Heritage Conservation Area. The site contains a local heritage item at 8-10 Moriarty Street.



6.5. TOPOGRAPHY

Steeply sloping land can present a constraint to coordinated development of medium and high density housing, given the additional costs associated with construction. The mapping of the topography within the 800-metre catchment shows that much of the land to the west of the Pacific Highway has slopes in excess of 10%, and a significant portion of this land has slopes that exceed 20%.



Figure 23 – Topography Map (source: Urbis)  
The subject site is located on land with slopes than are generally less than 4%



### 7.1. CONSOLIDATED SITE

The site contains 22 individual lots. The consolidated development of these properties has the advantage of providing additional housing in a coordinated way, rather than in an incremental way. The large site allows for a Master Plan approach to designing buildings.

The future development of the site will help realise the site's potential, help improve the streetscape of Bowen Street and Moriarty Road and provide greater housing choice for the local area in the short term (within 5 years).



Figure 24 – Consolidated Site



7.2. WALKABLE CATCHMENT TO PUBLIC TRANSPORT

The subject site is located within 800 metres of both the Chatswood and Artarmon Stations on the North Shore line, as well as 50 metres from bus stops along the Pacific Highway and Mowbray Road with connections to Macquarie Park, St Leonards North Sydney and Sydney CBD. The site is also within 800 metres of employment opportunities within the Chatswood CBD and Artarmon. Access to nearby public transport routes provide excellent opportunities for people to travel to employment centres further afield, including the heath precinct at St Leonards and to North Sydney and central Sydney.

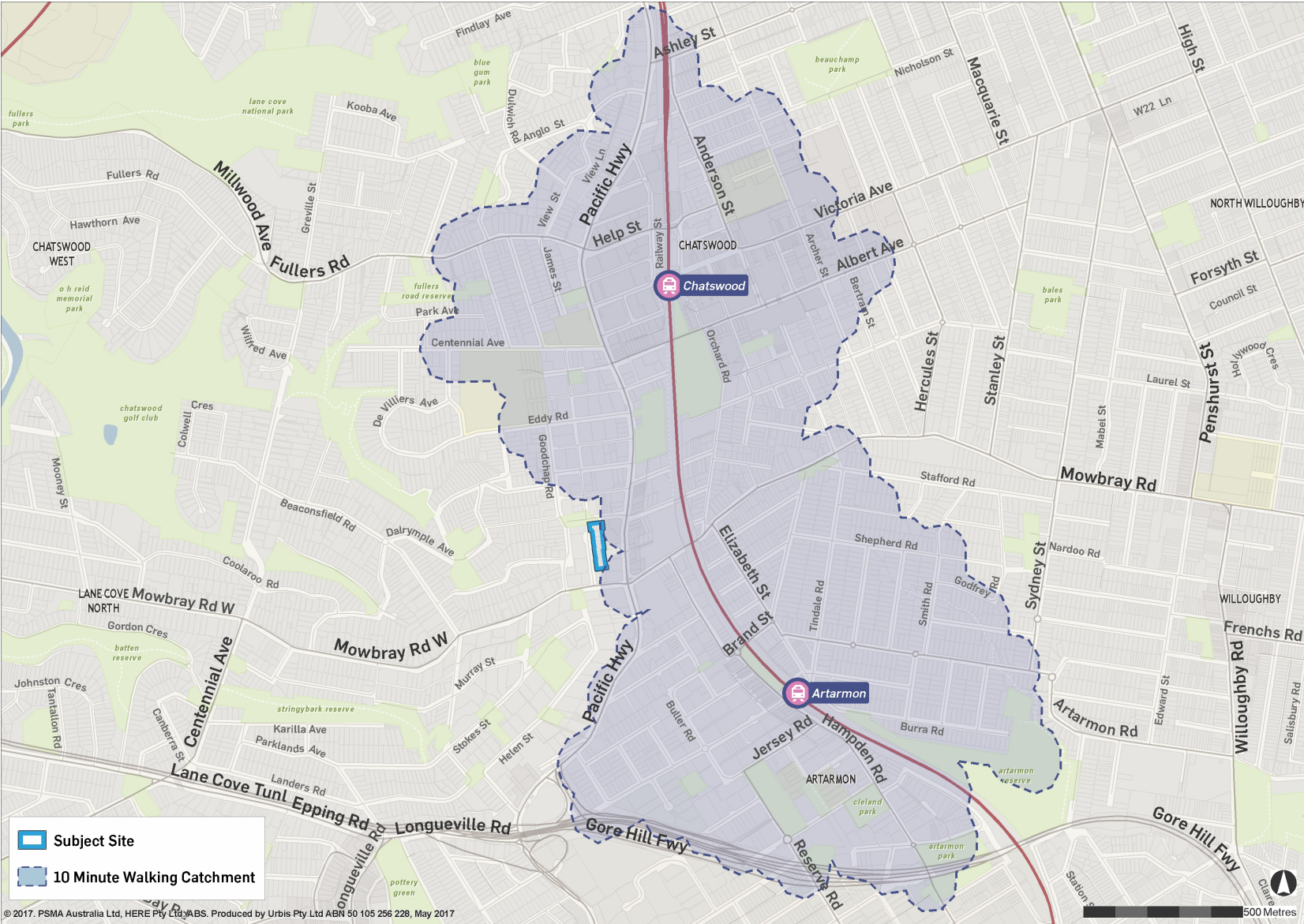


Figure 25 – 10-minute walkable catchment of Chatswood and Artarmon Stations  
The map shows the areas that are within a 10-minute walk to either Chatswood or Artarmon Stations. As can be seen, the subject site is located on the edge of the walkable catchment to two train Stations.



### 8.1. BUILDING HEIGHT AND SCALE

The heights of buildings in the area surrounding Chatswood CBD and extending south towards the site at Bowen Street are anticipated to change substantially over the coming decades. As touched-on earlier in this Planning Proposal report, the Chatswood CBD Planning & Urban Design Strategy proposes heights to 90m immediately east of the Pacific Highway. While the area to the west of the Pacific Highway (including the site) was not included in the CBD extension study area, the report highlighted that these areas “should not be permitted in the near term to develop as low to mid-rise strata apartments which may preclude future potential”.

On the basis of the CBD extension going ahead as proposed, it is fair to say that the area to the west of the Pacific Highway will continue to provide opportunities for growth of medium to high-density housing into the future. This is in alignment with the objectives of the Chatswood CBD Planning & Urban Design Strategy. The indicative section below (Figure 26) anticipates the likely scale of that development and the need for transition heights to the east and west of the CBD southern extension. The site, highlighted in both figures on this page, is situated in the middle of the western transition with a proposed maximum height of 30m. Sites adjacent to the Pacific Highway are anticipated to have higher height limits in the order of 40-60m and sites further to the west are anticipated to have lower height limits between 15-20m.

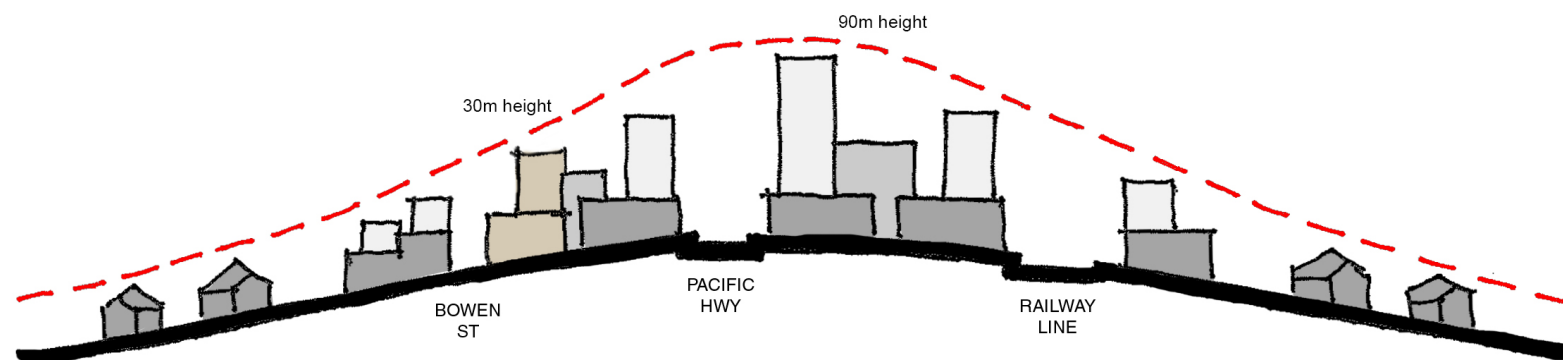


Figure 26 – Indicative section showing future scale transition from Pacific Highway into low density residential areas to the east and west.



## 8.2. SITE SETBACKS

The street setbacks for the site are proposed to be 3 metres. On Bowen Street this is consistent with the setback of the adjacent apartment building on the corner of Mowbray Road West. On Moriarty Road this setback is consistent with the service station building to the east, the apartment building to the west and also the retained heritage terraces.

The rear and side setbacks for the site are anticipated to follow ADG principles as a minimum. This means minimum 6m setbacks to all boundaries except the northern extent of the eastern boundary where a zero setback is possible given the relationship to the adjacent driveway and substation.

To minimise the scale of development on Bowen Street, the Proposal anticipates two separate buildings along the Bowen Street frontage.

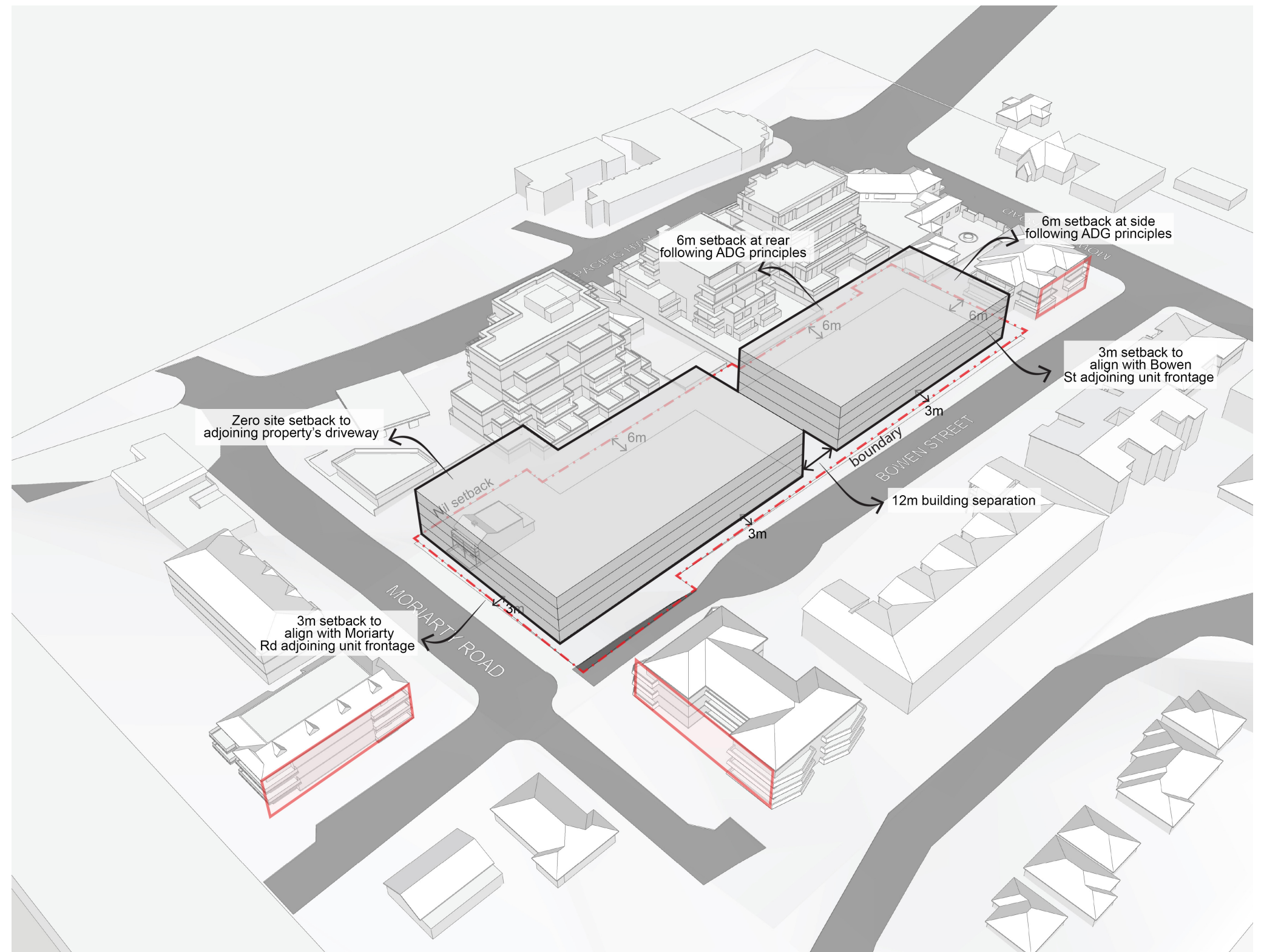


Figure 27 – Minimum Setback Envelope

The diagram above shows the maximum envelope potential for the site based on street, rear and side setbacks only. Buildings must be located within this envelope.



