

# 242-258 YOUNG STREET WATERLOO

URBAN DESIGN REPORT  
REVISION A

15.01.2023

*This Urban Design Report is submitted to the Council of the City of Sydney (Council) to support a request for a Planning Proposal relating to land at 242-258 Young Street, Waterloo. The Planning Justification Report prepared by Ethos Urban outlines the proposed amendments to the Sydney Local Environmental Plan (Sydney LEP) 2012.*

*The proposed amendments are seeking principally to facilitate the delivery of a new independent K-12 vertical school, catering for approximately 800 students. The amendments sought to the Sydney LEP 2012 will encourage and facilitate the redevelopment of the site by allowing for:*

- an increased maximum Floor Space Ratio (FSR)*
- an increased maximum Building Height*

*Supporting the amendments to the Sydney LEP 2012 is an amendment to the Sydney DCP 2012 which includes site-specific controls. For assessment purposes, the Planning Proposal is supported by a concept scheme prepared by Plus Architecture.*

00

INTRODUCTION

- ACKNOWLEDGEMENT OF COUNTRY
- EXECUTIVE SUMMARY
- DAP SUMMARY

01

PROJECT CONTEXT

- REGIONAL CONTEXT
- SCHOOL CATCHMENT OPPORTUNITY

02

URBAN CONTEXT ANALYSIS

- FUTURE PROJECTIONS OF THE AREA
- SITE PLAN - THE FUTURE OF WATERLOO
- FUTURE PRECINCTS

03

SITE ANALYSIS

- CURRENT LEP MAP CONTROLS
- EXISTING CONTEXT - SCALE
- FUTURE CONTEXT - SCALE
- EXISTING SITE CONDITIONS

04

DESIGN THINKING

- DESIGN DRIVERS
- DESIGN DIAGRAMS
- PERSPECTIVES

05

REFERENCE SCHEME

- ENVELOPE DIAGRAMS (VIEW ANALYSIS)
- ELEVATIONS
- SECTIONS
- FLOOR PLANS

06

PROGRAMMATIC OPERATIONS

- CONNECTIVITY TO LOCAL FACILITIES AND TRANSPORT
- SCHOOL SPACES BREAKDOWN
- VERTICAL SCHOOL PRECEDENYS - COMPARISON
- MIXED USE - MODES
- AUDITORIUM - MODES
- FLEXIBLE CLASSROOM MODULES

07

APPENDIX

- TREES STRATEGY
- FLOODING STRATEGY
- TRAFFIC STRATEGY
- SHADOW DIAGRAMS
- SCHOOL OPEN SPACE SOLAR STUDY
- SOLAR ACCESS TO EXISTING NEIGHBOURING PARK
- EXISTING HUNTER STREET APARTMENTS - SOLAR STUDY
- FUTURE YOUNG STREET DEVELOPMENT - SOLAR STUDY
- SITE OPTIONS SUMMARY
- DEVELOPMENT SCHEDULE





## ACKNOWLEDGEMENT OF COUNTRY

We acknowledge Country, the Cultural Landscape that we are working upon, and we acknowledge the custodianship of its people and the privilege and responsibility to Connect with Country.

We acknowledge the Gadigal people, and their ongoing connection to culture, lands and waters and their valuable contribution to the community. We recognise and acknowledge the surrounding clans to the North, South, East and West whilst honouring and celebrating their Elders past, present and emerging.

We are part of the system of Country, our actions must always be Country positive. Being connected to Country transcends language and culture - a connected system of action, emotion, and experience.



## EXECUTIVE SUMMARY

Despite the strong population growth forecast for the Waterloo-Green Square Corridor, there is a significant lack of planned school infrastructure to provide for the educational needs of children. No new high schools are currently in planning within a 2km radius of the target site, in the heart of Waterloo.

**New schooling facilities are needed to cater to the educational needs of local students, with demand expected to double in this period.**

The proposal envisions a mixed-use infill building that is primarily a Kindergarden to Year 12 School, with spaces for the current film school on-site, which can be shared with the community. The aim for the development is to provide much needed educational infrastructure to the Waterloo area, as well as provide great urban activation to its surrounds.

The proposal also envisions a community aspect through its flexible auditorium on ground floor, which can be used by the school and the shared community.

DESIGN ADVISORY PANEL (DAP) - RESPONSE TO COMMENTS

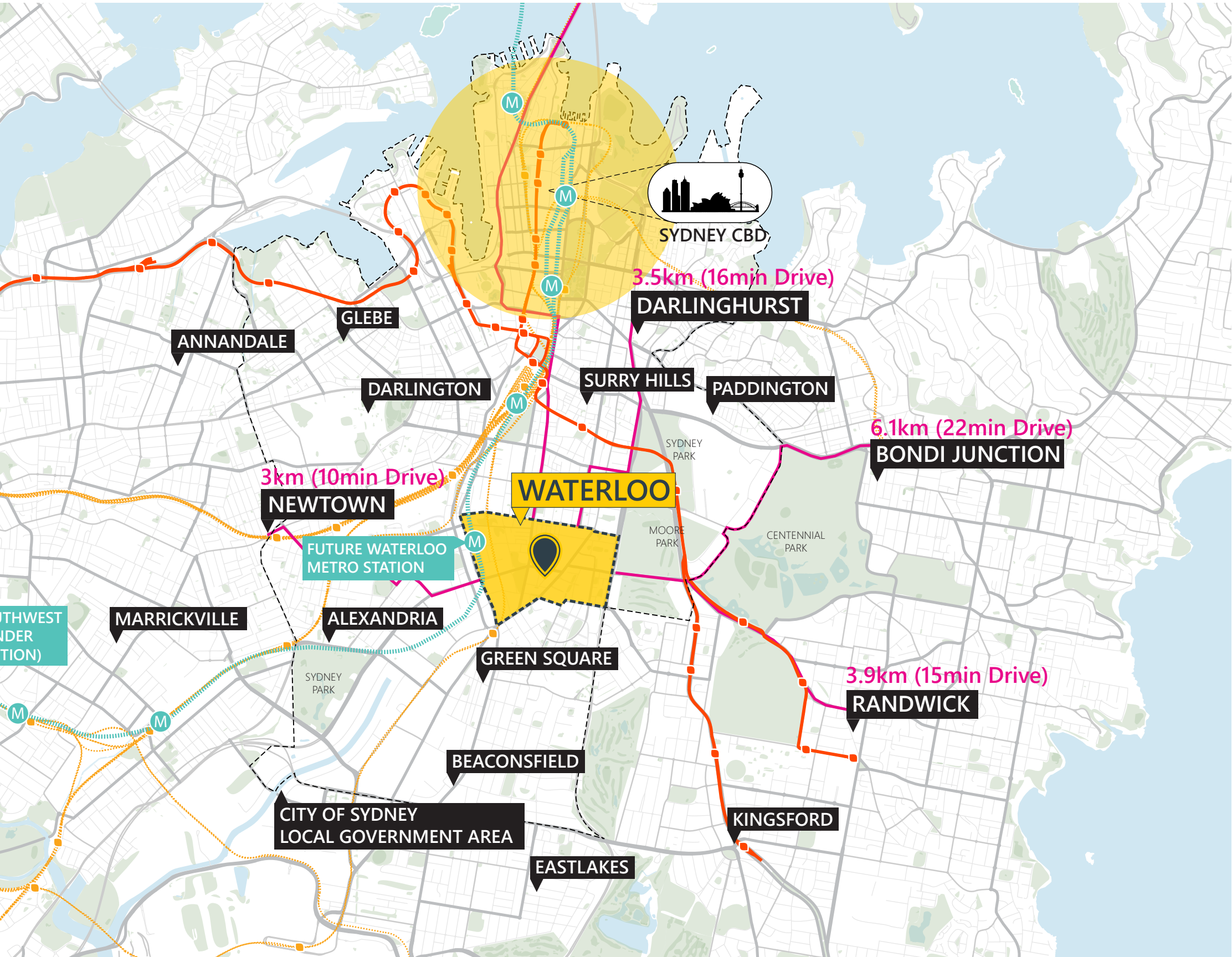
The Panel was presented with a pre-planning proposal request for the subject site on the 13/08/2023. The proposal was for a private Anglican secondary school of about 1,000 students and a separate film school for 120 students (the film school is currently accommodated on the site). The comments from the panel are noted below.

Since then, the scheme has responded in the following ways:

COMMENTS (13/08/2023)	RESPONSE
<p><b>1. There are key strategic and built form issues identified by the City, including but not limited to:</b></p> <p><b>1A.</b> Access to open space</p>	<p>Since the DAP meeting, the scheme has been amended to almost double the on-site open space per student. Access to additional open space off-site has also been considered, as detailed in the 'Social Infrastructure Review' prepared by Ethos Urban.</p> <p>It is currently proposed that students will have access to Turruwul Park, which is a 7 minute drive from the school. This park includes a soccer field, two tennis courts, a tennis wall, and cricket facilities. Council has confirmed the space has availability Monday to Friday 8:00am-5:00pm.</p> <p>Additionally, the future Waterloo Main Park provides two hectares of open space and include two playing fields. It is approximately 800m walk from the proposed school site and provides another option for potential shared use. If this could be achieved this option would be the preferred option given its proximity to the site.</p>
<p><b>1B.</b> Noise</p>	<p>Since the DAP meeting, an acoustic consultant has been engaged. Their report generally outlines any acoustic requirements / implications that are present on the site, as well as providing a guideline of how they can be mitigated or responded to. These findings will be taken into consideration by the design team during design development.</p>
<p><b>1C.</b>Traffic and transport, which includes safe movement of children and the cumulative impacts on Young Street from the school and Woolworths.</p>	<p>The transport impact assessment supporting the Planning Proposal responds to the comments provided by the Design Advisory Panel by:</p> <ul style="list-style-type: none"><li>• Considering the various pedestrian routes available from public transport nodes to and from the site, including future through-site connections proposed by the adjacent Woolworths site</li><li>• Developing a Green Travel Plan to support travel to/from the site via sustainable forms of transport and to minimise the traffic related impacts of the proposal</li><li>• Undertaking traffic modelling which considers the cumulative impacts of the proposal along with development in the surrounding area including the Wooworths site</li></ul>
<p><b>2.</b> Due to flooding constraints and setback requirements the City is not convinced the proposal will yield useable or fit-for purpose floorplates.</p> <p><b>3.</b> Squeezing two schools on the site, is perhaps impacting the feasibility of both.</p>	<p>Since the DAP meeting, a school operations consultant has been engaged to validate key internal areas of the school. In conjunction with this, the student population has been reduced from 1,000 students to 800 students. The school internal area has also been increased, whilst the film school internal area has been decreased, whilst ensuring functionality of both uses on the site.</p>






# 01

## SITE AND CONTEXT



Waterloo is located in the City of Sydney local government area. Waterloo, considered an inner-city suburb, sits south of Sydney CBD and can be easily accessed from there by car, bus, or by train from Green Square Station. By 2024, the site will also be easily accessed by the future Waterloo Metro Station.

Waterloo is also within ~20min driving distance from the Eastern suburbs, inner-south suburbs and inner-west suburbs, with bus and train offering public transport. Overall, Waterloo features great proximity to several key precincts in Sydney.

-  17 MIN WALK TO FUTURE WATERLOO METRO STATION
-  11 MIN WALK TO GREEN SQUARE STATION
-  20 MIN RIDE TO SYDNEY CBD
-  18 MIN DRIVE TO SYDNEY CBD
-  25 MIN BUS RIDE TO SYDNEY CBD





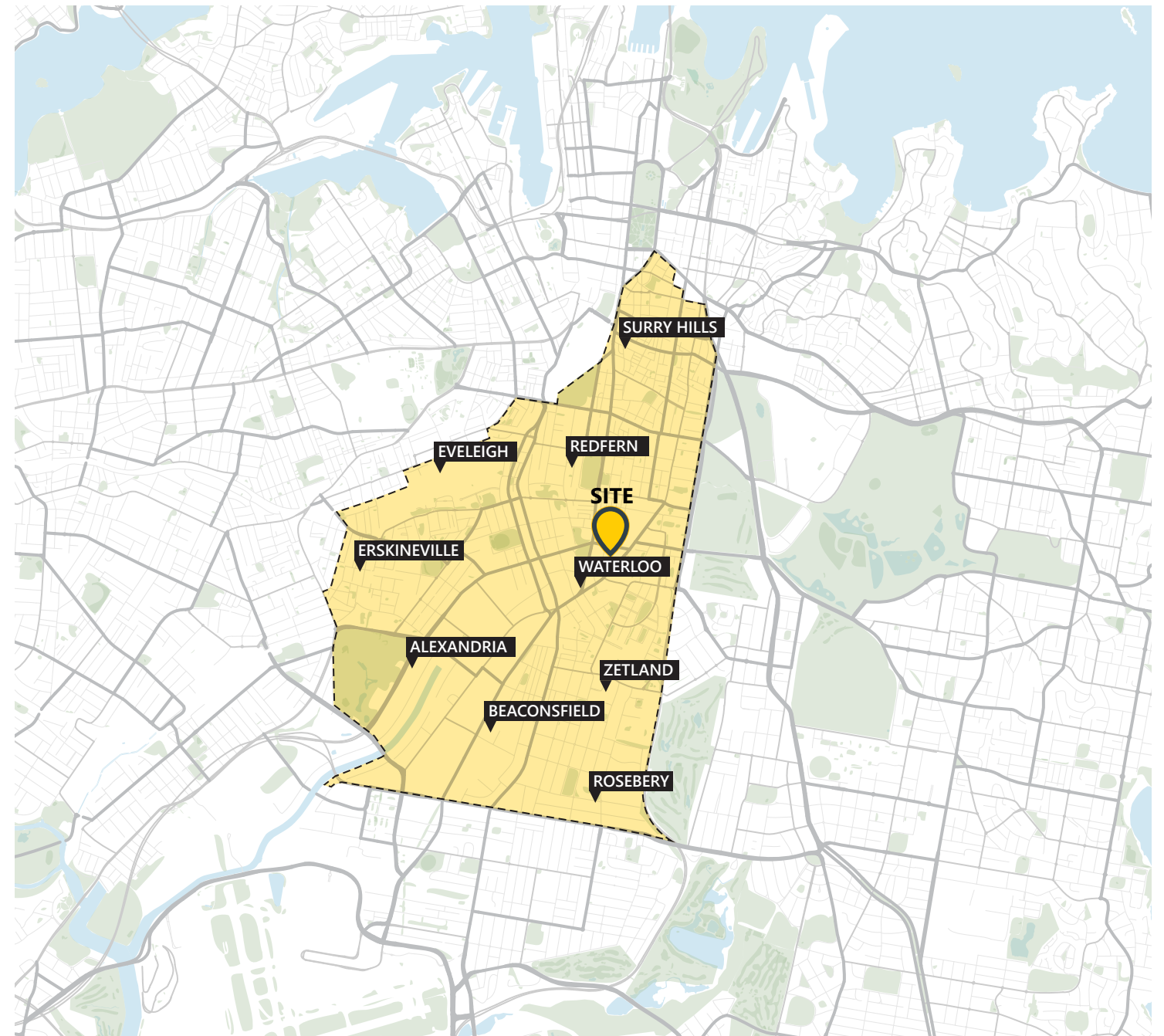
## SHORTAGE OF SECONDARY SCHOOLS IN THE SOUTH SYDNEY REGION



The circle shows the distribution of secondary schools within a 2km radius to the Site. It clearly demonstrates that there is a significant shortage of secondary schools around the Waterloo/Green Square district which will be further magnified given the area is forecast to be one of the highest density per square km in the world by 2036.