### 8.3. CREATING THE ENVELOPE

#### Heritage Context:

With the retention of the heritage terraces there are two principal strategies anticipated to integrate the future built-form with this heritage item:

1. A two-storey podium will be established that is matched in scale with the terraces. The architectural proportions, materials and detailing will be important factors at the Development Application stage.
2. The building element to the south of the terraces will be setback behind the significant heritage fabric which will retain the principal form of these buildings. Both terraces have been substantially altered at the rear over the years and no significant heritage fabric will be impacted by rear additions.

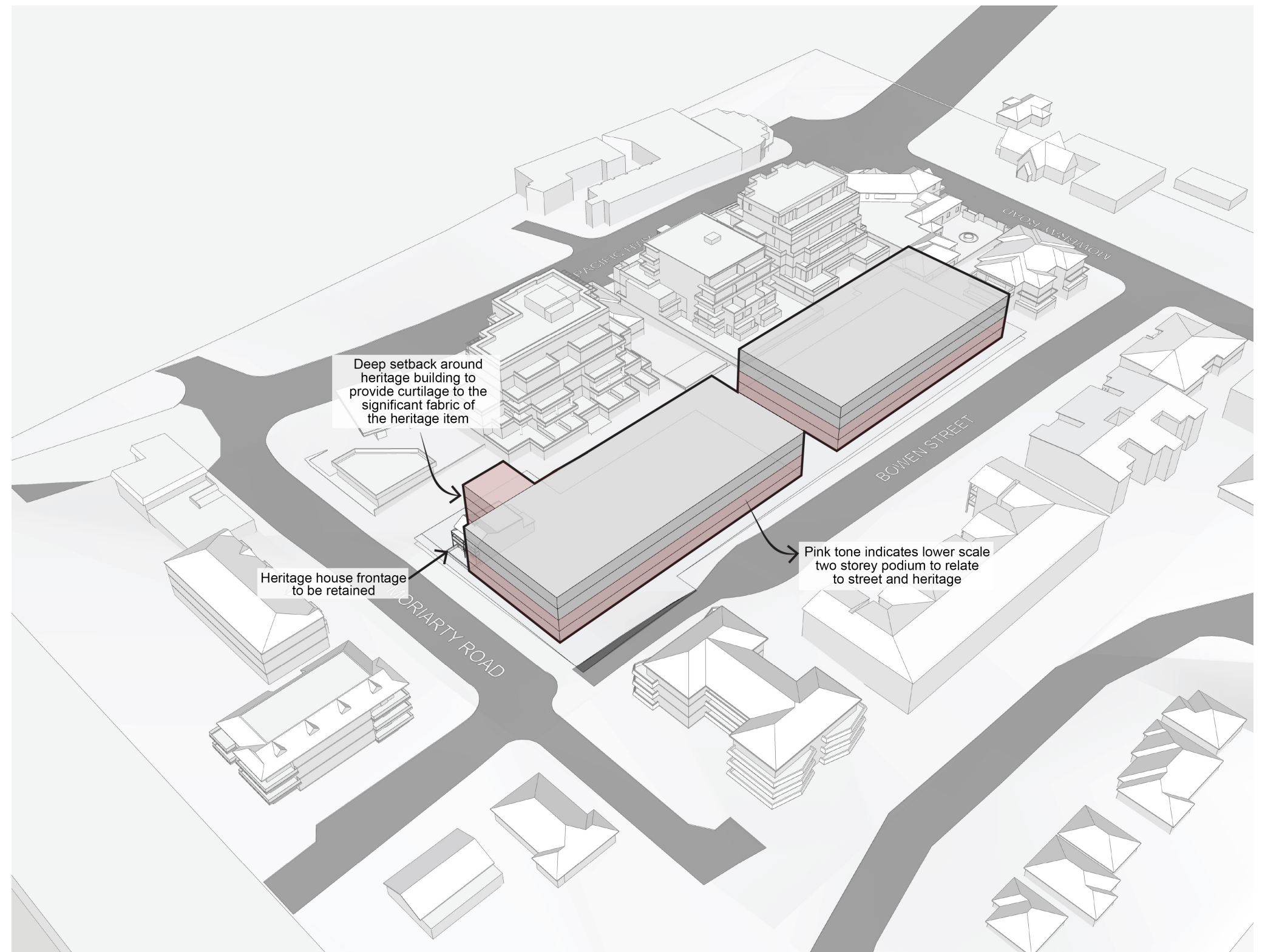


Figure 28 – Modified Envelope

The diagram above shows the modification of the envelope to identify the podium level and shift south behind the heritage terraces.



### 8.3. CREATING THE ENVELOPE

General Massing to Bowen Street:

ADG Principles will inform the appropriate depths of the buildings. By creating four primary cores and cross-through apartments between each major core, the two buildings will be further expressed as four principal building elements rather than just two.

By breaking the building into four principal building elements rather than just two, the perceived massing along Bowen Street will be broken up. This will improve the contextual fit of the proposal as it relates to the rhythm of the apartment buildings on the opposite side of Bowen Street.

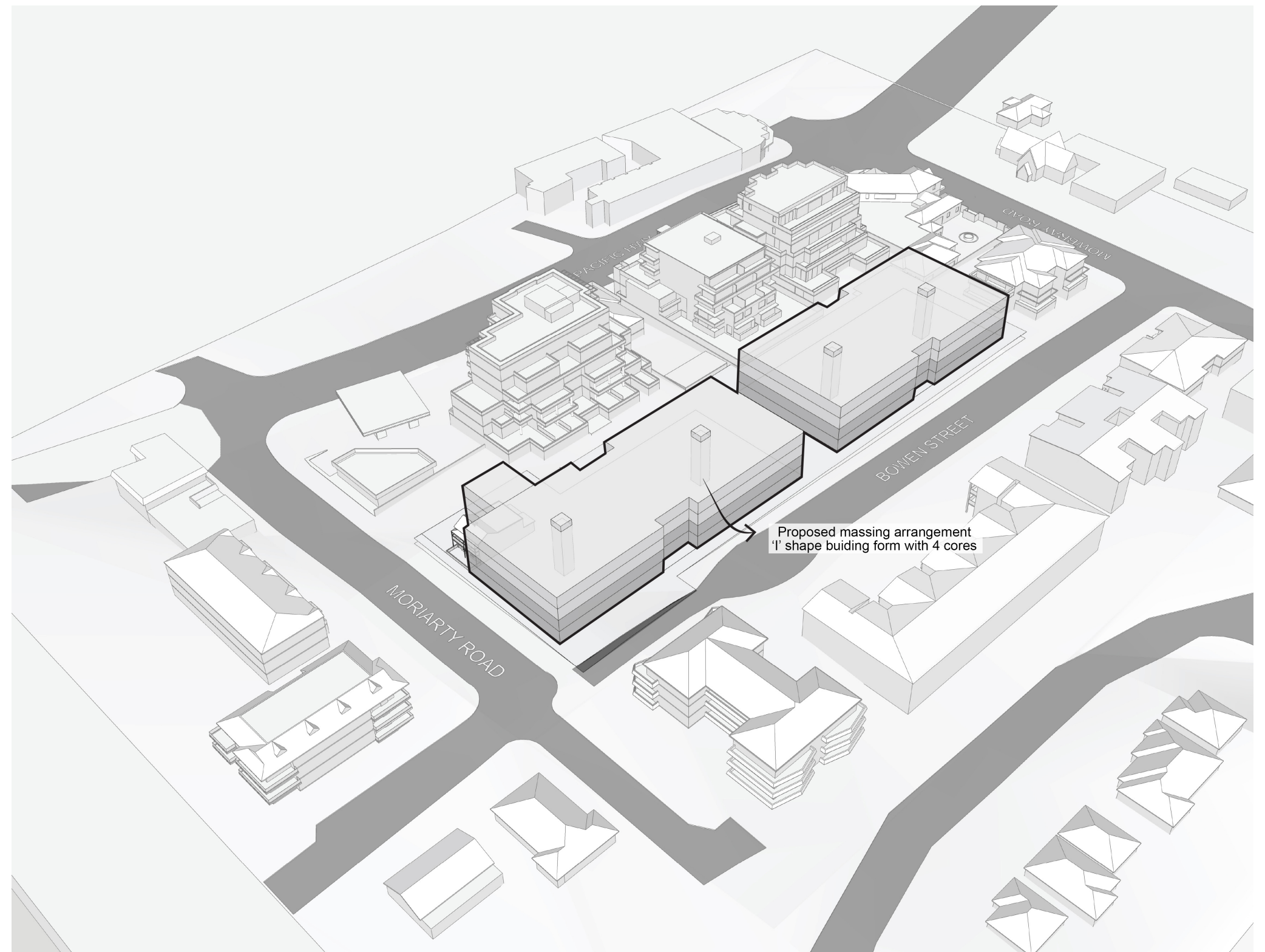


Figure 29 – Modified Envelope

The diagram above shows the introduction of articulation of the massing to respond to the introduction of 4 principal cores.



### 8.3. CREATING THE ENVELOPE

#### Public Forecourt and improving Solar Access:

The proposed envelope is further modified by reviewing opportunities to maximise solar access to as many apartments as possible while also creating a Public Forecourt on Bowen Street. The Public Forecourt is a significant public offering and serves to 'push-back' the building from the frontage. This shift of geometry at this location will help to identify the significance of the corner at Moriarty Road and Bowen Street as well as providing a second focal point at the northern end of the southern building.

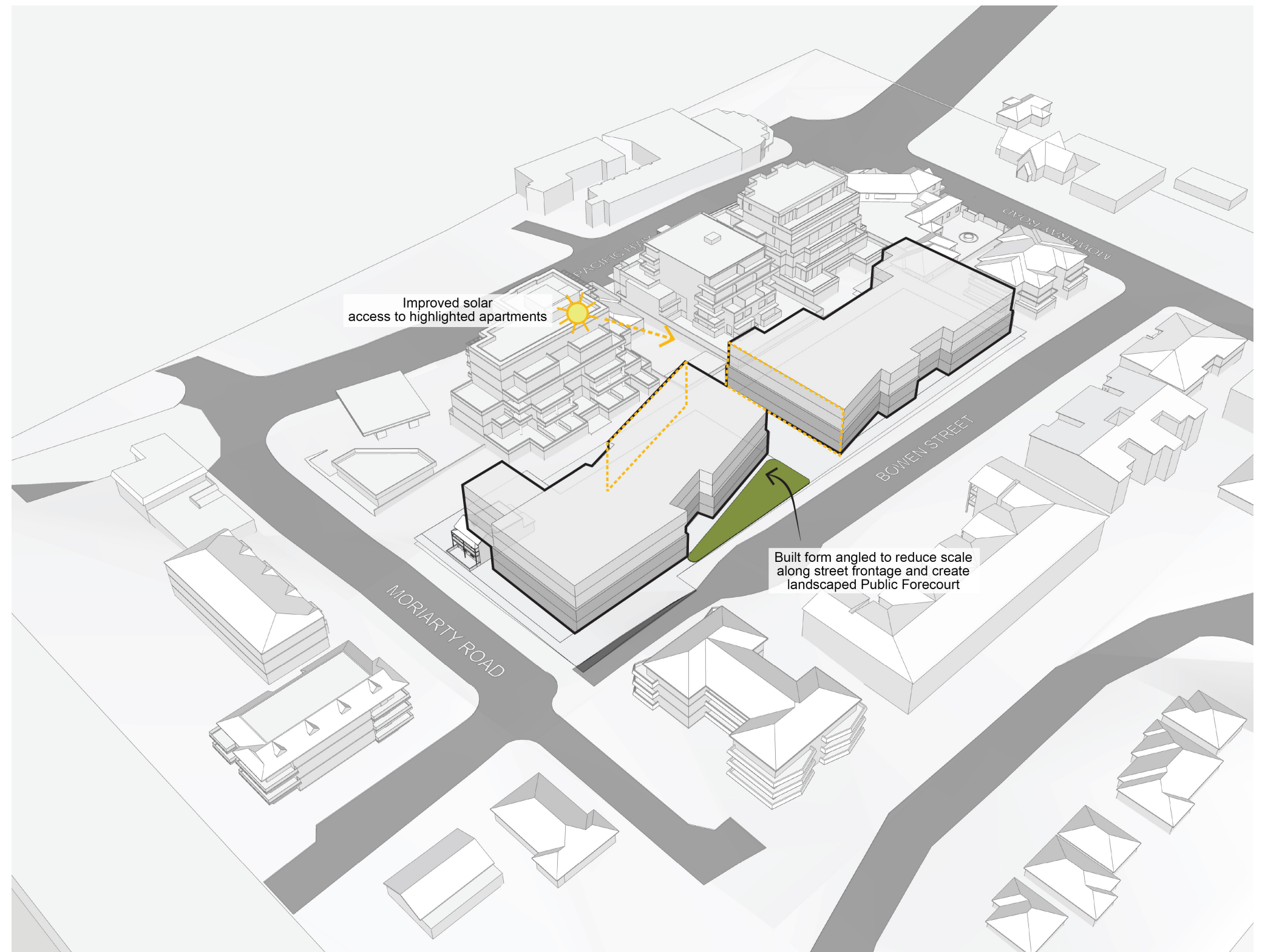


Figure 30 – Modified Envelope  
The diagram above shows the further massaging of the envelope to respond to solar opportunities and the introduction of a Public Forecourt



### 8.3. CREATING THE ENVELOPE

#### Communal Open Spaces:

In addition to the Public Forecourt, the proposal will have three other Communal Open Spaces at Ground Floor. These will provide opportunities for landscape, separation and outdoor recreation.