● Secondary School

## POTENTIAL CATCHMENT AREA



Potential Catchment area

The potential catchment zone for the school is shown in the above map. This zone will cover an approximate current population of **90,000 people**, with a population forecast to grow to **114,000 people in 2031 (+26%).**

# 02

## URBAN CONTEXT ANALYSIS



# FUTURE PROJECTIONS OF THE AREA



**+50,000 RESIDENTS (2041)**  
(REDFERN / WATERLOO /  
GREEN SQUARE)

<https://forecast.id.com.au/sydney/about-forecast-areas?WebID=140>

<https://forecast.id.com.au/sydney/about-forecast-areas?WebID=2010>



**21,000 + NEW JOBS**  
(GREEN SQUARE)

<https://www.urbanagendaplatform.org/best-practice/i-green-square-rich-industrial-past-vibrant-sustainable-and-connected-community>



**FUTURE WATERLOO  
METRO STATION (2024)**



**+30,000 NEW  
DWELLINGS (2030)**

(GREEN SQUARE, BEACONSFIELD, ZETLAND,  
ALEXANDRIA, ROSEBERY, WATERLOO)

<https://www.cityofsydney.nsw.gov.au/green-square>



**+40 NEW PARKS IN  
GREEN SQUARE TOWN  
CENTRE**

<https://news.cityofsydney.nsw.gov.au/articles/green-square-new-park-drying-green-residents>





### Waterloo Area Redevelopment:

The Waterloo area is currently undergoing substantial redevelopment. These areas include key strategic precincts, such as Danks Street South, Lachlan Precinct, Waterloo Estate, and others.

- Directly interfacing with the site are:
- the future Woolworths Waterloo development
  - Lachlans Precinct
  - Dank Street South Precinct

These future redevelopments generally have a focus on mixed use, providing retail, commercial, and residential dwelling, and will greatly reshape the context of the site.

### Infrastructure and Connectivity:

Key road networks like Bourke, Elizabeth, Botany and S Dowling Streets connects suburbs in a north-south direction, while McEvoy, Dacey Avenue, and Euston Road facilitate east-west connectivity, linking the inner west to the Eastern Suburbs. Essential public transport nodes include Green Square Station and the ongoing construction of the Waterloo Metro, both within a 1km radius or a 15-minute walk, with additional bus routes along Elizabeth and Bourke Streets connecting the area to surrounding locales.



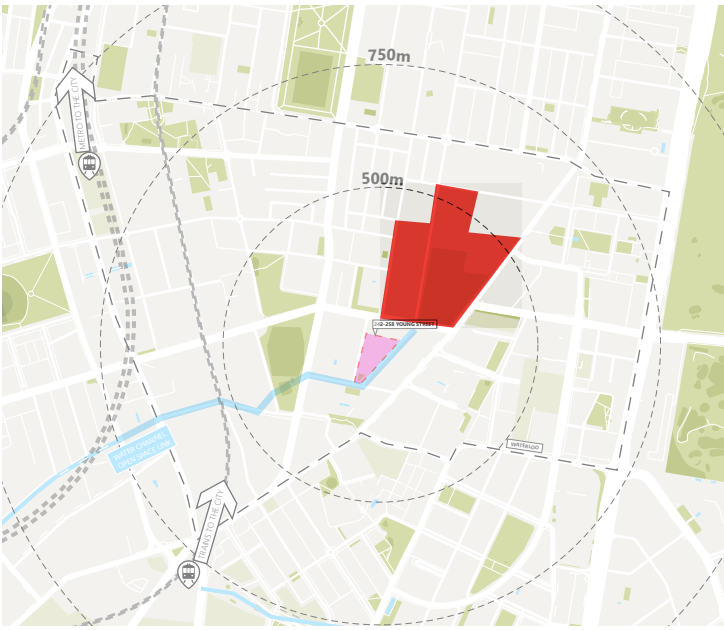


URBAN CONTEXT ANALYSIS

# FUTURE PRECINCTS - DANK STREET SOUTH



- Dank Street South:
- 6 apartment buildings by Bates Smart, Richard and Spence, MHNDU, and Fieldwork
  - 376 apartments total
  - 5% of units to be affordable
  - 15% of units to be adaptable
  - retail spaces proposed





# FUTURE PRECINCTS - WATERLOO METRO QUARTER & WATERLOO ESTATE

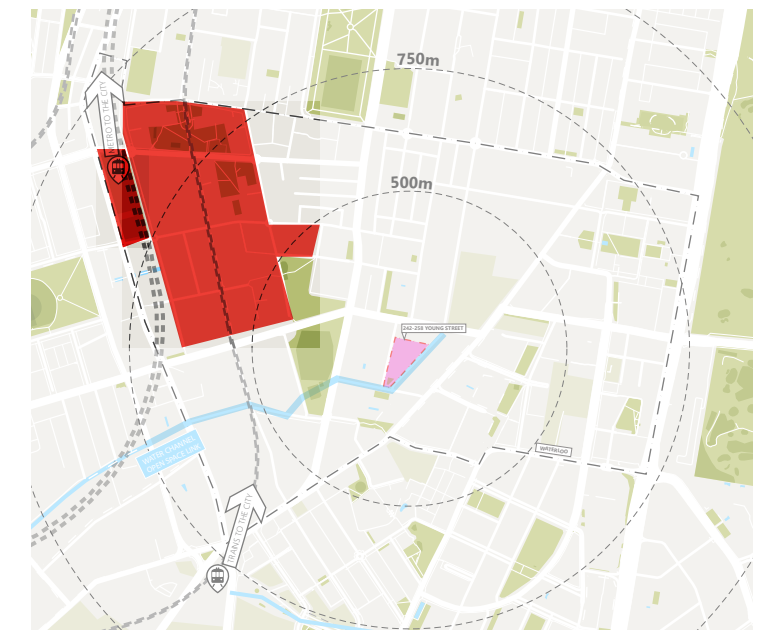


## Waterloo Metro Quarter:

- 220 new homes, including 70 social housing dwellings and 24 affordable homes;
- 35,000 square metres of offices and shops;
- 2,600 square metres of public space, including pedestrian links from Raglan Street and Botany Road through to Cope Street Plaza;
- Community facilities; and Parking for 155 vehicles.
- New Metro Station

## Waterloo Estate:

- 3,000 new homes, including ~1,500 new social and affordable properties
- ~50% social and affordable housing



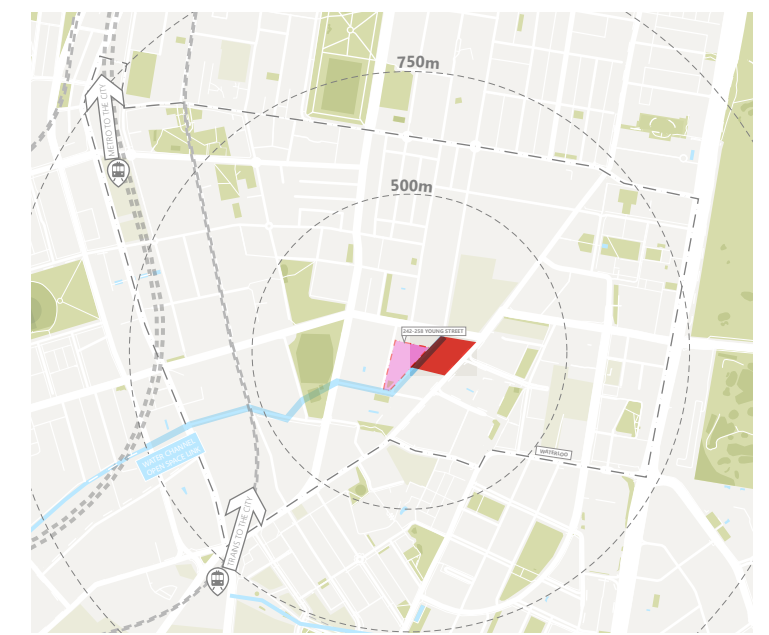


# FUTURE PRECINCTS - WOOLWORTHS WATERLOO



Woolworths Waterloo:

- 121 apartments proposed
- 2,025 sqm commercial area proposed
- 3,200 sqm 5 Star Green Star rated full line Woolworths supermarket proposed
- 1,670 sqm retail area proposed



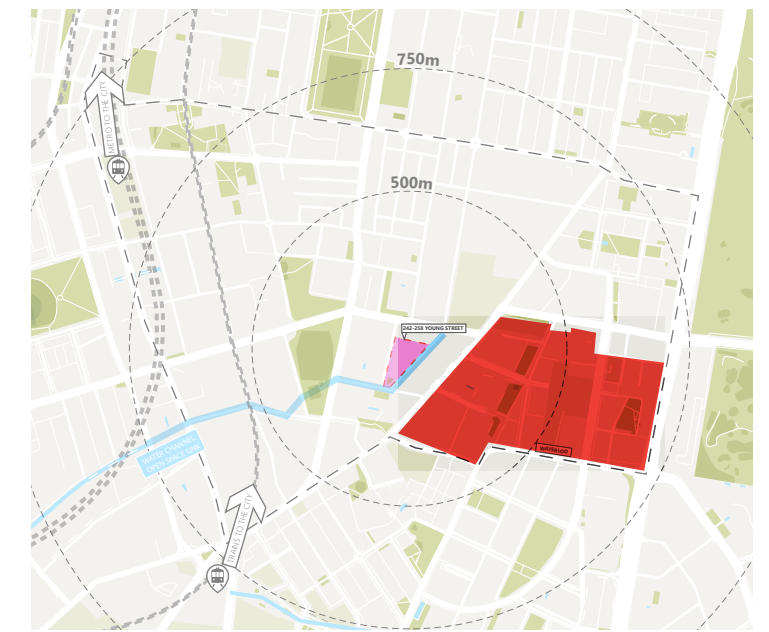


# FUTURE PRECINCTS - LACHLAN PRECINCT



Lachlan Precinct:

- The plan arranges multi-residential development into smaller lots, aligning them with street networks and open areas.
- Varied building heights and footprints are introduced to promote diversity in the overall context and streetscape relationship.
- The masterplan ensures fair access by evenly situating open spaces and pocket parks throughout the development.





# 03

## SITE ANALYSIS

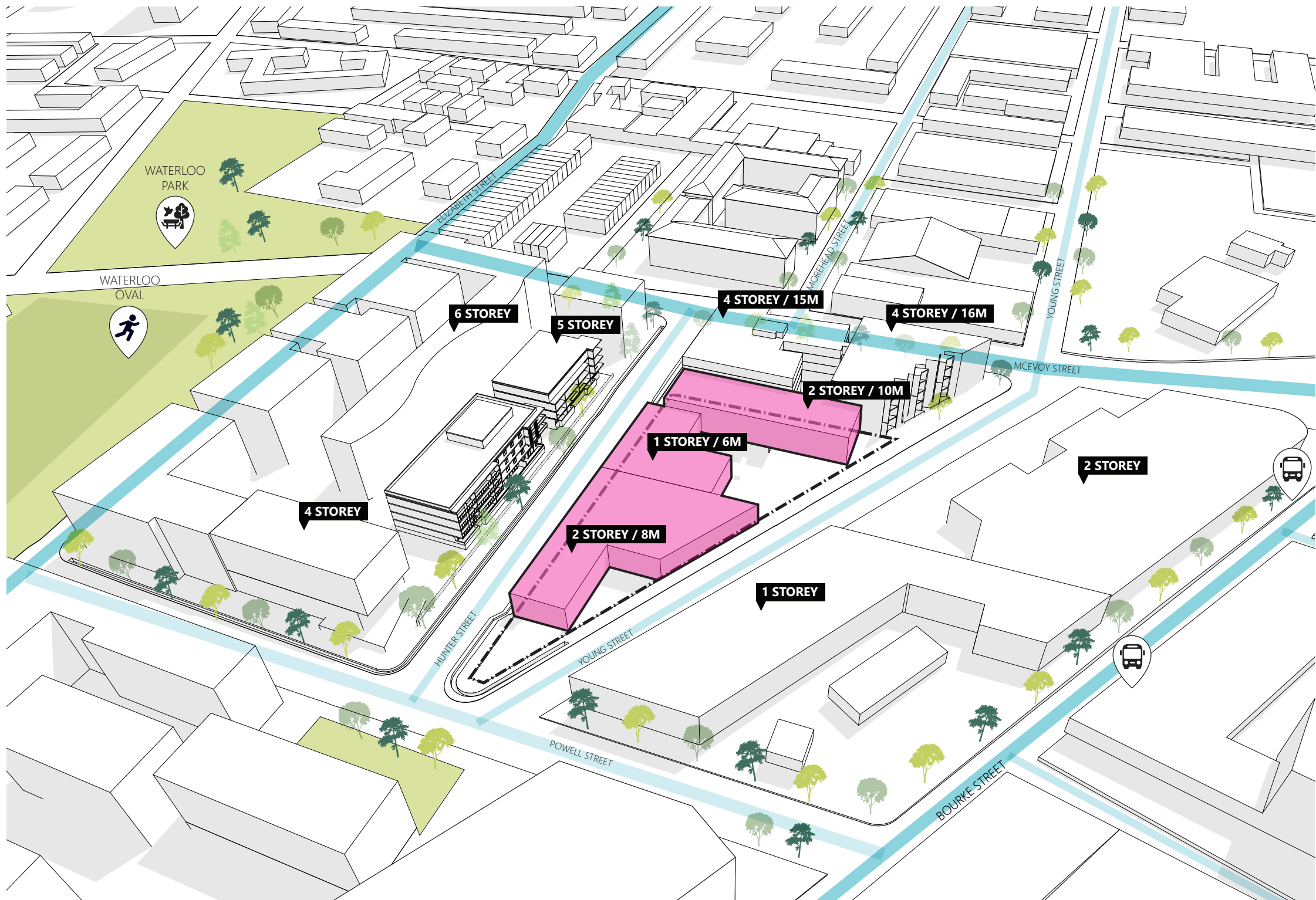
The map displays the Green Square Neighbourhood Centre area. Key features include:

- Streets:** Bourke Street, Hunter Street, Powell Street, Young Street, and Dinkerley Place.
- Landmarks:** Mt Carmel Shrine Church, Our Lady of Mt Carmel School, James Henry Deacon, and the Green Square Neighbourhood Centre.
- Road Classifications:** SP2 Classified Road, R1, and MU1.
- Other Labels:** ZETLAND, GREEN SQUARE NEIGHBOURHOOD CENTRE, and GREEN SQUARE LIBRARY.