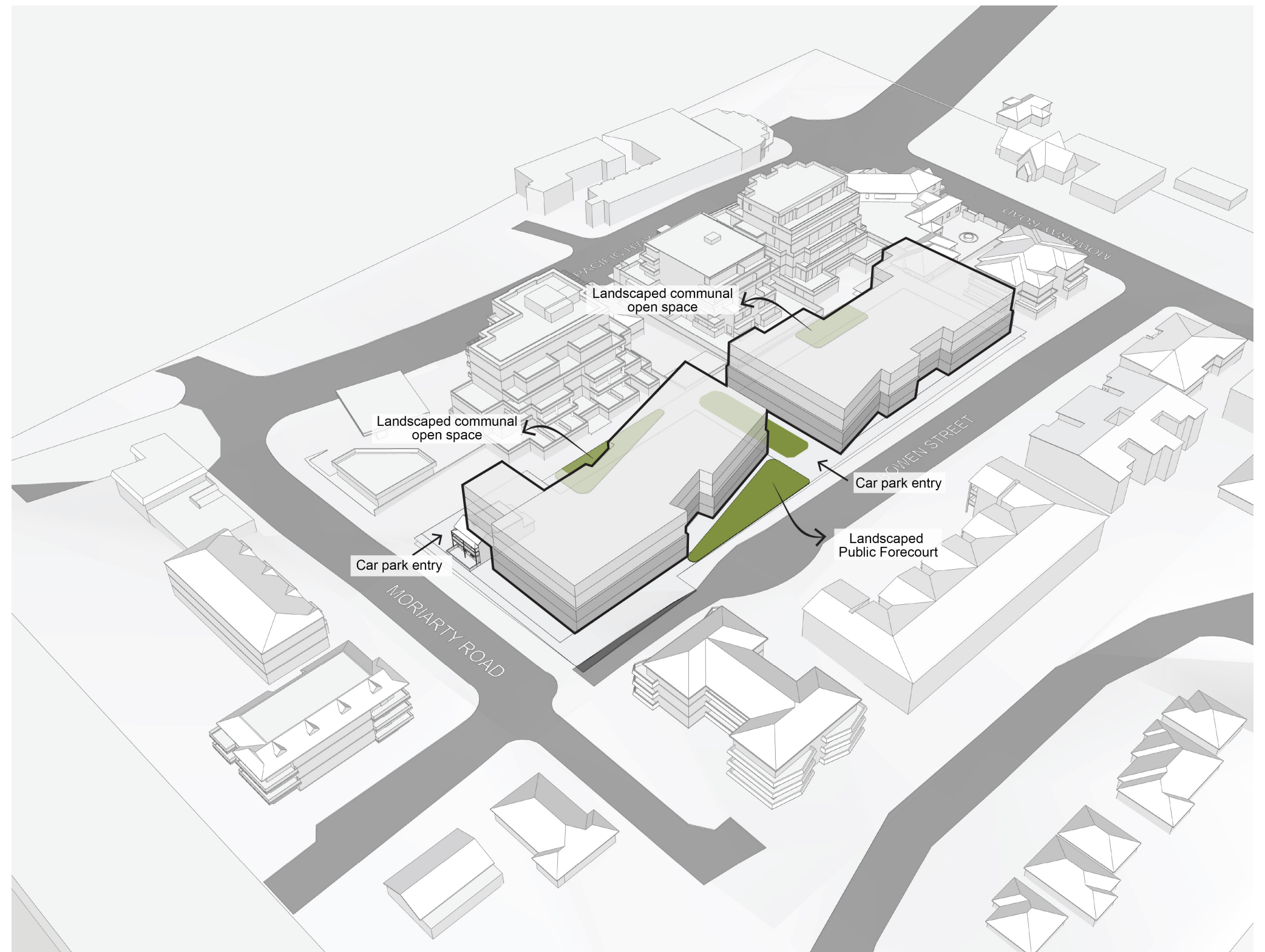


Figure 31 – Modified Envelope  
The diagram above shows the opportunities for Communal Open Spaces at Ground Floor.



## 8.3. CREATING THE ENVELOPE

## Mid Levels:

As the building envelopes are extended vertically above four storeys, the separation between buildings and neighbours will increase in accordance with ADG Principles and would also be further articulated along the street frontage.

The element behind the terraces would remain at four stories as a transition to the main building.

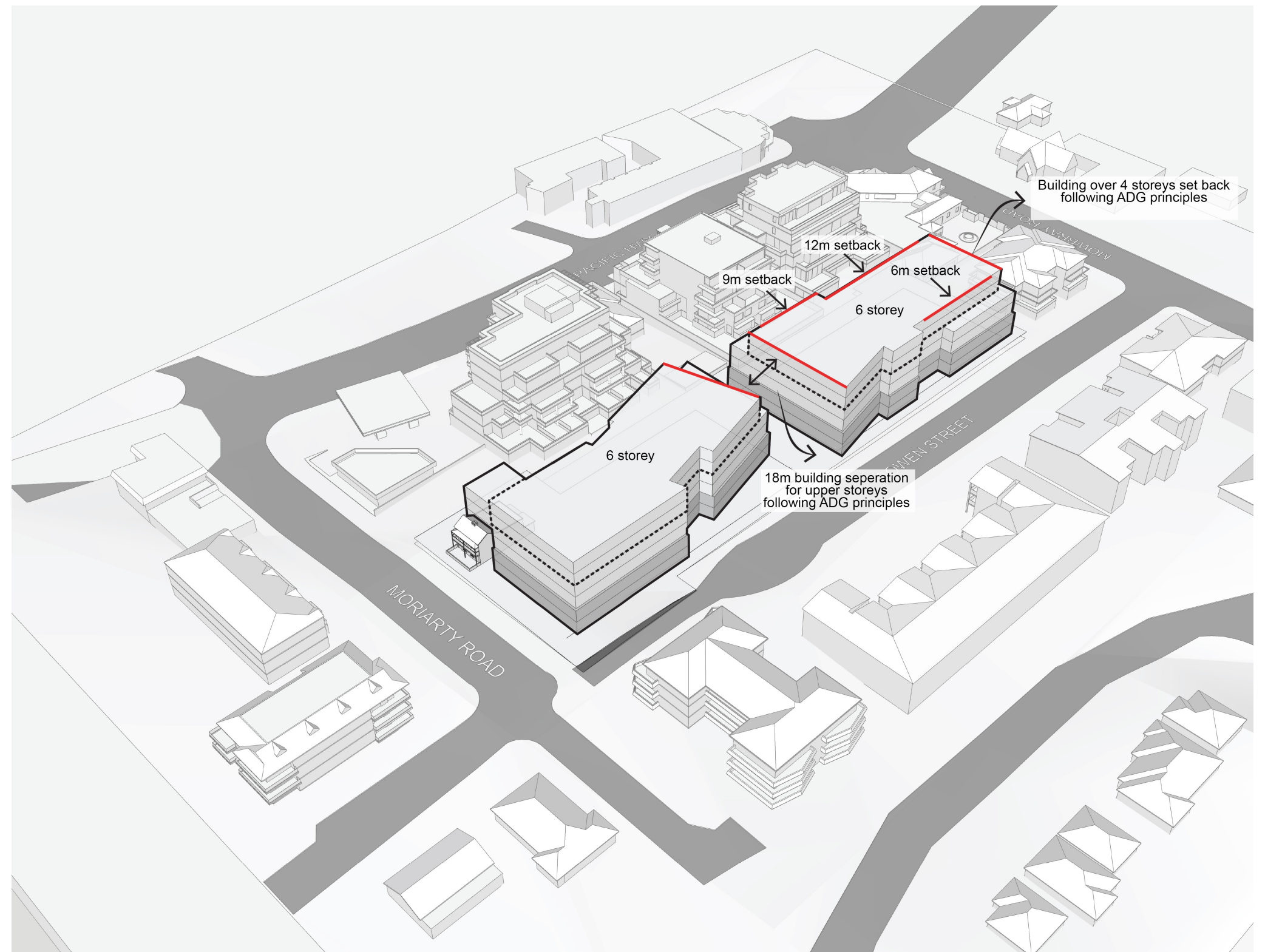


Figure 32 – Development of the Envelope

The diagram above demonstrates how the envelope will step back from boundaries, the street and other buildings to increase separation on upper levels and create further opportunities for building articulation.



### 8.3. CREATING THE ENVELOPE

#### Upper Levels:

The maximum building heights are proposed as 9 and 8 storeys as per Figure 33. As the envelopes extend to these heights, the floor-plates are reduced to produce a more vertical expression that creates greater opportunities for architectural articulation. This should be further explored in the Development Application stage.

The stepped profile for both buildings maximises solar access and minimises impacts to other residential buildings and other properties.

This proposal includes vertical elements to prevent massing that is overly horizontal in nature. As per the previous diagrams, the proposal intends to break-up the scale of the overall buildings into parts that are more appropriate for this streetscape. Introducing vertical, taller elements, are an important aspect in achieving a desirable outcome.