[illegible][illegible]



SITE ANALYSIS  
EXISTING CONTEXT - SCALE



FILM SCHOOL

YOUNG STREET



POWELL STREET

WATERLOO OVAL

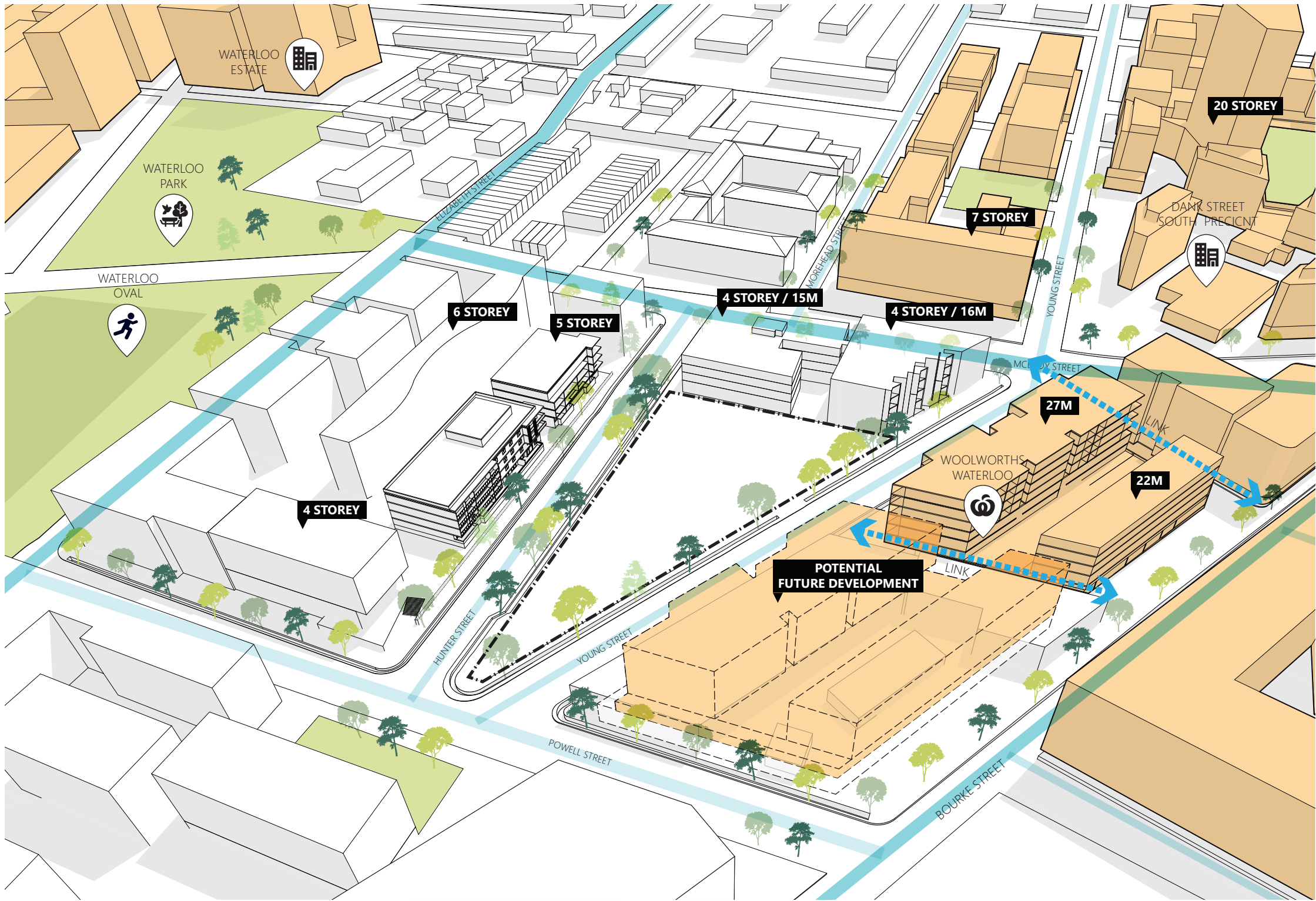


MCEVOY STREET

HUNTER STREET



SITE ANALYSIS  
FUTURE CONTEXT - SCALE



DANK STREET SOUTH

LACHLAN PRECINCT



WATERLOO ESTATE

WOOLWORTHS WATERLOO

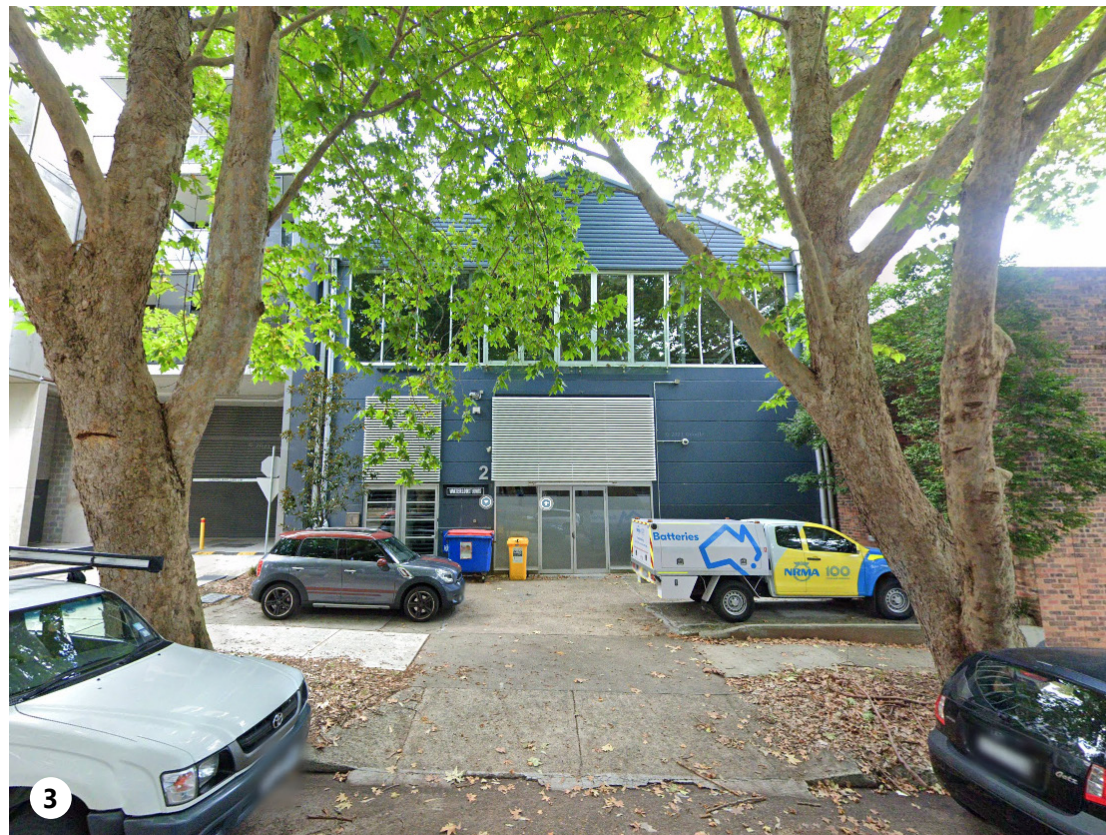


WATERLOO METRO QUARTER

FUTURE WATERLOO METRO STATION

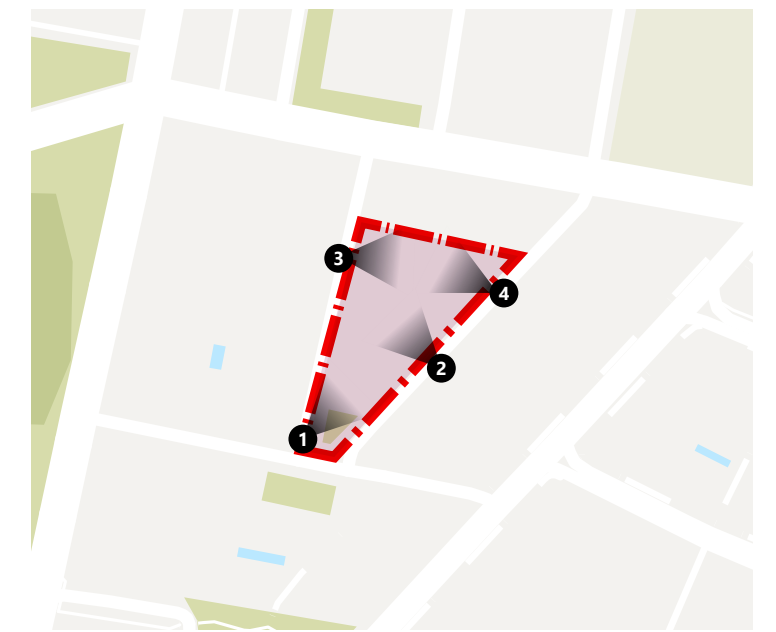


# EXISTING SITE CONDITIONS - BUILDINGS



## Existing Buildings:

- The site consists of two buildings, a masonry commercial building of one to two storeys, and a two storey pitched building, which is housing the current Film school.
- There is a green space to the southern corner of the site.
- The site features multiple driveway access points, as shown in images 2, 3, and 4.
- The site features significant street trees which contribute to the character to the area.



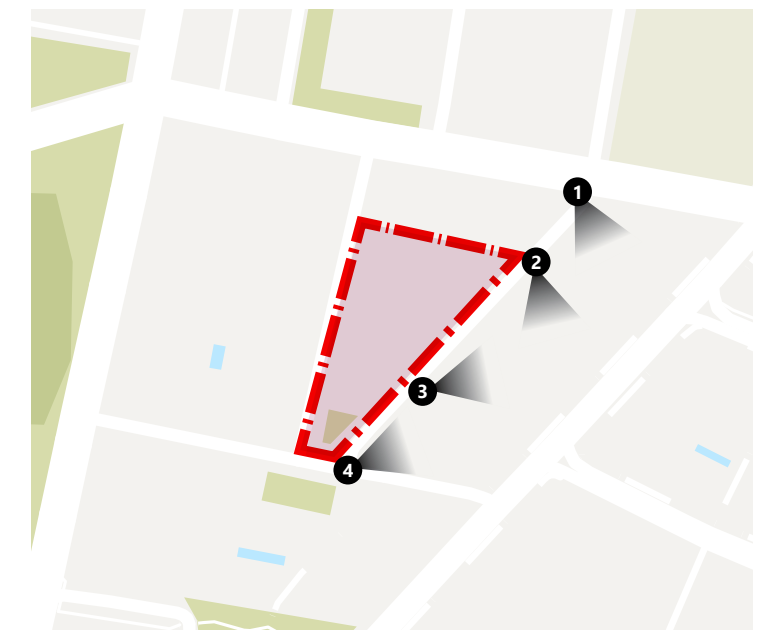


# EXISTING SITE CONDITIONS - YOUNG STREET



## Young Street:

- On the eastern side of the site, Young Street features single-story commercial / retail buildings.
- An approved planning proposal on 923-935 Bourke Street stipulates a new Woolworths, retail, and multi-residential uses. This development will provide great amenity to its context as well as characterising the area as a future neighbourhood centre.

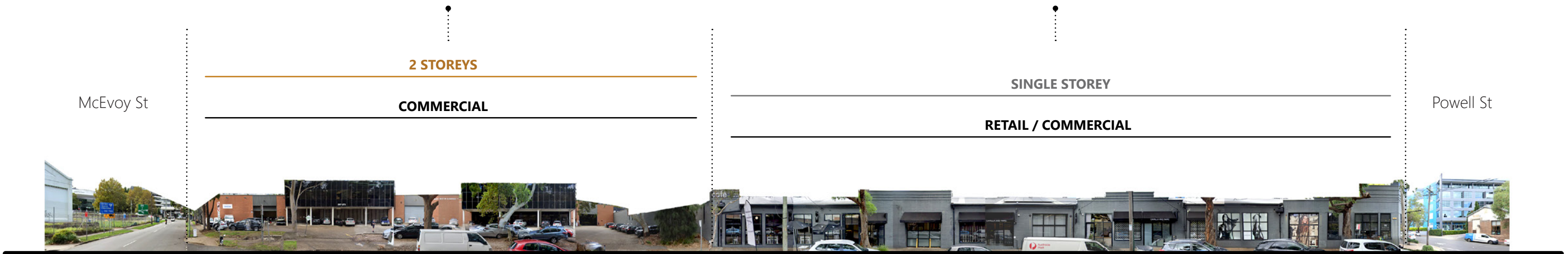




# EXISTING SITE CONDITIONS - YOUNG STREET ELEVATIONS

At the northern end of the street, a commercial building specializing in vehicle sales is situated, distinguished by a greater setback compared to the adjacent structures.

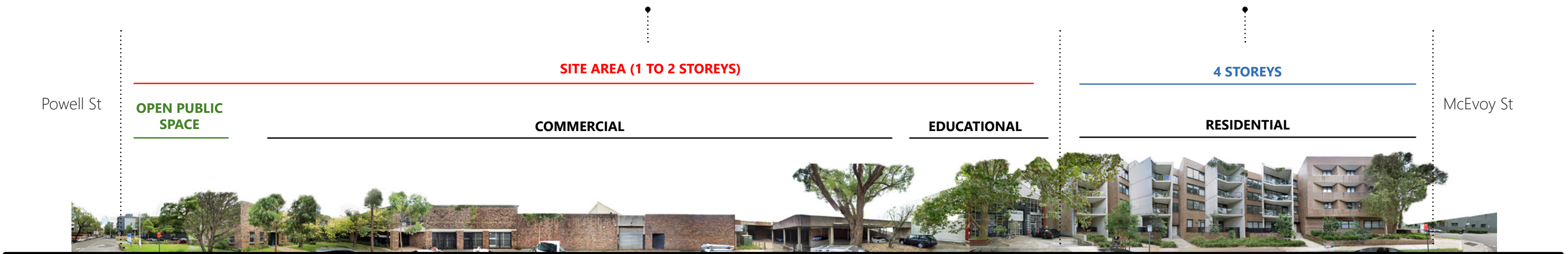
The second segment along the street pertains to retail establishments, featuring single-story shops that provide diverse services to the community.



1. EAST ELEVATION

The site is characterised by a one to two storey masonry building, characterised by blank solid walls and minimal openings. There is also a green space to the south, and a two storey building, housing the current Film School.

Similar to Hunter Street, the four-story building is noted for sharing materiality with the site's perimeter walls. Additionally, the building introduces a sequence of angular designs in the balconies of its residential units.



2. WEST ELEVATION



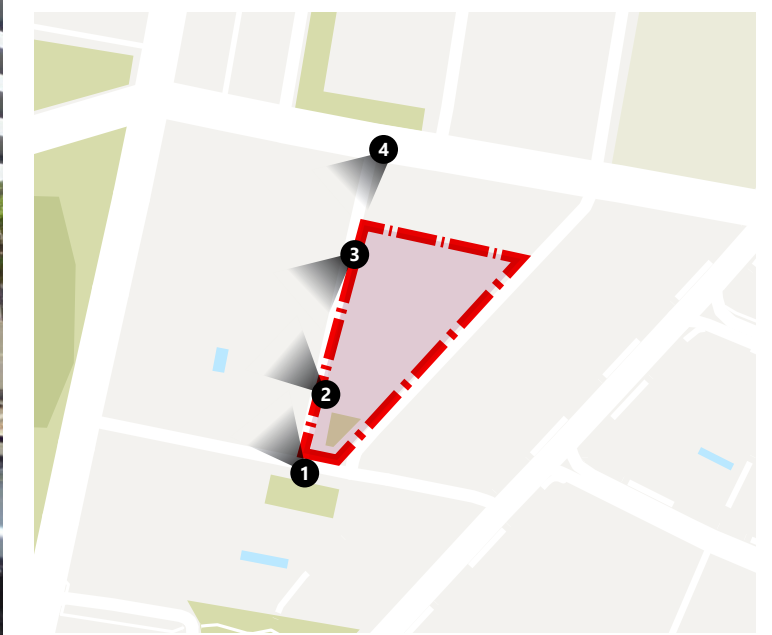


# EXISTING SITE CONDITIONS - HUNTER STREET



## Hunter Street:

- Hunter Street is located on the western side of the site and comprises a series of four-story residential buildings, which are raised on a high base with parking underneath.
- The balconies of these buildings are oriented towards the street, where a row of trees is evenly situated on both sides.

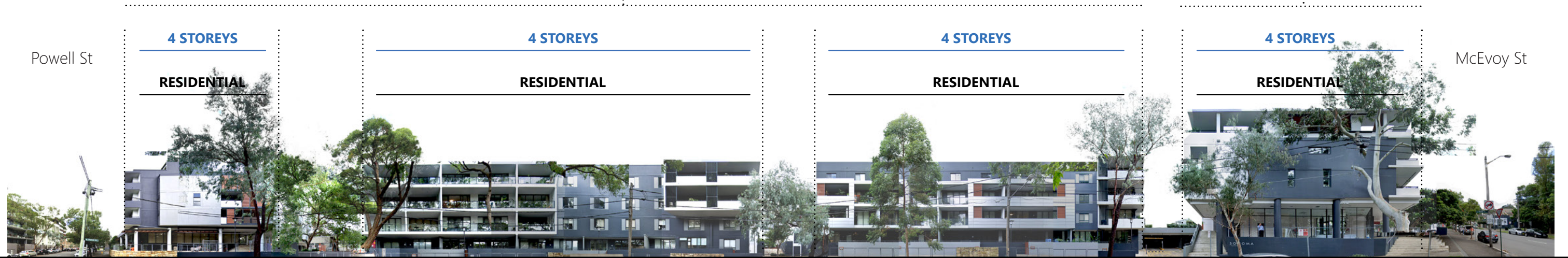




# EXISTING SITE CONDITIONS - HUNTER STREET ELEVATIONS

The street, spanning its length, is characterized by four storey residential buildings that share a consistent morphology and height. Additionally, these buildings provide access to resident parking facilities.

The corner building boasts a significantly more spacious commercial/retail ground level in terms of height, resulting in an overall greater height compared to the other buildings along the same street, creating an urban marker at the corner.



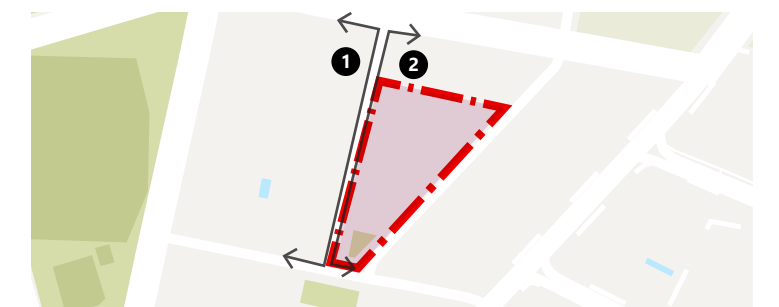
1. WEST ELEVATION

At one end of the block, a residential building is positioned with a greater setback compared to the other buildings along the same street.

The site is characterised by a one to two storey masonry building, characterised by blank solid walls and minimal openings. There is also a green space to the south, and a two storey building, housing the current Film School.



2. EAST ELEVATION



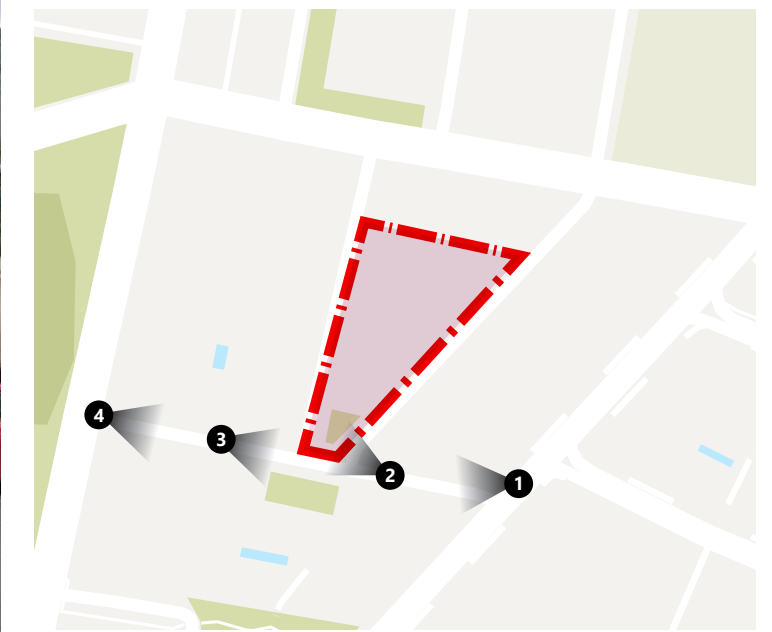


# EXISTING SITE CONDITIONS- POWELL STREET



## Powel Street:

- Powell Street, situated to the south of the site, acts as a linkage between Bourke Street and Elizabeth Street, both bustling thoroughfares with significant public transportation connectivity.
- Functioning as a quieter street, Powell Street provides a southern vantage point of the site.
- Along Powell Street, a variety of buildings, ranging from one to eight stories, exhibit diverse materials and architectural styles. There uses range from commercial / retail / multi-residential.
- There is a green open space directly across from the subject site, as shown in View 03





# 04

## DESIGN THINKING



# DESIGN DRIVERS - CONTRIBUTING TO FUTURE MIXED USE PRECINCT

The project seeks to achieve a mixed use building dedicated to social and educational infrastructure, that will be of great benefit to the future mixed use precinct being established in nearby areas. The school will be the primary user, with additional spaces provided for the tertiary film school. The shared community will be able to use parts of these spaces which will be delineated in an operational management plan.



SCHOOL



TERTIARY FILM SCHOOL



COMMUNITY



SHARED SPACE





DESIGN THINKING

# DESIGN DRIVERS - OVERALL PRINCIPLES



WELCOMING TO COMMUNITY



FLEXIBLE USE AND INNOVATIVE LEARNING SPACES



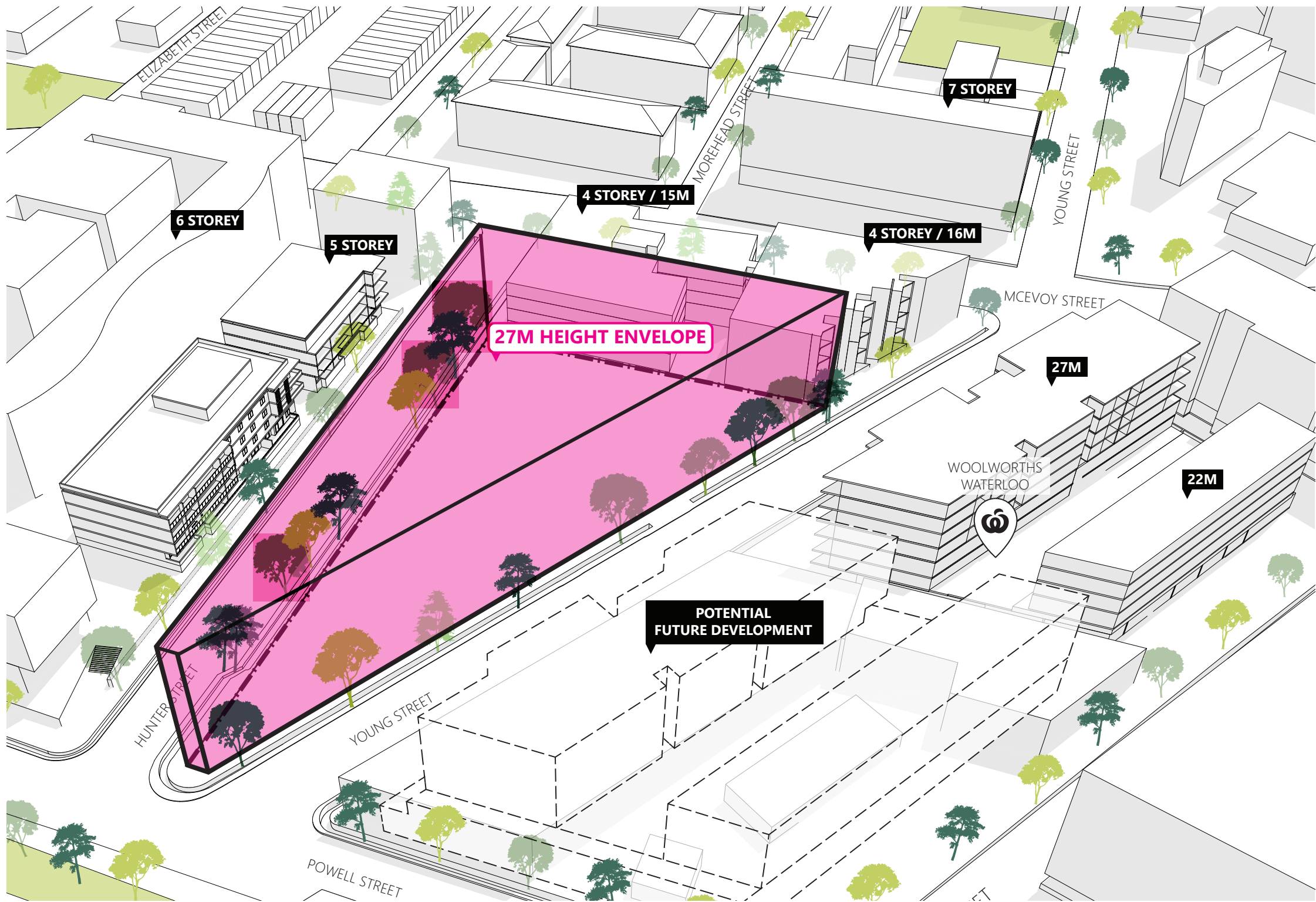
DYNAMIC OUTDOOR SPACES



SUSTAINABILITY



DESIGN THINKING  
DESIGN DIAGRAMS - ENVELOPE



The proposal brings a massing form to 27m from natural ground levels, within the footprint of the site.