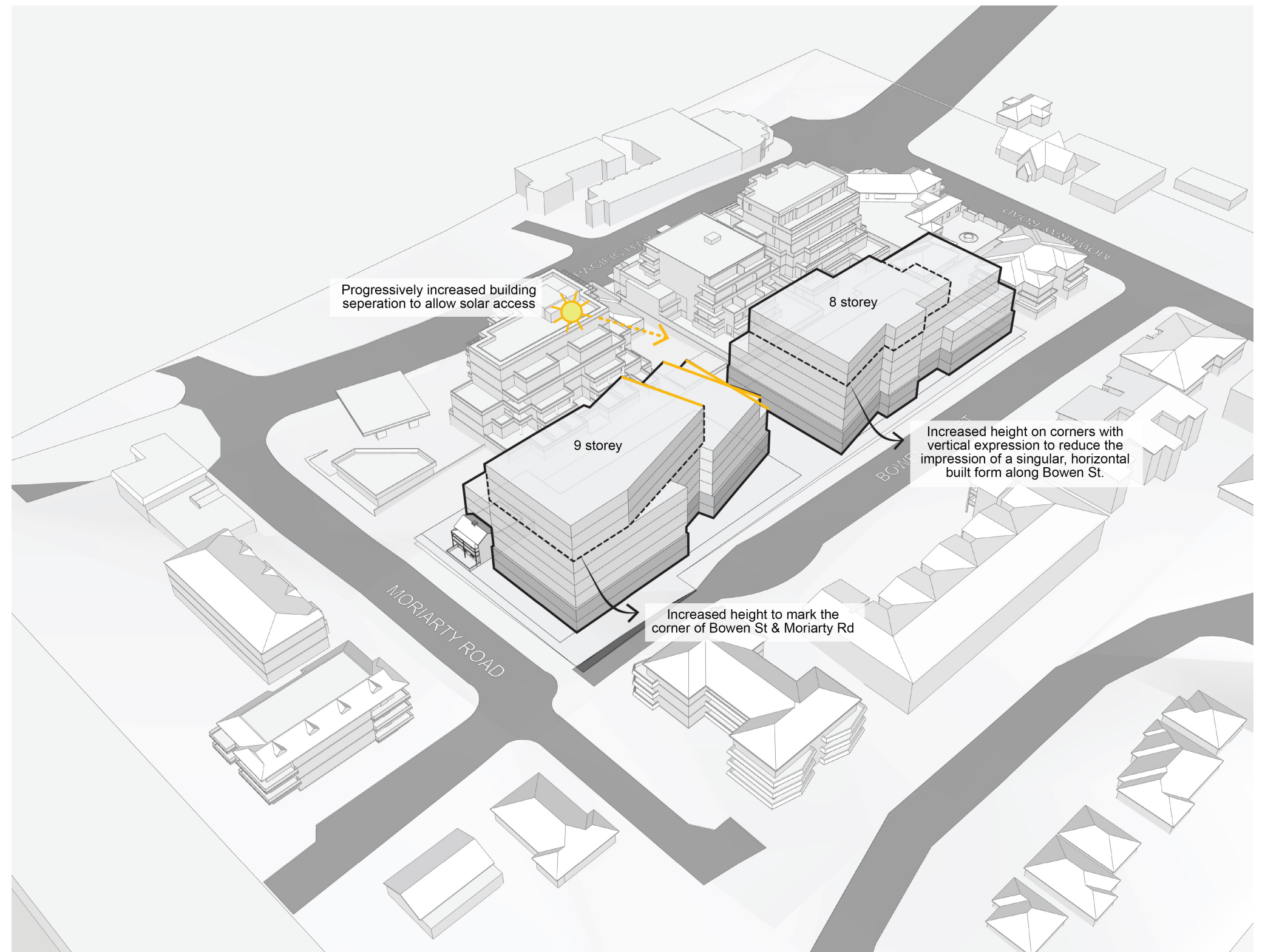


Figure 33 – Development of the Envelope

The diagram above shows the maximum envelope potential for the site with a final layer of massing to the upper levels shifted significantly to the north of each building to mark the prominent corner of each envelope and maintain solar access to a maximum number of apartments.



### 8.3. CREATING THE ENVELOPE

#### Articulation of the Cores:

In addition to the massing generation described in the preceeding pages, the Cores will provide other opportunities to break-up the scale of the facades and mark the entrances to the buildings.

Each core is proposed to have direct access to light and ventilation at all levels. Each lift lobby is also proposed to have a maximum number of 8 apartments. This is consistent with ADG Principles for a high-quality outcome.

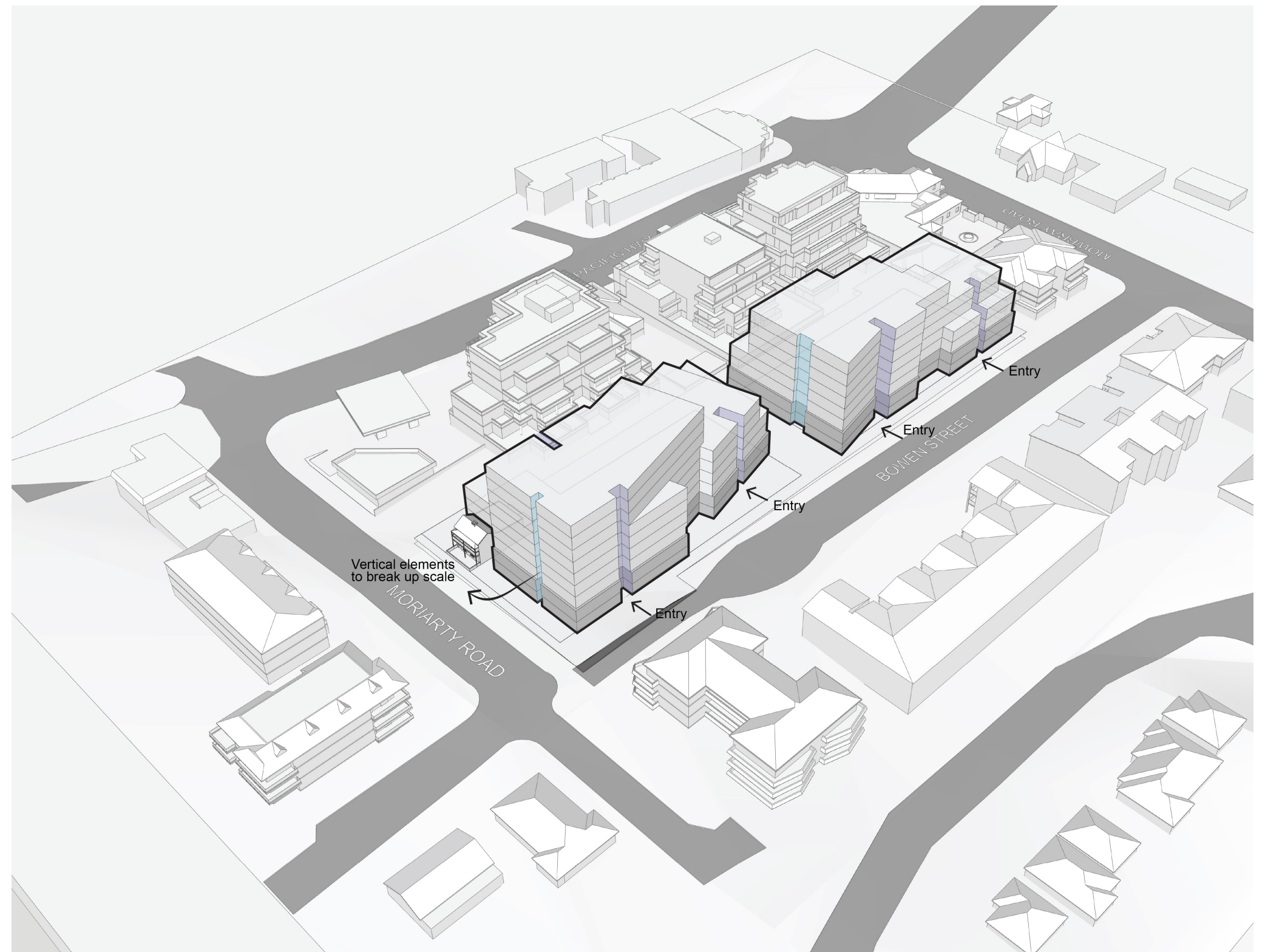


Figure 34 – Articulation of the Envelope

The diagram above demonstrates that there are further opportunities to articulate the built-form by expressing the entries and lift lobbies where they access daylight and ventilation.



### 8.3. CREATING THE ENVELOPE

#### Communal Open Spaces:

In addition to the Ground Floor Communal Open Spaces, each building is proposed to have a rooftop Communal Open Space. The spaces will provide gathering areas away from the street and Ground Floor apartments. District views will be available to both spaces.



Figure 35 – Roof Top Communal Open Spaces

The plan diagram above demonstrates the potential areas for Communal Open Spaces on the upper floors of both buildings.