WOOLWORTHS WATERLOO



10-20 MCEVOY STREET



9 HUNTER STREET

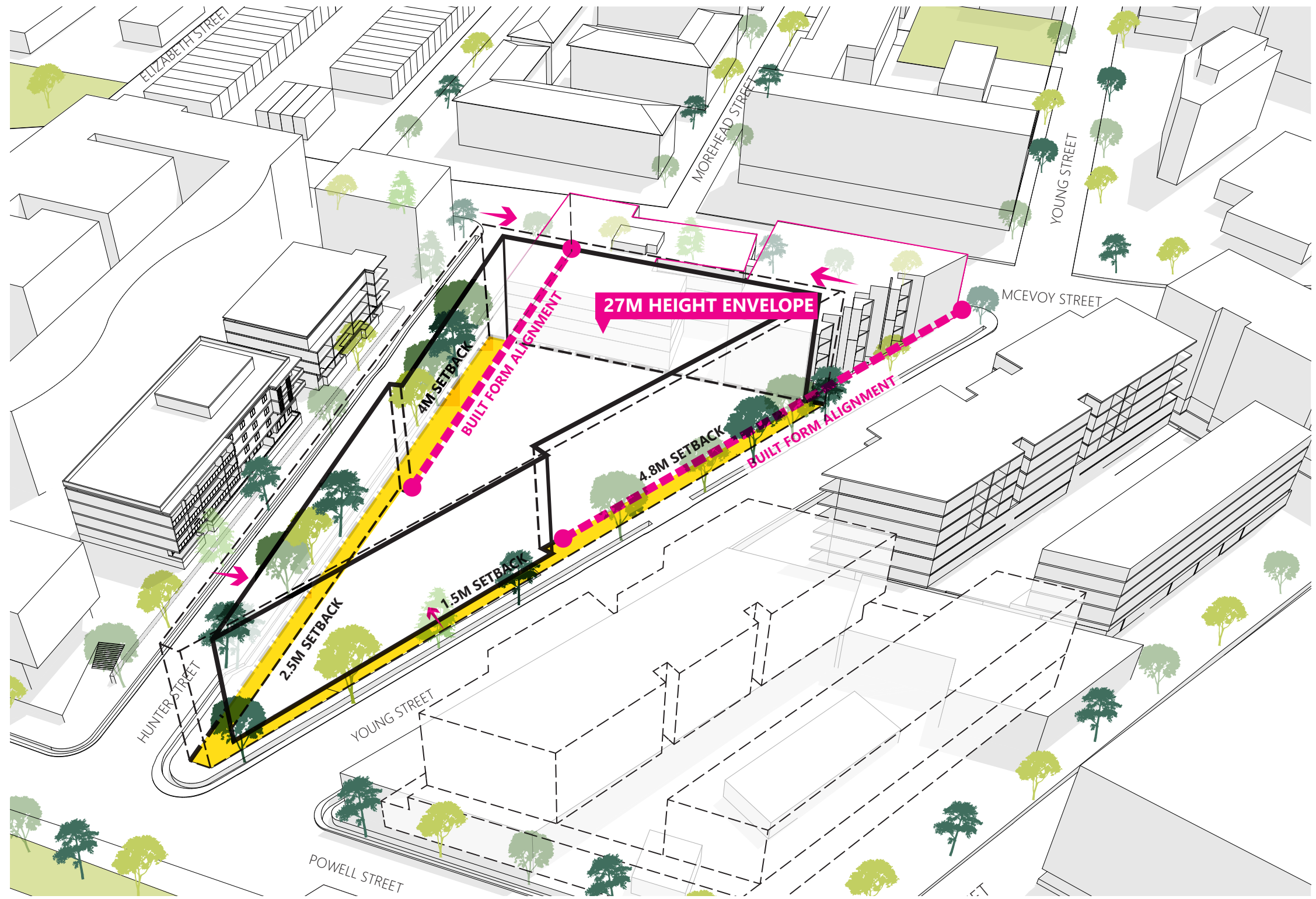


5 HUNTER STREET



DESIGN THINKING

# DESIGN DIAGRAMS - SETBACKS TO ALIGN WITH NEIGHBOURS



Setbacks are applied to offer relief to the street, and to tie in with the alignments of the existing buildings to the north.



WOOLWORTHS WATERLOO



10-20 MCEVOY STREET



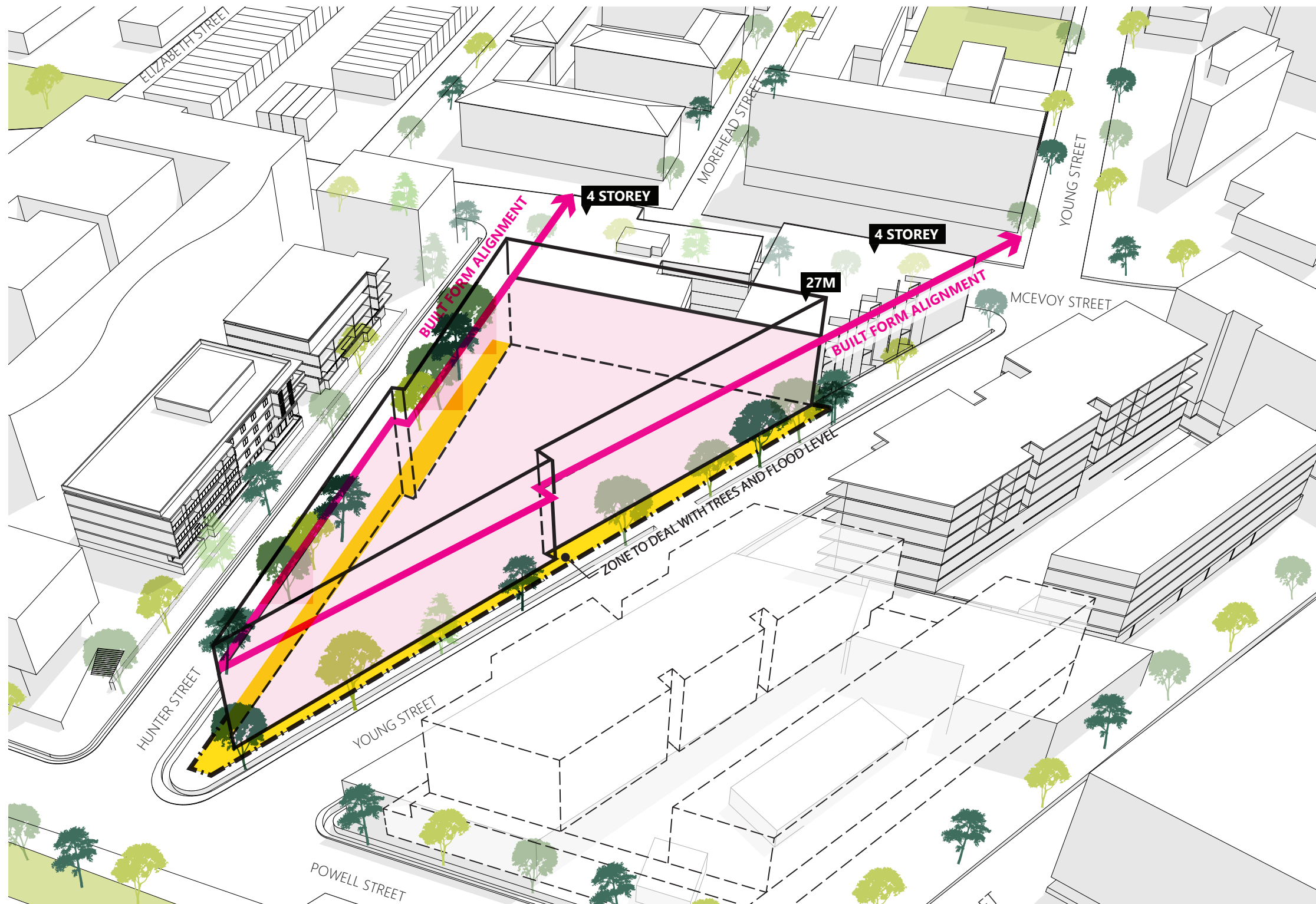
9 HUNTER STREET



5 HUNTER STREET



# DESIGN DIAGRAMS - PODIUM VS UPPER LEVEL EXPRESSION



The proposal seeks a podium expression of 4 storeys that ties into the scale of its surrounds. These levels will be expressed differently to the upper storeys.



WOOLWORTHS WATERLOO



10-20 MCEVOY STREET



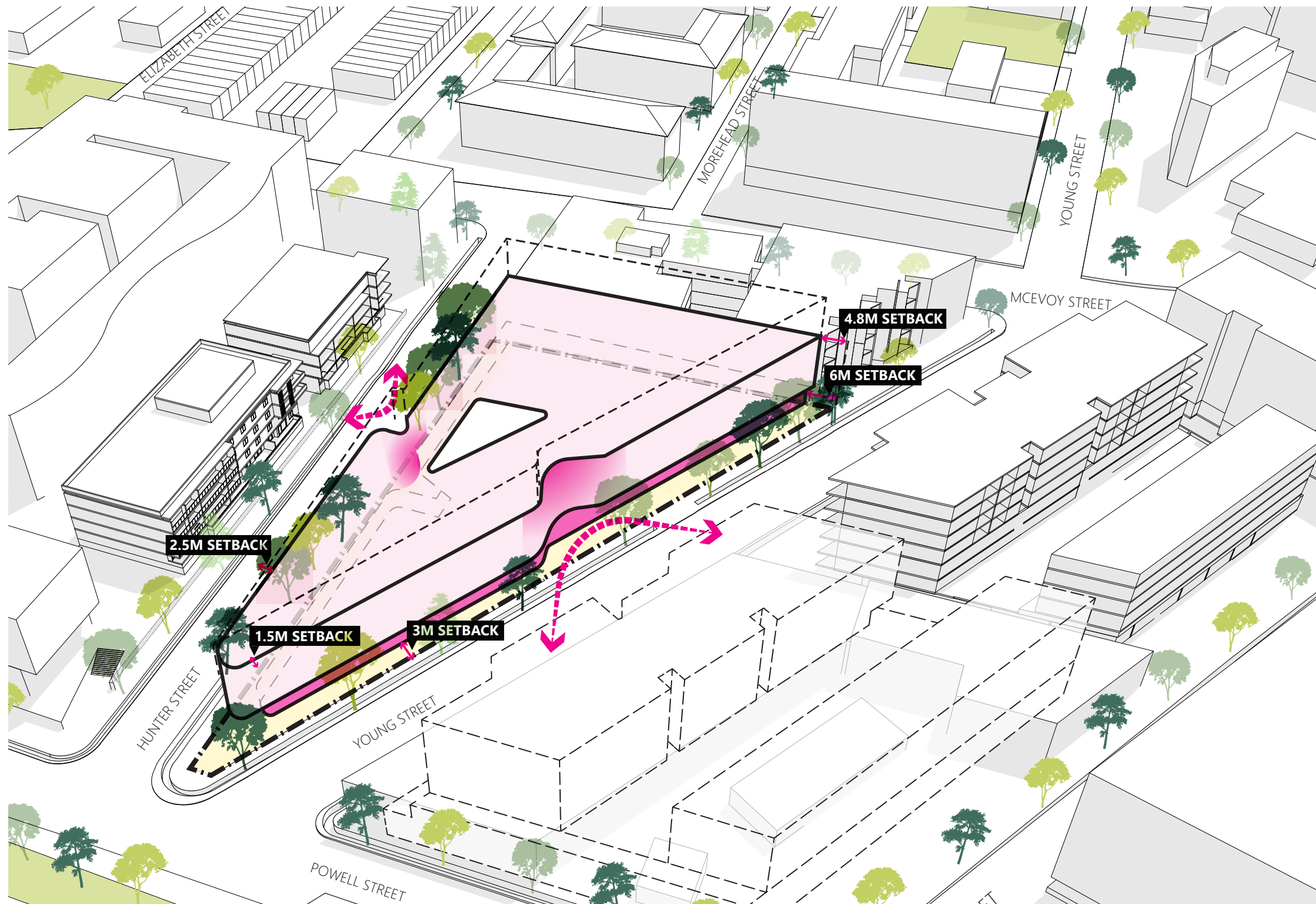
9 HUNTER STREET



5 HUNTER STREET



# DESIGN DIAGRAMS - PODIUM ARTICULATION



Key articulations are introduced to create a more sympathetic built form to the context. Indents to the east and west facade reduce the length of the street wall. The ground level is further setback to offer relief to the street and add a recessive articulation zone.



WOOLWORTHS WATERLOO



10-20 MCEVOY STREET



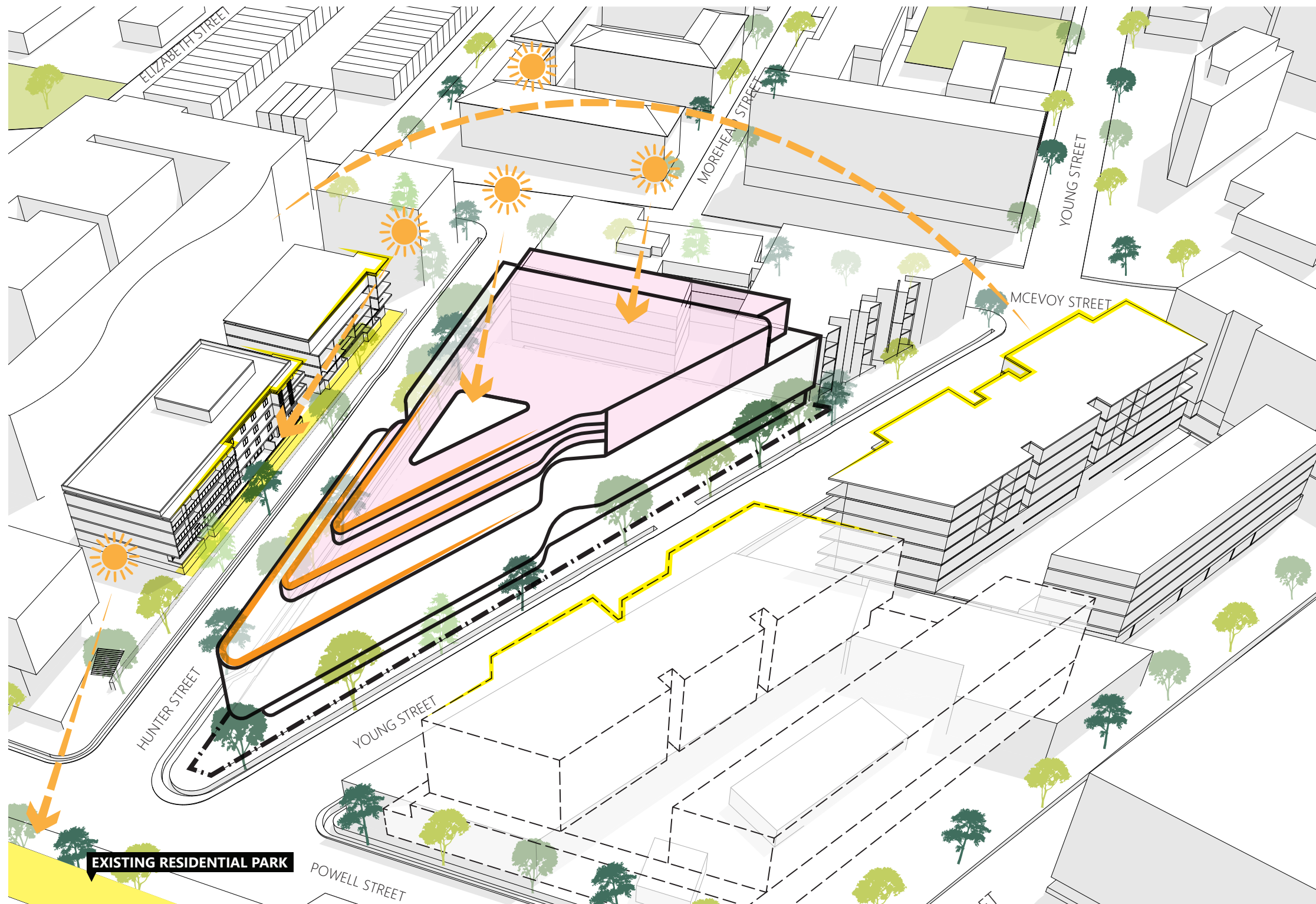
9 HUNTER STREET



5 HUNTER STREET



# DESIGN DIAGRAMS - UPPER LEVEL ARTICULATION AND SOLAR



The upper levels are generally dedicated to majority of the open space for the school. Introduction of setbacks allow solar access to the existing buildings to Hunter Street, future developments to Young Street, and the pocket park to the south.



WOOLWORTHS WATERLOO



10-20 MCEVOY STREET



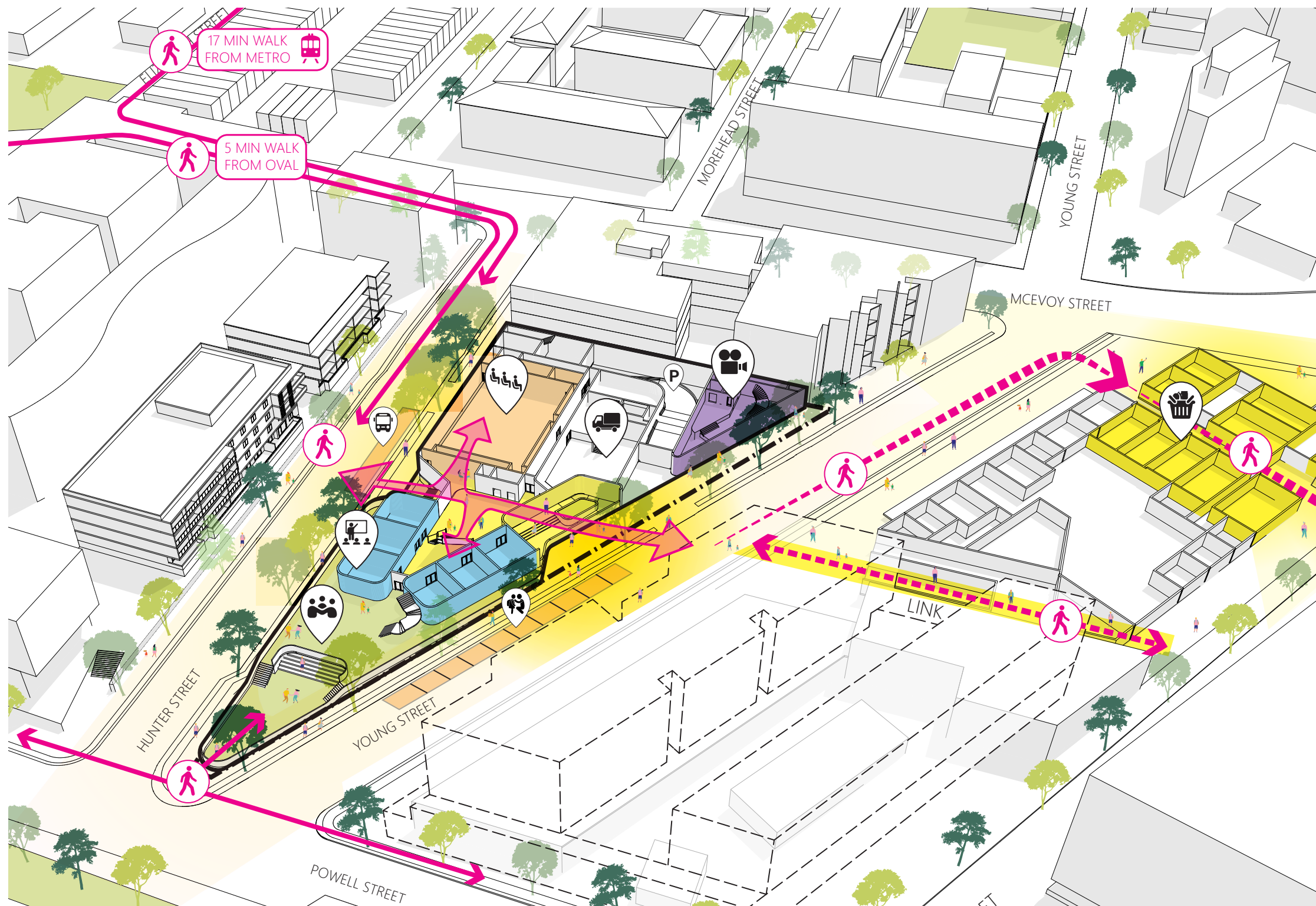
9 HUNTER STREET



5 HUNTER STREET



# DESIGN DIAGRAMS - GROUND PLANE



The ground plane features a main foyer space for the school, which is easily accessed from both Hunter and Young Street. This creates a east-west through site link for the school users, easily connects to the future link on the Woolworths site and to the future metro. The school foyer also links to the auditorium, located on Hunter Street. It can be used by the shared community on the weekends. To the south of the site sits admin, classroom and open space for the school.

The film school lobby is located on Young Street, adding to the future mixed use nature of Young. Ground floor loading and basement access are located off Young Street, to minimise disruption to the residential character of Hunter Street. To reduce overload of traffic on one street, pick-up/drop-off zones for the school is located on Young Street, whilst the bus zones are located on Hunter Street.



ACTIVE ENTRANCE



MAIN FOYER



AUDITORIUM

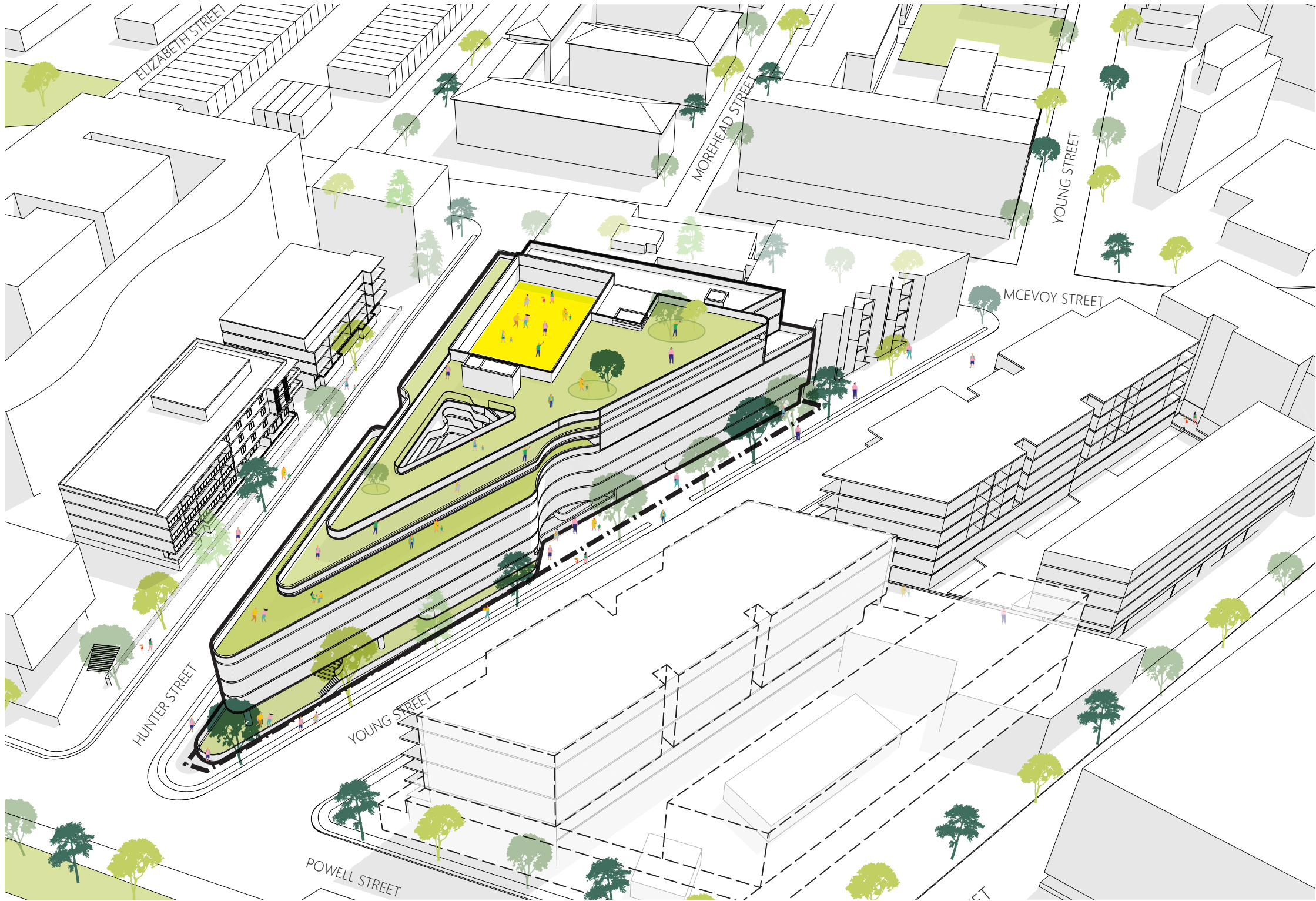



OPEN SPACE



DESIGN THINKING


# DESIGN DIAGRAMS - OVERVIEW






DEV SUMMARY

Height	27m Height Limit
Total GFA	13,544sqm (including school circulation)
Total FSR	2.94:1 (including school circulation)
Cars	55 cars



SCHOOL

GFA	10,609sqm (incl. school circulation)
STUDENTS	~800
GLSS	45
OUTDOOR	4,975sqm (6.2sqm per student)



FILM SCHOOL

GFA	2,935sqm
STUDENTS	~120
OUTDOOR	59sqm

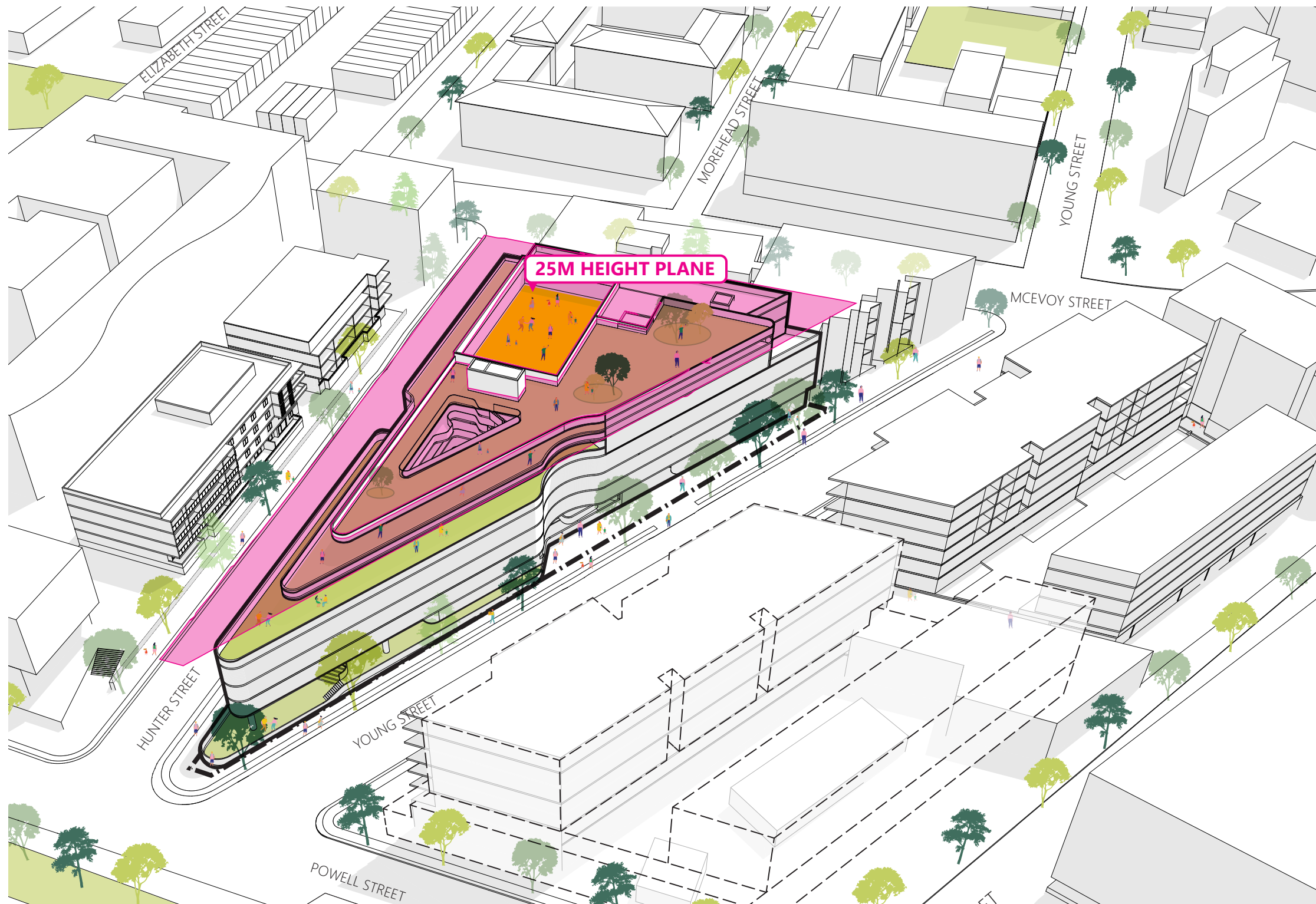


SCHOOL STUDY SPACES

VERTICAL CIRCULATION



# DESIGN DIAGRAMS - HEIGHT PLANE 25M



The current design seeks to fit the built form (sans the rooftop netting and balustrading from the outdoor area) into a height of 25m. To accomodate accessibility to level 6, the school core lift will go through the 25m height plane.