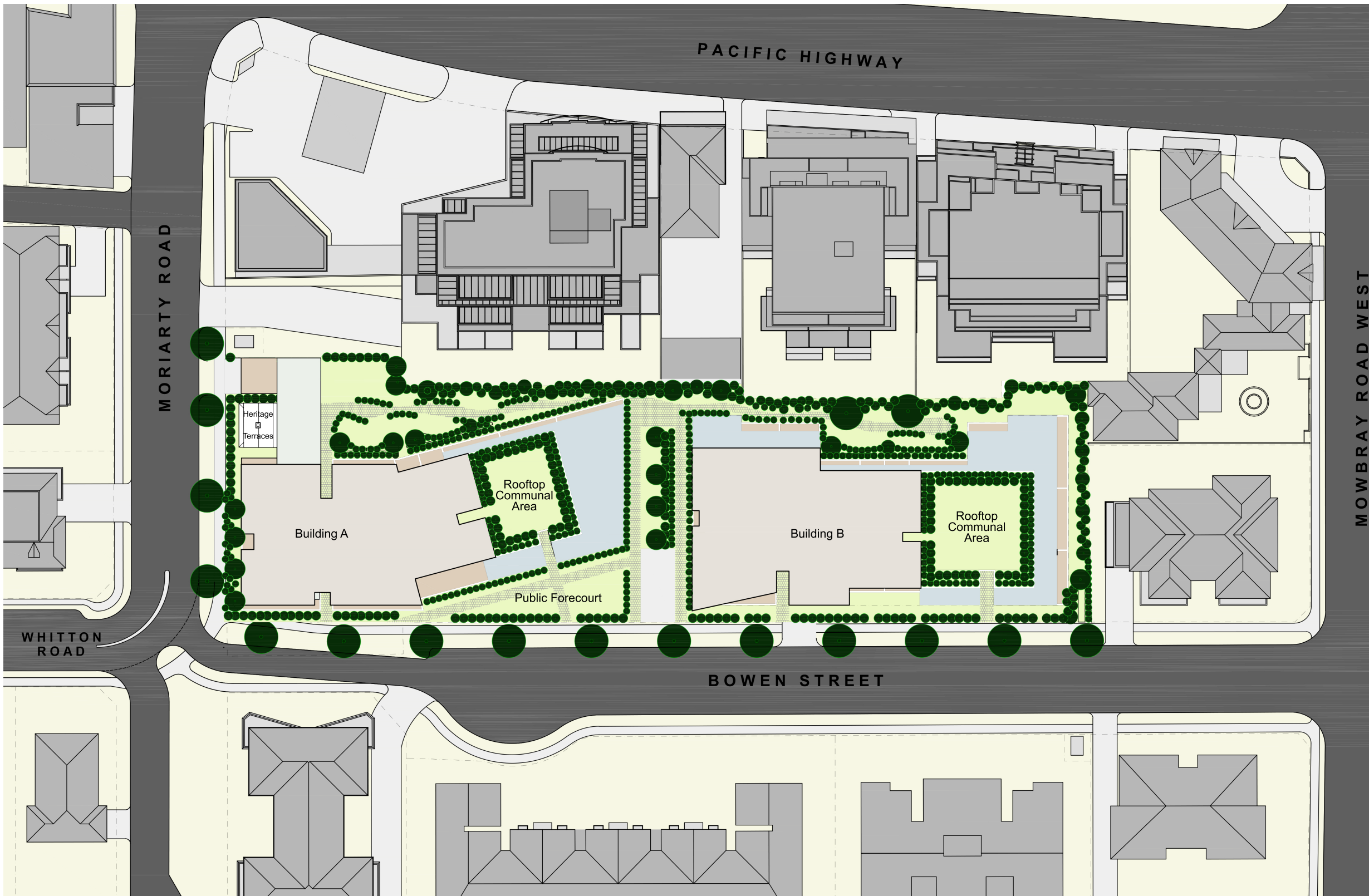


9.1. BUILT FORM ENVELOPE





9.2. SITE PLAN

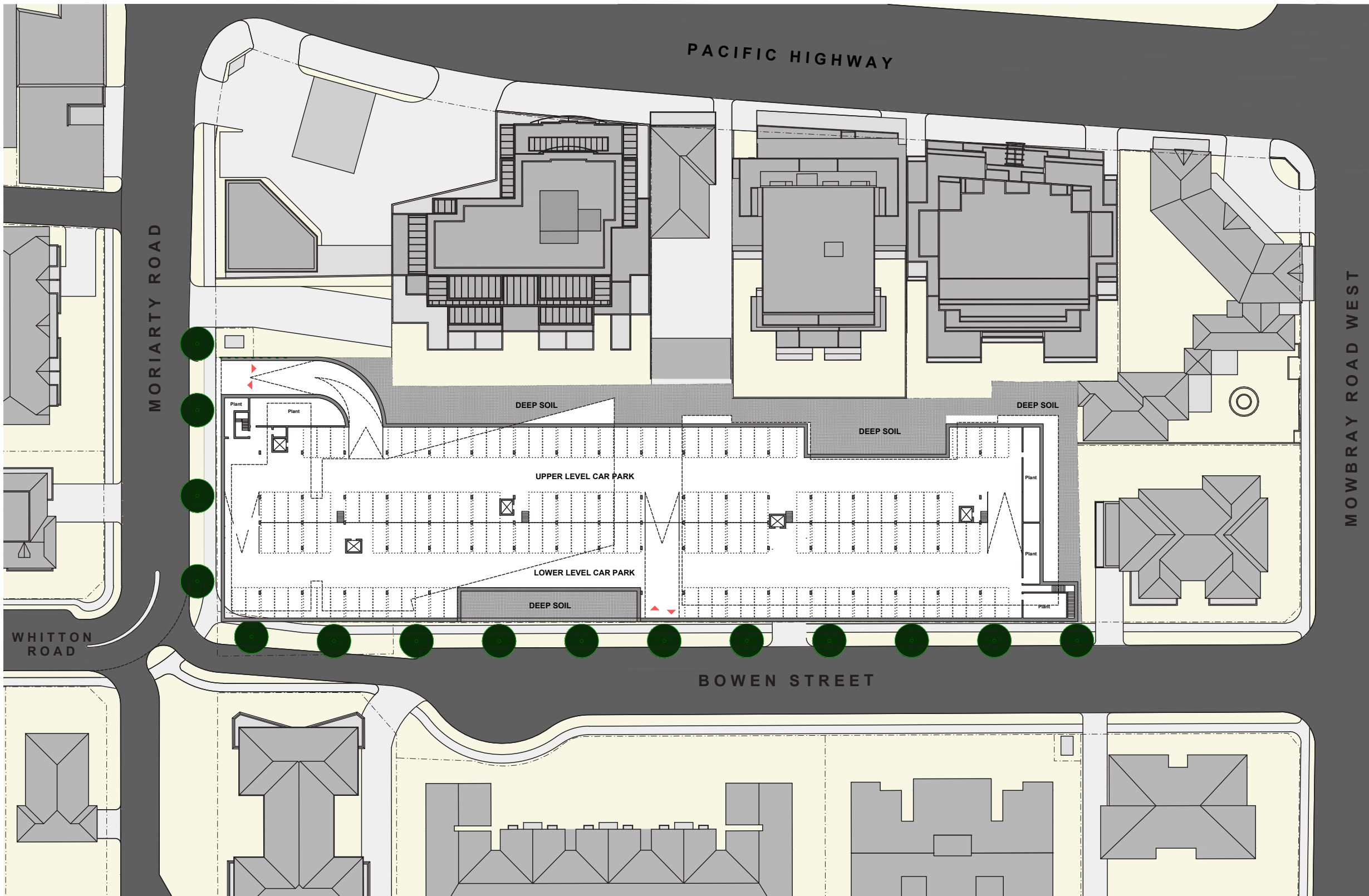


0 5 10 20 30 50m



9.3. BASEMENT PLAN

This basement plan is only a schematic layout to support the built-form envelope



0 5 10 20 30 50m



9.4. GROUND FLOOR PLAN





9.5. TYPICAL LOWER FLOOR PLAN





9.6. TYPICAL MID FLOOR PLAN





9.7. TYPICAL UPPER FLOOR PLAN



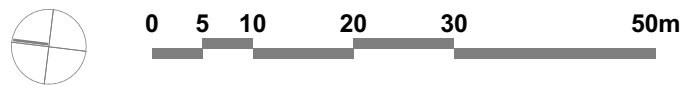


9.8. DEEP SOIL ZONES

**LEGEND:**

- DEEP SOIL ZONE (≥3m WIDE)
- DEEP SOIL ZONE (<3m WIDE)

Site Area:	6,716.4m <sup>2</sup>
Deep Soil(≥3m):	641.1m <sup>2</sup> (9.5%)
Deep Soil(<3m):	138.7m <sup>2</sup> (2.1%)
Total:	779.8m <sup>2</sup> (11.6%)





9.9. COMMUNAL OPEN SPACE

**LEGEND:**  
COMMUNAL OPEN SPACE

Site Area: 6,716m<sup>2</sup>  
Communal Open Space:  
Ground Floor 983m<sup>2</sup>  
Roof Tops 700m<sup>2</sup>  
Total: 1683m<sup>2</sup> (25.0%)





9.9. COMMUNAL OPEN SPACE

**LEGEND:**

COMMUNAL OPEN SPACE

Site Area: 6,716m<sup>2</sup>

Communal Open Space:  
Ground Floor 983m<sup>2</sup>  
Roof Tops 700m<sup>2</sup>

Total: 1683m<sup>2</sup> (25.0%)





9.10. CROSS-VENTILATION

GROUND FLOOR

**LEGEND:**

- CROSS-VENTILATED
- NOT CROSS-VENTILATED
- FAVOURABLE ORIENTATION

17/27 Apartments capable of cross-ventilation (63.0%)

1 additional apartment faces SSE and is therefore not subject to significant heat loads in summer and faces the prevailing cool breezes in summer.

Total number of naturally ventilated apartments: 18/27 (66.6%)

All cores naturally ventilated



9.10. CROSS-VENTILATION

TYPICAL LOWER FLOOR

**LEGEND:**

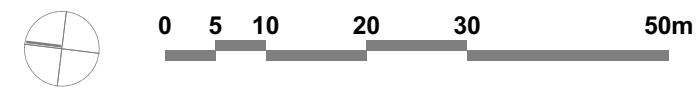
- CROSS-VENTILATED
- NOT CROSS-VENTILATED
- FAVOURABLE ORIENTATION

18/28 Apartments capable of cross-ventilation (64.3%)

1 additional apartment faces SSE and is therefore not subject to significant heat loads in summer and faces the prevailing cool breezes in summer.

Total number of naturally ventilated apartments: 19/28 (67.9%)

All cores naturally ventilated





9.10. CROSS-VENTILATION

TYPICAL MID FLOOR

LEGEND:

CROSS-VENTILATED

NOT CROSS-VENTILATED

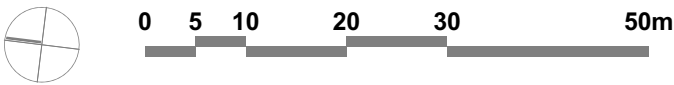
FAVOURABLE ORIENTATION

16/24 Apartments capable of cross-ventilation (66.6%)

No additional apartments face SSE

Total number of naturally ventilated apartments: 16/24 (66.6%)

All cores naturally ventilated



9.10. CROSS-VENTILATION

TYPICAL UPPER FLOOR

**LEGEND:**

- CROSS-VENTILATED
- NOT CROSS-VENTILATED
- FAVOURABLE ORIENTATION

11/15 Apartments cross-ventilated (73.3%)

No additional apartments face SSE.

Total number of naturally ventilated apartments: 11/15 (73.3%)

All cores naturally ventilated





9.11. SOLAR ACCESS

GROUND FLOOR

**LEGEND:**

≥2 HOURS SOLAR ACCESS

<2 HOURS SOLAR ACCESS

20/27 Apartments receive at least 2 hours of sunlight in mid-winter (74.1%)

All cores receive natural light



9.11. SOLAR ACCESS

TYPICAL LOWER FLOOR

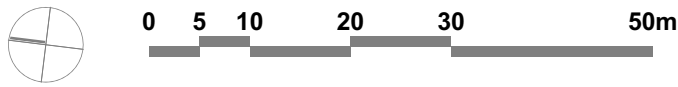
LEGEND:

≥2 HOURS SOLAR ACCESS

<2 HOURS SOLAR ACCESS

21/28 Apartments receive at least 2 hours of sunlight in mid-winter (75.0%)

All cores receive natural light





9.11. SOLAR ACCESS

TYPICAL MID FLOOR

LEGEND:

≥2 HOURS SOLAR ACCESS

<2 HOURS SOLAR ACCESS

19/24 Apartments receive at least 2 hours of sunlight in mid-winter (79.2%)

All cores receive natural light



9.11. SOLAR ACCESS

TYPICAL UPPER FLOOR

LEGEND:

≥2 HOURS SOLAR ACCESS

<2 HOURS SOLAR ACCESS

11/15 Apartments receive at least 2 hours of sunlight in mid-winter (73.3%)

All cores receive natural light





9.11. SOLAR ACCESS

COMMUNAL OPEN SPACE

**LEGEND:**  
[Orange Box] ≥22 HOURS SOLAR ACCESS

There are a number of Principal Communal Open Spaces proposed:

- Public Forecourt
- North-East Courtyard
- Roof-Top Terraces

More than 50% of each of these spaces will receive more than 2 hours solar access in mid-winter.



9.11. SOLAR ACCESS

COMMUNAL OPEN SPACE

**LEGEND:**  
[Orange Box] ≥2 HOURS SOLAR ACCESS

There are a number of Principal Communal Open Spaces proposed:

- Public Forecourt
- North-East Courtyard
- Roof-Top Terraces

More than 50% of each of these spaces will receive more than 2 hours solar access in mid-winter.