ROOFTOP GARDEN



OUTDOOR SEATING



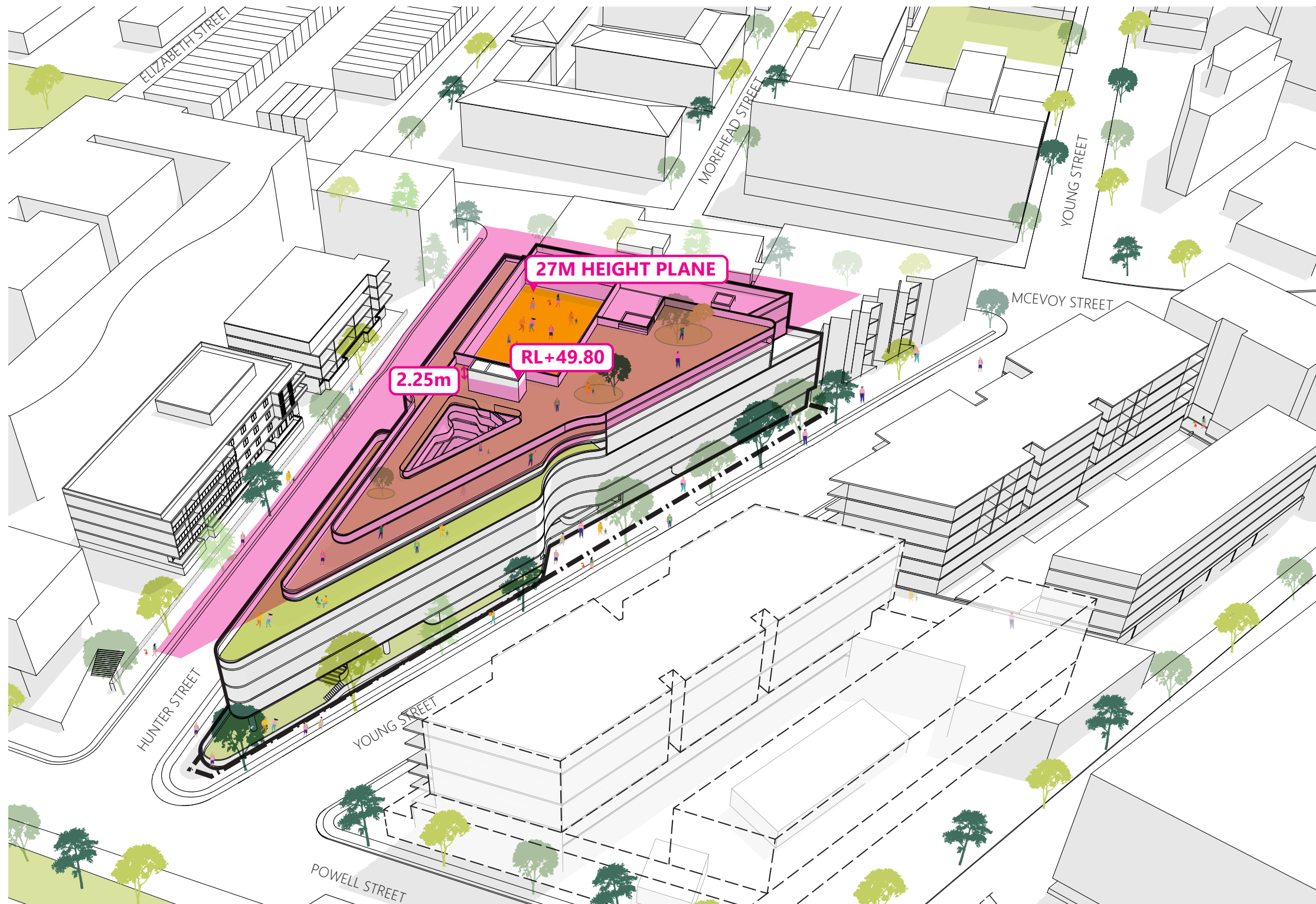
SPORT AREA



PLAY AREA



# DESIGN DIAGRAMS - HEIGHT PLANE 27M



The netting and balustrading will sit slightly higher than the 25m, with intent that it sits within the 27m height line. The school core lift will have minor encroachment, with the overrun on RL+49.800 and 2.25m maximum exceedance from the 27m height plane.



ROOFTOP GARDEN



OUTDOOR SEATING



SPORT AREA



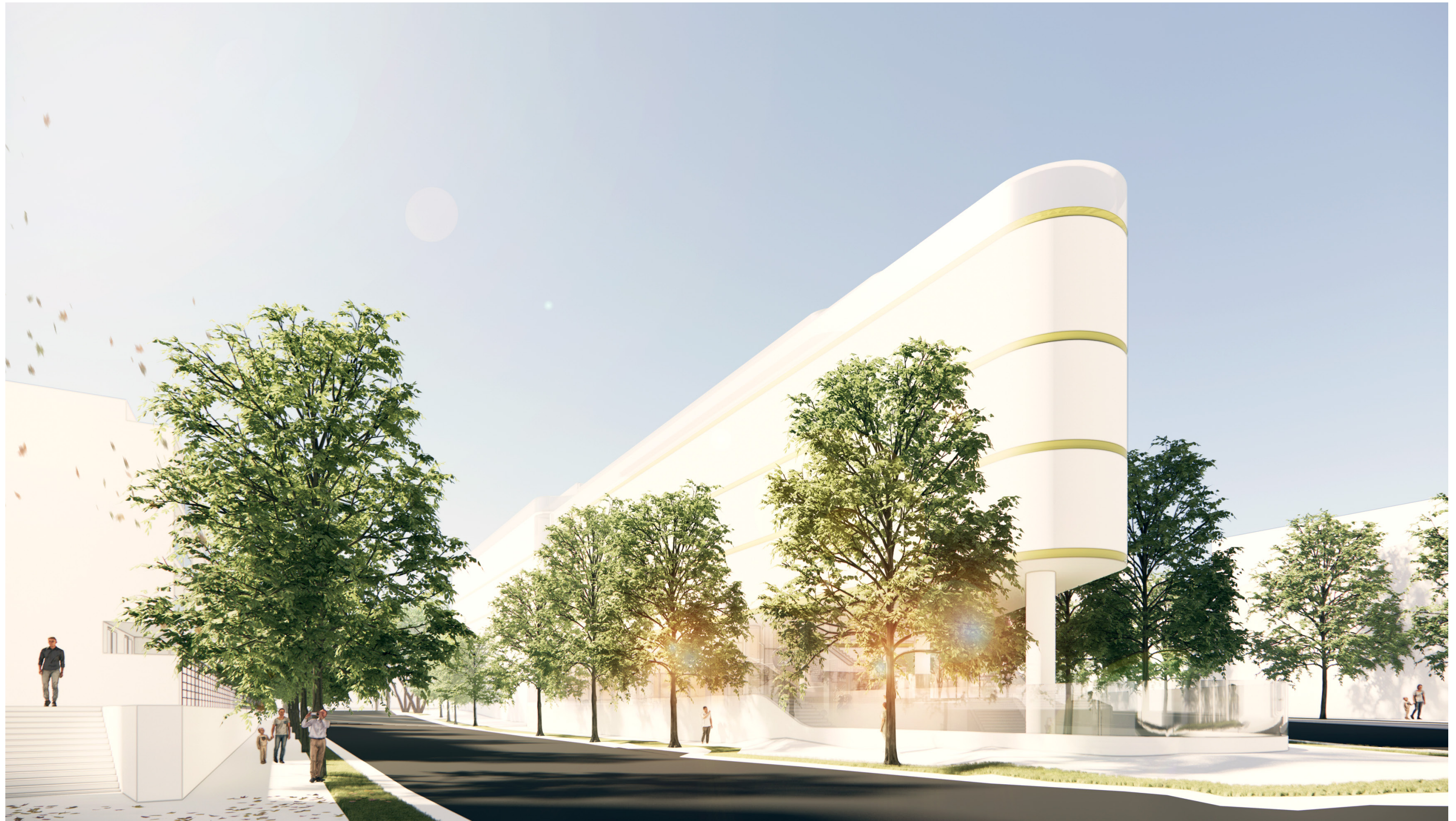
PLAY AREA







PROPOSED DESIGN  
PERSPECTIVE- STREET VIEW





PROPOSED DESIGN  
PERSPECTIVE- STREET VIEW





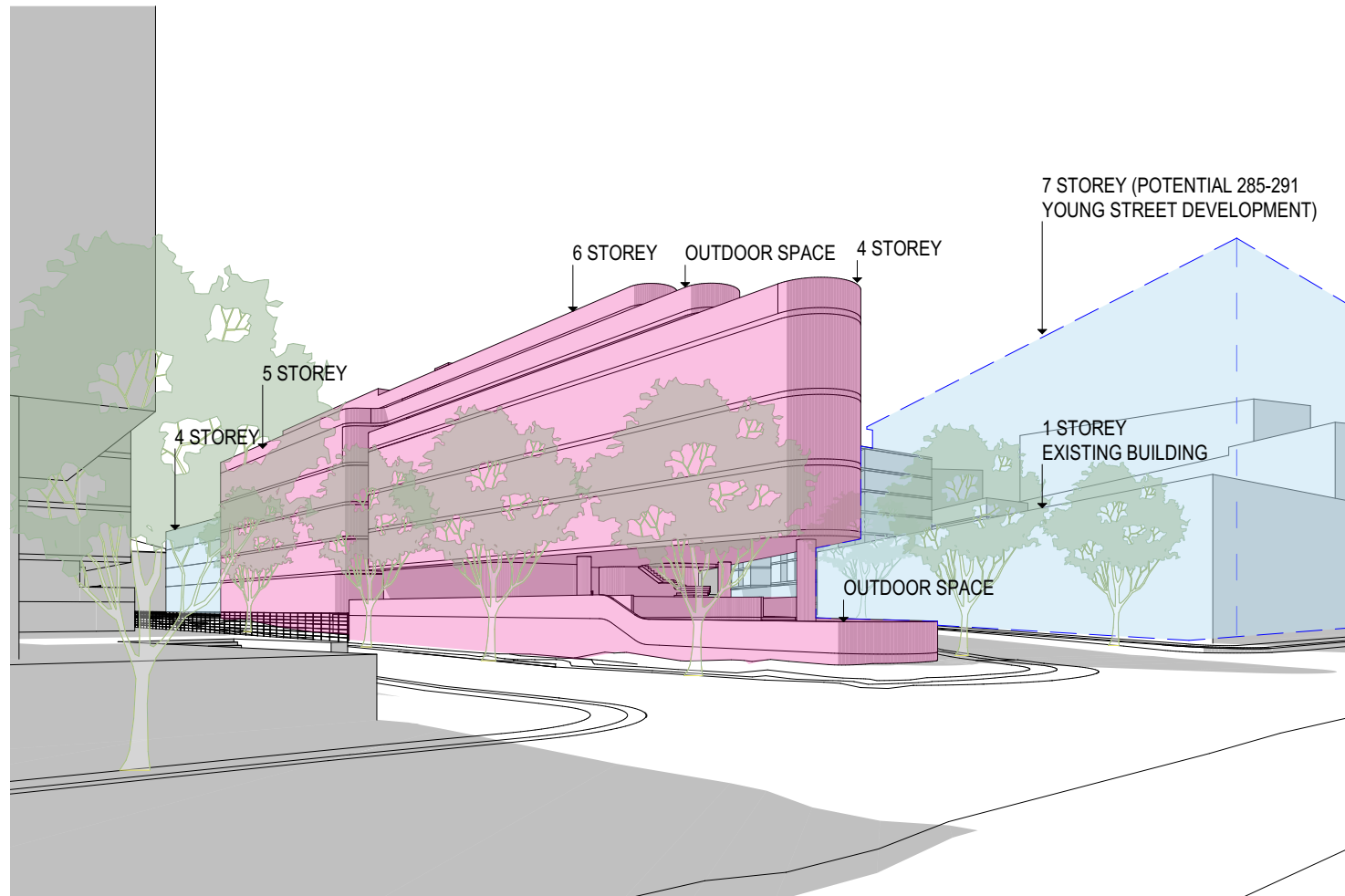
# 05

## REFERENCE SCHEME

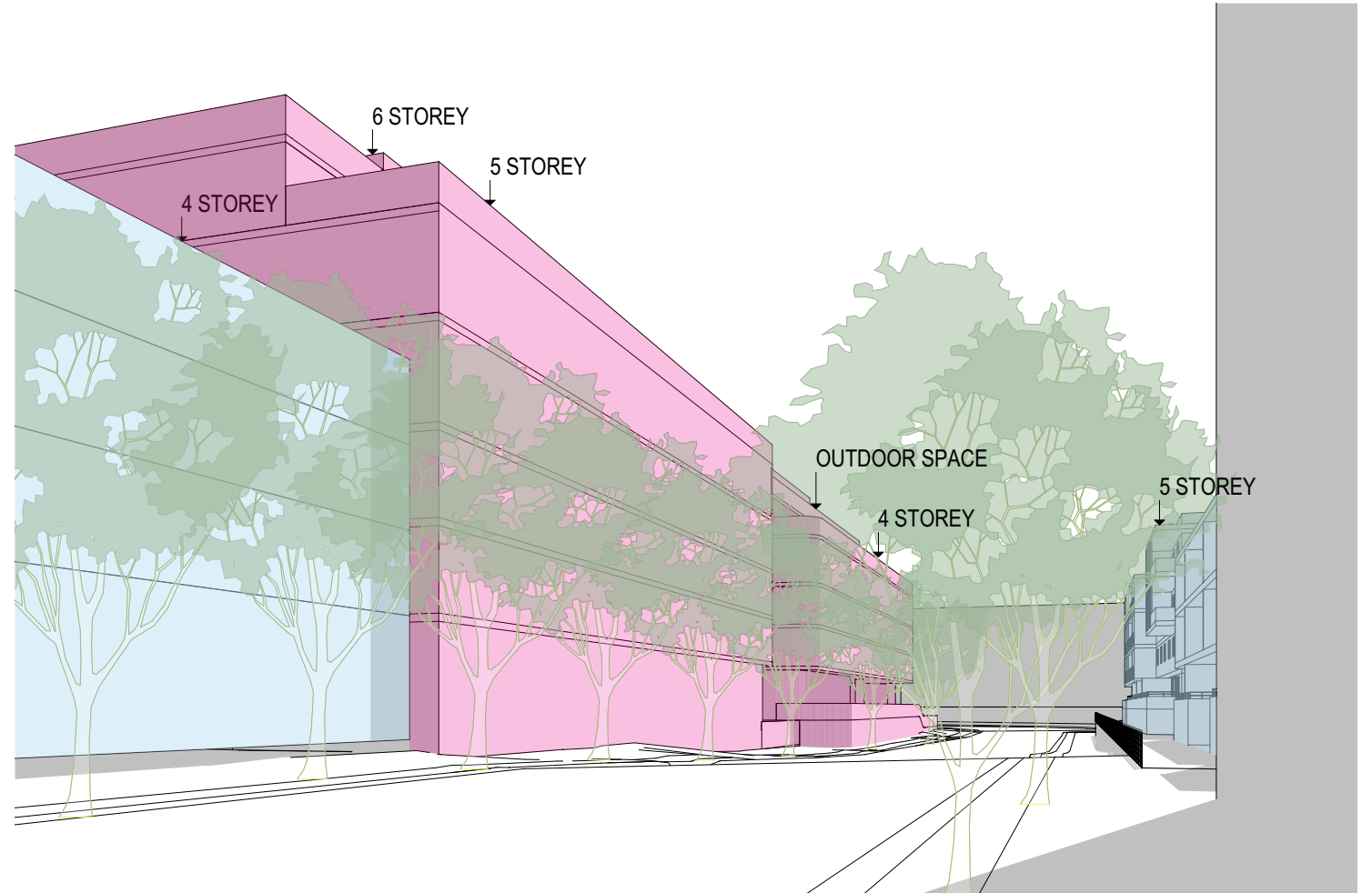


# ENVELOPE DIAGRAMS (VIEW ANALYSIS) - HUNTER STREET

01 - VIEW FROM HUNTER STREET (SOUTH)