9.12. SOLAR STUDY 2.85:1 FSR BUILDING ENVELOPE

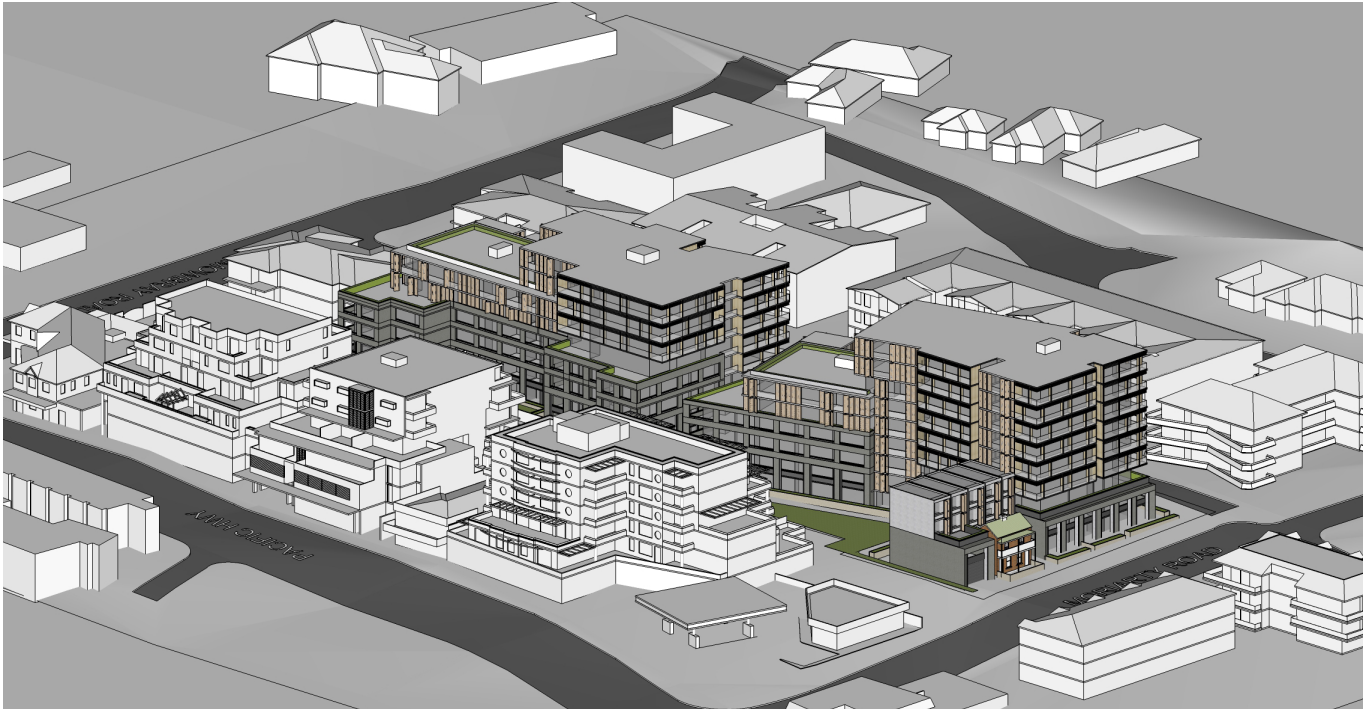


Figure 36. Sun eye View 9.00 a.m



Figure 37. Sun eye view 9.30 a.m



Figure 38. Sun eye View 10.00 a.m



Figure 39. Sun eye view 10.30 a.m



9.12. SOLAR STUDY 2.85:1 FSR BUILDING ENVELOPE



Figure 40. Sun eye View 11.00 a.m



Figure 41. Sun eye view 11.30 a.m



Figure 42. Sun eye View 12.00 p.m



Figure 43. Sun eye view 12.30 p.m



9.12. SOLAR STUDY 2.85:1 FSR BUILDING ENVELOPE



Figure 44. Sun eye View 1.00 p.m



Figure 45. Sun eye view 1.30 p.m



Figure 46. Sun eye View 2.00 p.m



Figure 47. Sun eye view 2.30 p.m



9.12. SOLAR STUDY 2.85:1 FSR BUILDING ENVELOPE

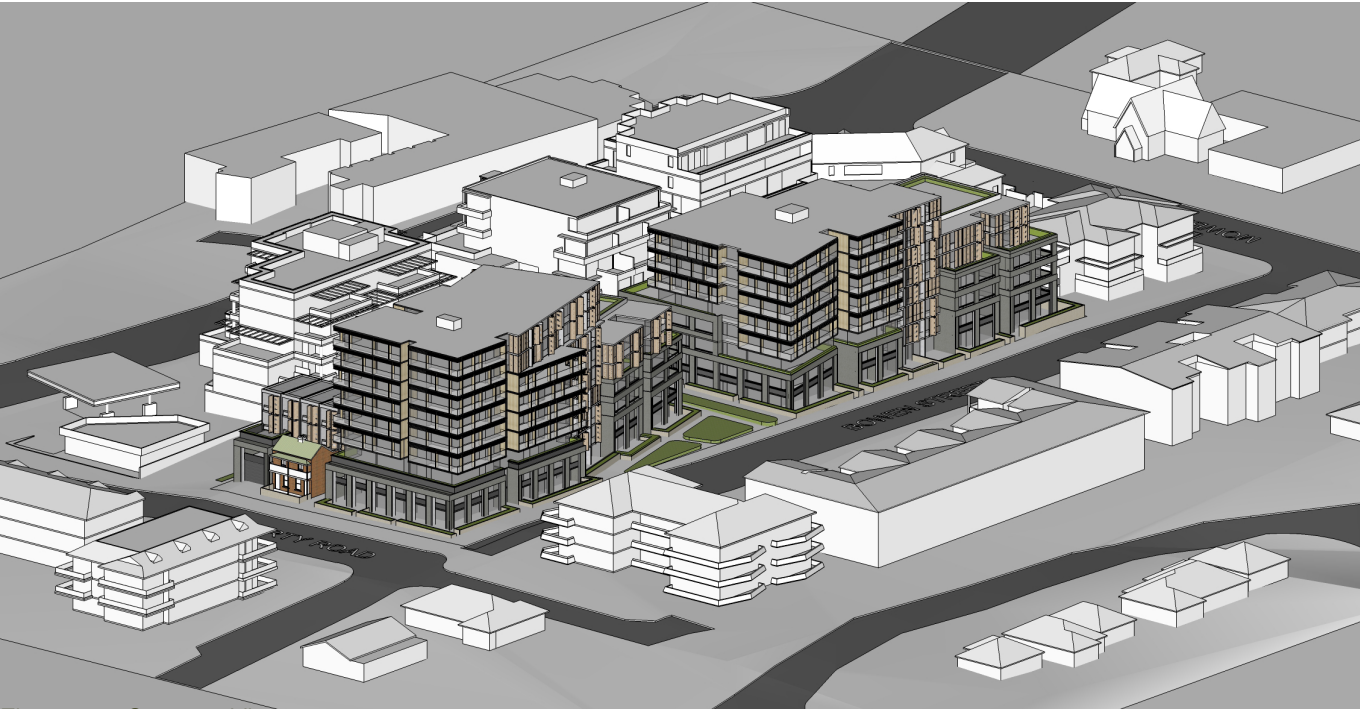


Figure 48. Sun eye View 3.00 p.m

The solar study shows that the proposed 2.85:1 FSR and 30m height building envelope allows at least two hours of direct solar access into living areas and private open spaces to most of the adjacent buildings, with the exception of 2-6 Bowen Street and 524 Pacific Highway.

The building design at 2-6 Bowen Street is self-shadowing from 10:45 a.m and does not receive the two hours according to ADG principles. 524 Pacific Highway also has problems with self-shadowing due it having deep over-hangs for balconies. The proposed building envelope for the subject site allows at least two hours of solar access into more than 70% of private open spaces for these buildings in accordance with ADG principles.

Since most of the living areas and private open spaces for 8-16 Bowen Street are facing west towards Goodchap Road, the proposed building envelope does not greatly affect the majority of residential units in that development.

377 MOWBRAY ROAD WEST - CHATSWOOD						Total units: 8
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	2	0	5	0	1	
TOTAL	25%	0%	63%	0%	13%	
< 2 HOURS		25%	≥ 2 HOURS		75%	

1 BOWEN STREET - CHATSWOOD						Total units: 12
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	2	0	4	3	3	
TOTAL	17%	0%	33%	25%	25%	
< 2 HOURS		17%	≥ 2 HOURS		83%	

2-6 BOWEN STREET - CHATSWOOD						Total units: 21
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	4	6	11	0	0	
TOTAL	19%	29%	52%	0%	0%	
< 2 HOURS		48%	≥ 2 HOURS		52%	

8-16 BOWEN STREET - CHATSWOOD						Total units: 36
SOLAR COMPLIANCE CHECK 4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	6	3	0	27	0	
TOTAL	17%	8%	0%	75%	0%	
< 2 HOURS		25%	≥ 2 HOURS		75%	

524 PACIFIC HIGHWAY - CHATSWOOD						Total units: 35
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	10	4	13	8	0	
TOTAL	29%	11%	37%	23%	0%	
< 2 HOURS		40%	≥ 2 HOURS		60%	

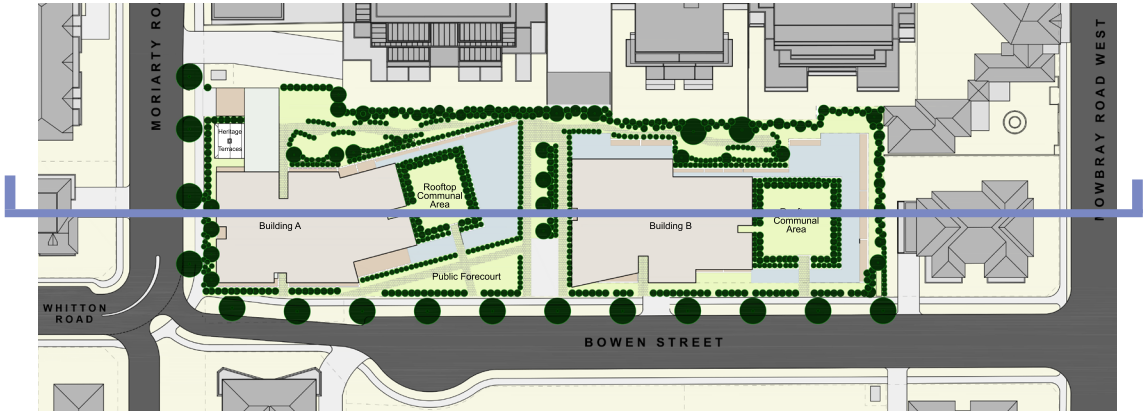
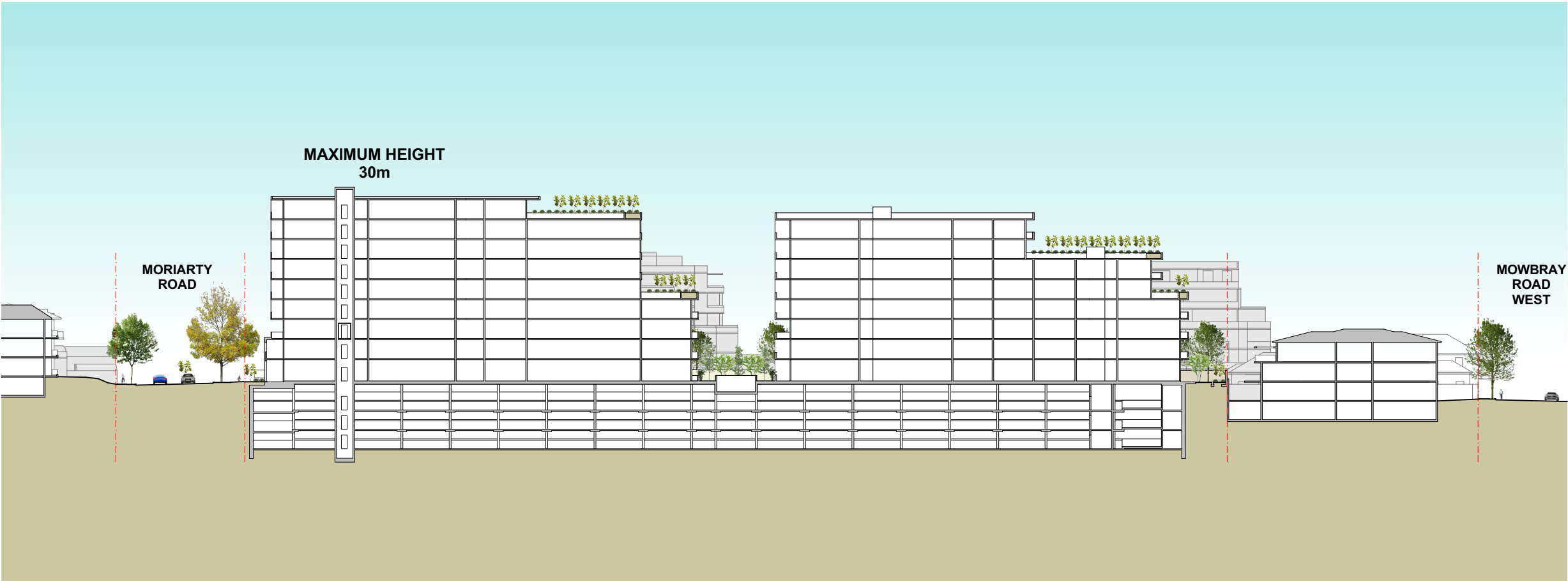
544 PACIFIC HIGHWAY - CHATSWOOD						Total units: 35
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	9	0	20	1	5	
TOTAL	26%	0%	57%	3%	14%	
< 2 HOURS		26%	≥ 2 HOURS		74%	

552 PACIFIC HIGHWAY - CHATSWOOD						Total units: 47
SOLAR COMPLIANCE CHECK (4.1:1 FSR BUILDING ENVELOPE)						
HRS	0-1	1.5	2	2.5	3+	
# UNITS	10	4	25	7	1	
TOTAL	21%	9%	53%	15%	2%	
< 2 HOURS		30%	≥ 2 HOURS		70%	

Figure 49. Hours of solar access to neighbouring apartment buildings



9.13. SECTION



9.14. MASSING PHOTOMONTAGES



Image 19 – Existing view from Mowbray Road West looking north along Bowen Street



Image 20 – View from Mowbray Road West showing original Planning Proposal massing



9.14. MASSING PHOTOMONTAGES



Image 21 – Existing view from Whitton Road looking south towards Moriarty Road & Bowen Street



Image 22– View from Whitton Road looking south showing amended Planning Proposal massing



9.14. MASSING PHOTOMONTAGES



Image 23 – Existing view from Pacific Highway looking north-west towards Great Northern Hotel



Image 24– View from Pacific Highway looking north-west showing amended Planning Proposal massing



### 10.1. DEEP SOIL ZONES

This planning proposal anticipates the inclusion of significant Deep Soil Zones along the eastern boundary and the Bowen Street frontage. The eastern landscape zone is the ideal location for canopy vegetation to provide a buffer between the proposed apartments and the existing shop-top housing fronting the Pacific Highway. Providing Deep Soil for the Public Forecourt will maximise the impact of the vegetation in this area.

Preliminary investigations clearly indicate that the majority of basement car parking is capable of being located under the central and western portions of the site allowing Deep Soil to be retained along the majority of the eastern side of the site. A smaller zone of Deep Soil along the Southern boundary is also likely.

The primary zones, indicated in green on the diagram to the right, provide substantial consolidated areas providing maximum potential for substantial canopy planting. The areas indicated are likely to be permeated with paths and small areas of hard landscaping. These areas will reduce the total Deep Soil but will add to the amenity of these important zones. It is anticipated that there will not be significant reductions in Deep Soil resulting from these inclusions and compliance with ADG requirements is readily achievable.

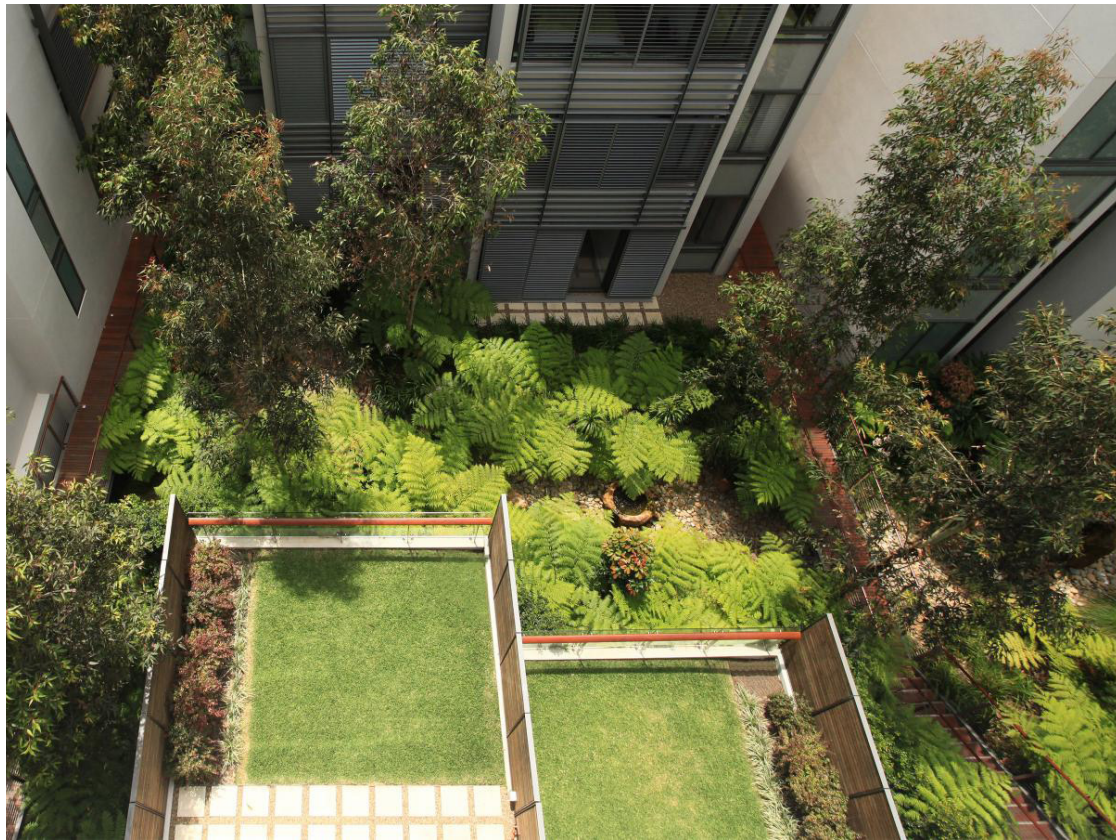


Image 25. Example of landscaping to Deep Soil Zone of apartment complex  
Source: McGregor Coxall



Figure 50. Location of Deep Soil Zones



## 10.2. COMMUNAL OPEN SPACES

The Deep Soil zones, identified on the previous page, connect directly to the anticipated landscaping between the proposed separate building envelopes. This will ensure that the vegetation supported by these Deep Soil zones will be visible from Bowen Street and is also likely to support extended vegetation through these important zones of the development.

These Communal Open spaces, indicated on the diagram to the right, are anticipated to provide a variety of opportunities for uses based on scale and position. The Public Forecourt is likely to be the most active area with the largest setbacks between buildings and a public interface.

The southern and central Communal Open Spaces are anticipated as quieter zones with some larger open areas but predominantly more intimate spaces. The entry to the Central Communal Open Space from Bowen Street will flow in from the Public Forecourt. A narrower entrance adjacent to the car park entry ramp will serve to reduce the significance of the space and promote the more subdued ambience.

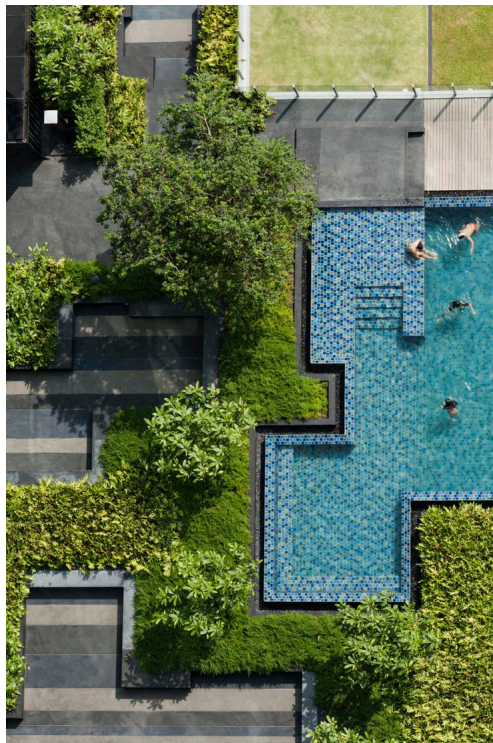


Image 26. Example of communal landscaping

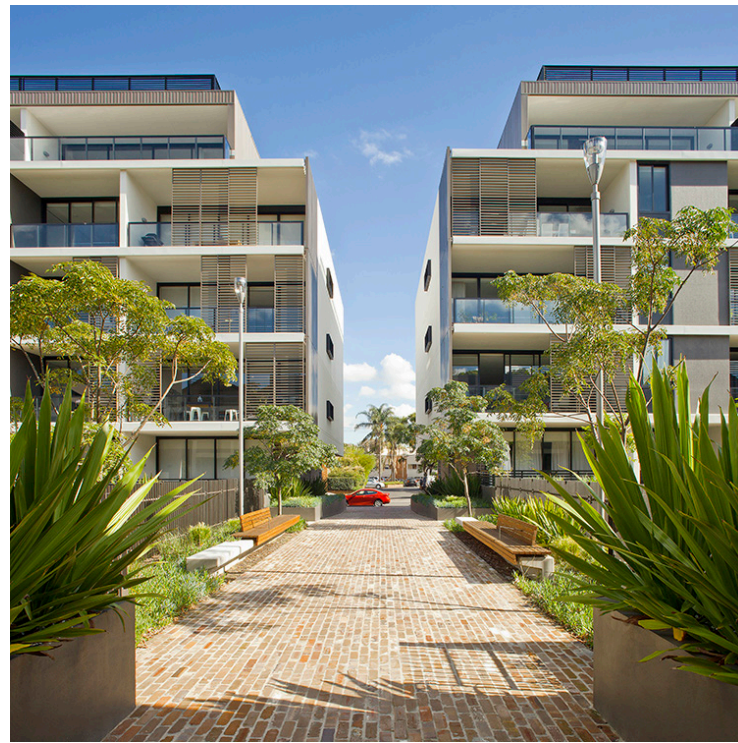


Image 27. Example of communal landscaping



Figure 51. Location of Communal Open Space



### 10.3. STREET SETBACK LANDSCAPING

As indicated in the diagram to the right, the majority of the Bowen Street frontage will have garden apartments with planted garden beds providing separation between the public and private realms. The Moriarty Road frontage will also have a planted landscape frontage with particular treatment around the retained heritage terraces.

The basement car parking geometry is currently proposed to utilise half-level transitions between each side (east/west). This geometry provides for the portion of the car parking under the west side, adjacent to Bowen Street, to be sunken by an additional half a floor relative to the eastern side. This maximises the depth of landscaping along this important frontage. The street frontages are anticipated to be characterised by a mixture of taller and shorter evergreen shrubs and plants in structured low garden beds.

The connecting common space landscaping and new street trees will further enhance the character of both street frontages.



Image 28. Example of apartment interface to street with landscaping to setback  
Source: DKO Architects



Image 29. Example of apartment interface to street with landscaping to setback  
Source: DKO Architects



Figure 52. Street Setback Landscaping



### 11.1. LAND USE

The subject site is proposed to be rezoned R4 High Density Residential to reflect the proposed land use and development outcome proposed for the site. The R4 High Density Residential land zoning provides a transition from the B5 and business zones along the Pacific Highway and the surrounding R3 Medium Density Residential zone.

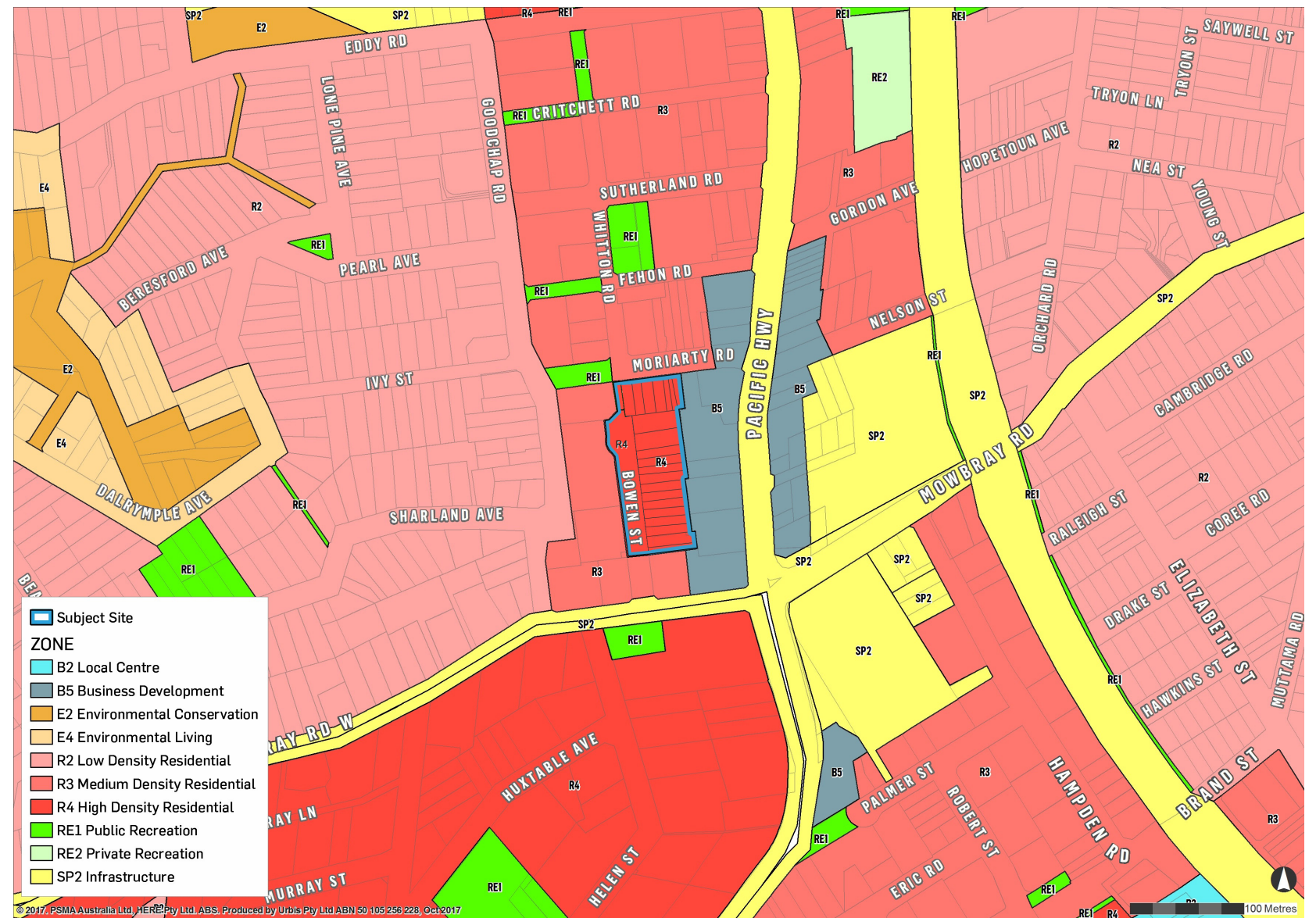


Figure 53 – Land Use Zone Map

This proposed amendment to the WLEP2012 land use zoning map shows the site zoned R4 High Density Residential.

Source: WLEP2012 (modified)



## 11.2. FLOOR SPACE RATIO (FSR)

The Maximum Floor Space Ratio (FSR) of the subject site is proposed to be amended to a ratio of 2.85:1.

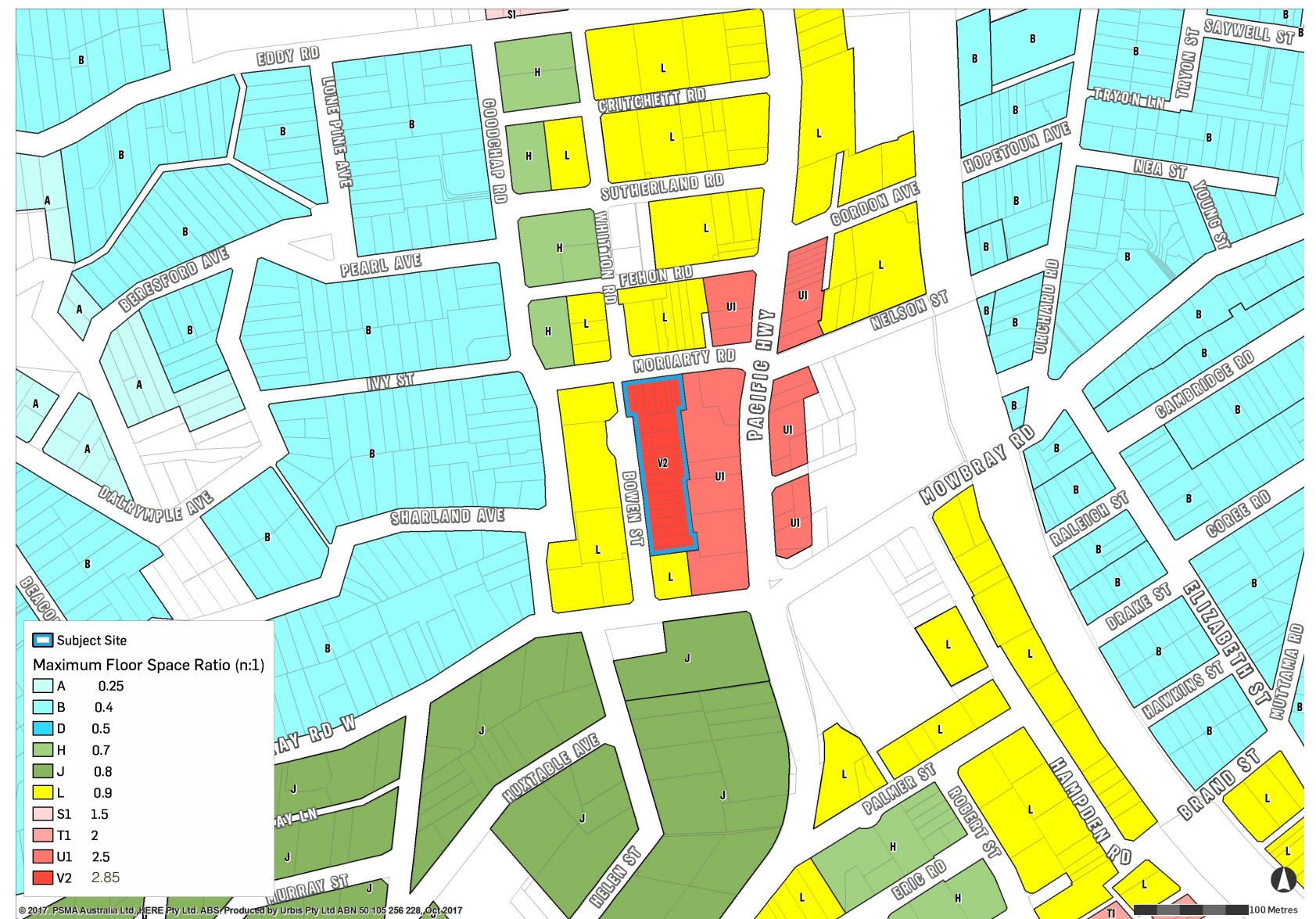


Figure 54 – FSR Control Map

This map shows the amended WLEP2012 FSR control map showing the site with a proposed FSR of 2.85:1.

Source: WLEP2012 (modified)

### 11.3. MAXIMUM HEIGHT OF BUILDINGS

The maximum height of buildings for the subject site is proposed to be 30 metres.



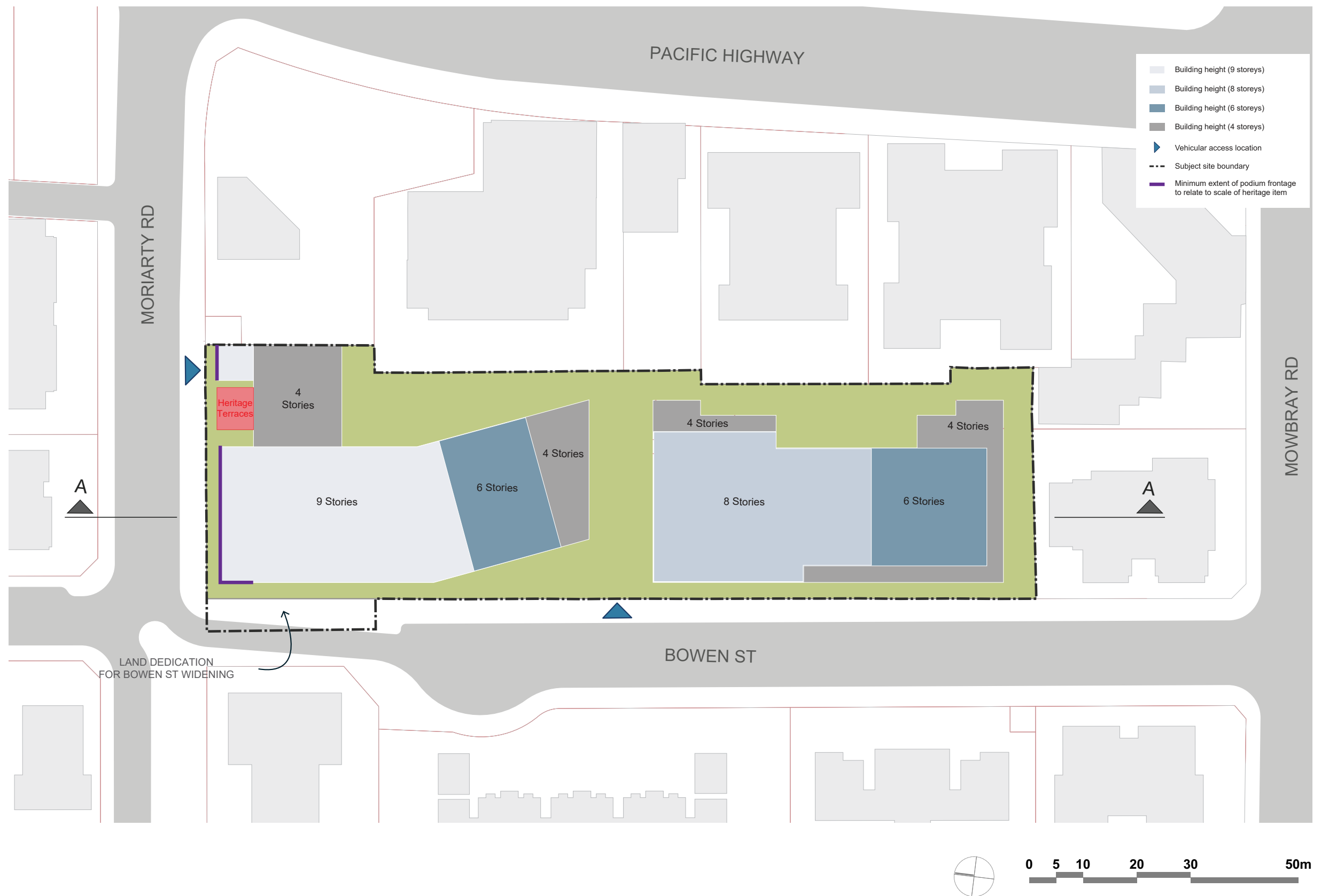
Figure 55 – Maximum Height Map

This map shows the amended WLEP2012 Maximum Building Height Map showing the site with a proposed maximum building height of 30m. Source: WLEP2012 (modified)



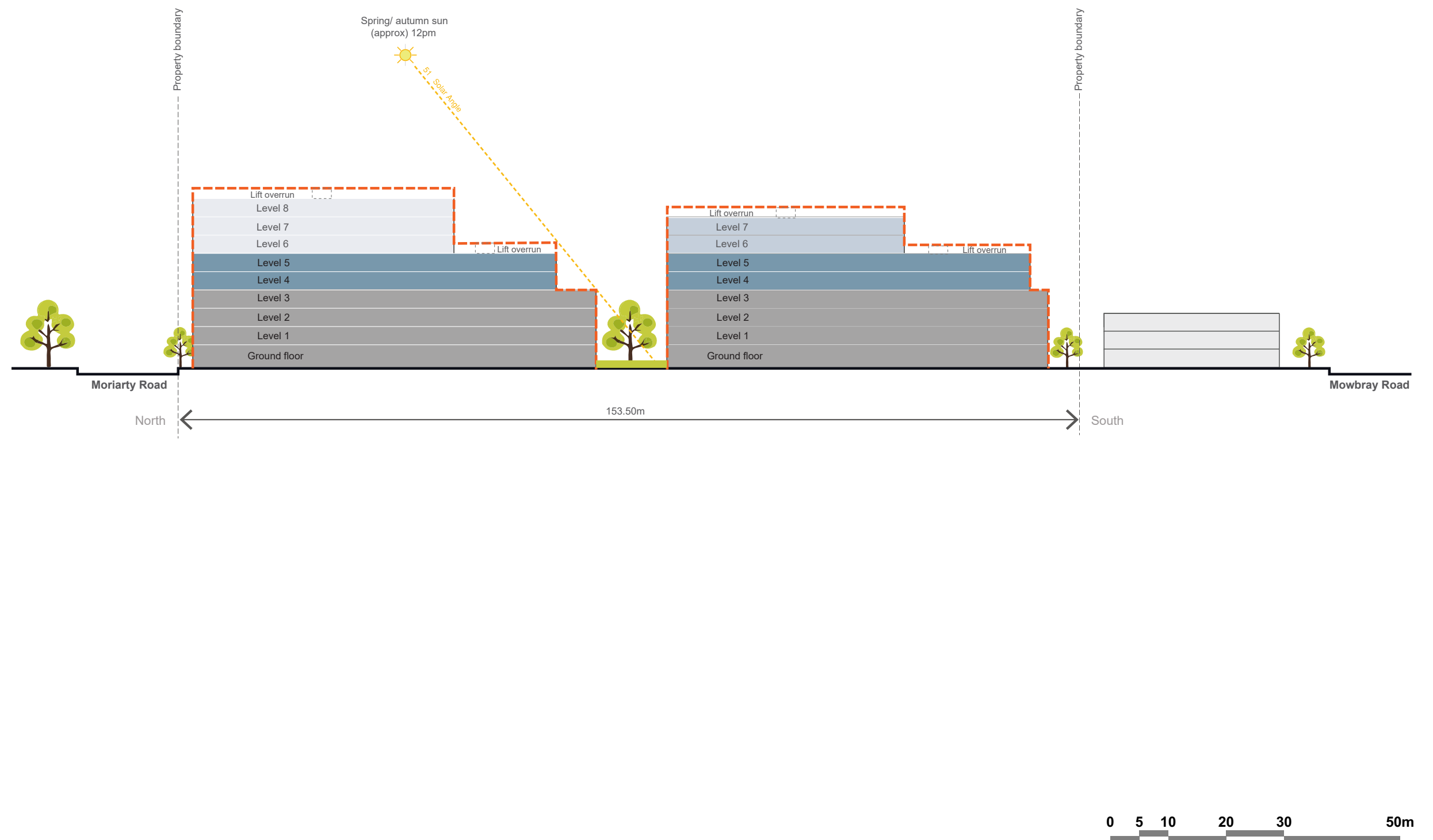
## 11.4. SITE SPECIFIC DCP CONTROLS

Plan of DCP envelopes

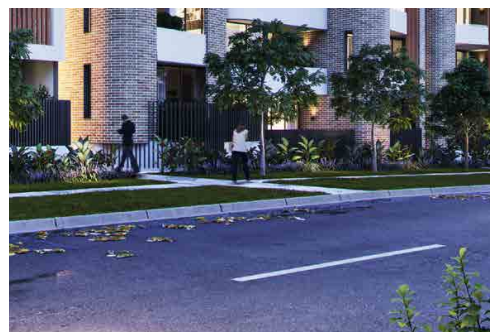


## 11.4. SITE SPECIFIC DCP CONTROLS

## Section of DCP envelopes







PBD | ARCHITECTS





## PROFILE | OUR PRACTICE

PBD Architects and Project Managers is a multi-disciplined Design/ Development Management practice committed to creating buildings that meet objectives of the project brief and adhere to the highest Architectural standard.

With the experience and delivery capability to take projects through from inception to completion PBD are often engaged to prepare initial feasibility studies on raw sites generating both a design concept and financial plan for building procurement.

The practice has established links to a network of clients ranging from individual investors, local development companies and major international listed development corporations. These relationships have seen PBD Architects & Project Managers, manage the interests of international clients for potential projects in the vicinity of \$350mil.

## PROFILE | OUR PEOPLE

Experience within the PBD team stems from all facets of the construction industry including Design/ Architecture, Project/ Development Management, Contract Administration and Technical Support. This combined knowledge ensures a holistic approach to design and building procurement.

Design, cost and program are key commercial elements in what the team at PBD Architects and Project Managers consider an “integrated design process” where limitations of a project should be posed by the site and not its designer.

We are committed to providing an honest, reliable and personalized service in which meeting the financial and management goals of our clients become our primary concern.