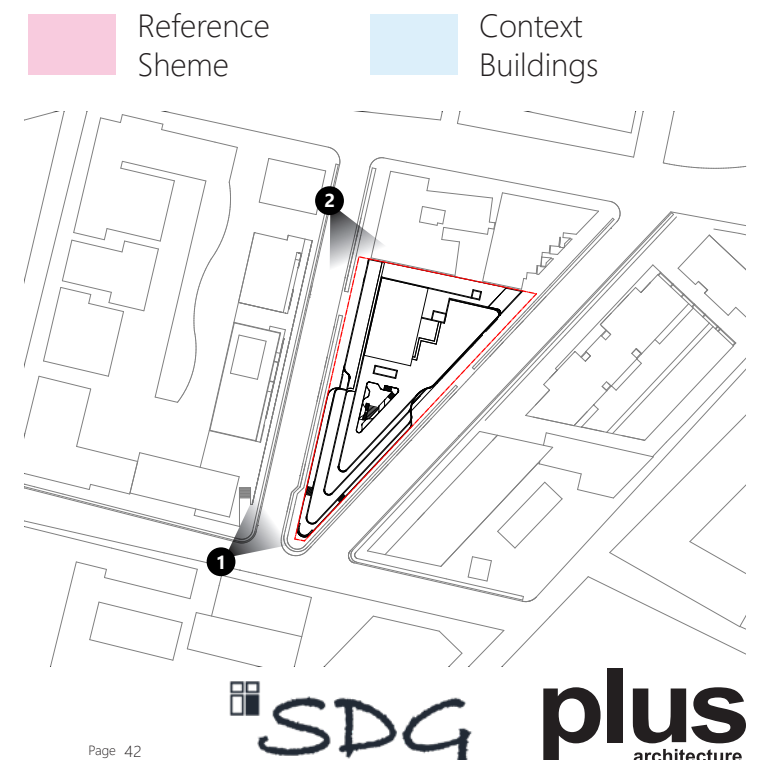


02 - VIEW FROM HUNTER STREET (NORTH)



## VIEW ANALYSIS ALONG HUNTER STREET:

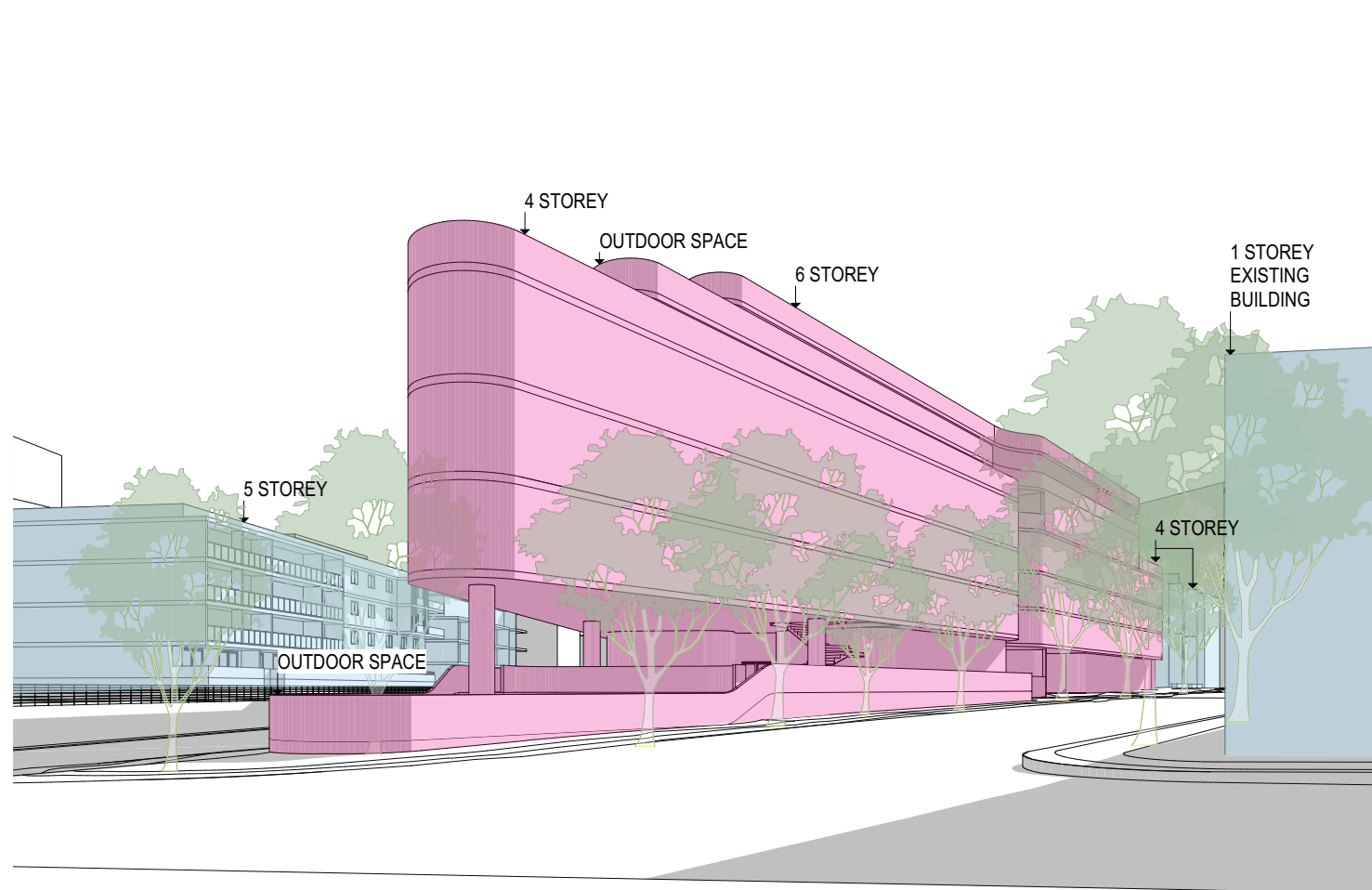
- Along Hunter Street, the scheme proposes a 5 storey podium height to the north, which transitions to 4 storeys towards the south. The 4-5 storey scale appropriately ties in with the 4-5 storey scale of existing buildings along Hunter Street.
- The proposal reaches 6 storeys, with the upper levels set back from the podium to reduce visual appearance of the building. The lift overrun on level 6 has minor encroachment on the 27m height line, but is not visible from the street, as illustrated in these street views.
- Retention of existing mature street trees buffers views towards the built form.
- The ground floor is recessively expressed to create a lightness and relief to the base of the building. Erosion of the ground floor at the corner of Young Street and Hunter Street also softens the building's interface at the intersection, whilst allowing the building to present as a key urban marker, as shown in View 01.



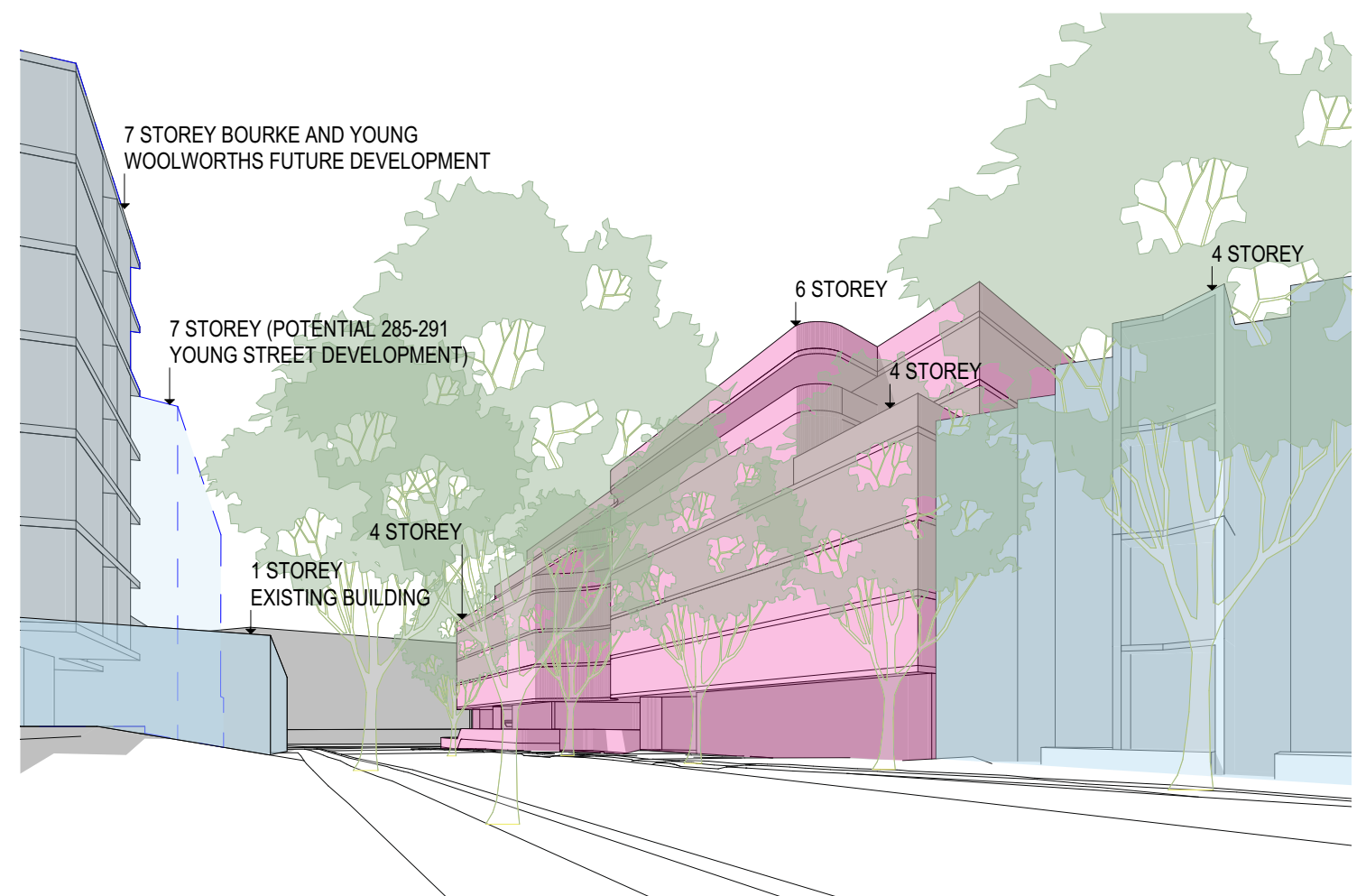


# ENVELOPE DIAGRAMS (VIEW ANALYSIS) - YOUNG STREET

03 - VIEW FROM YOUNG STREET (SOUTH)

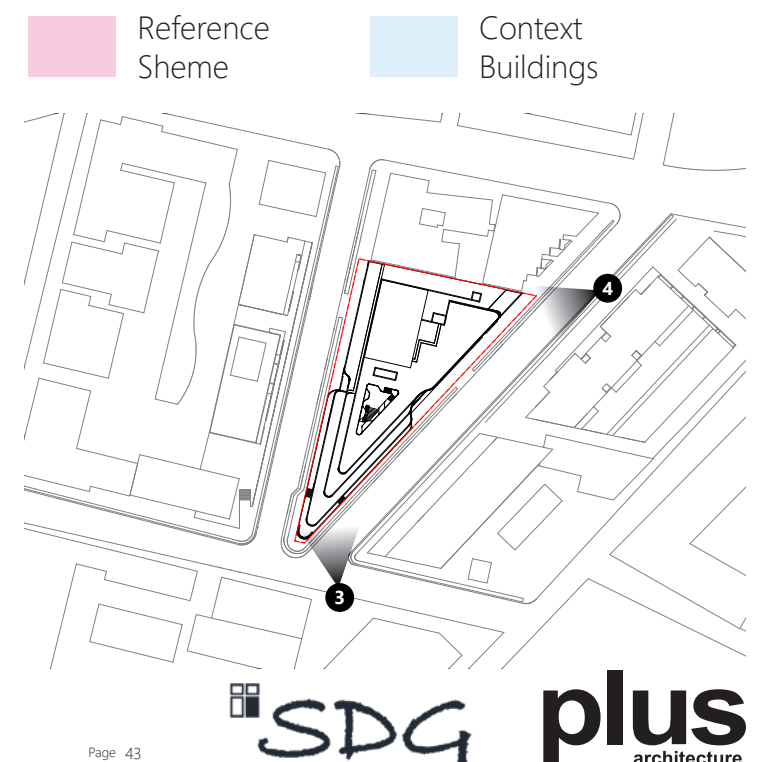


04 - VIEW FROM YOUNG STREET (NORTH)



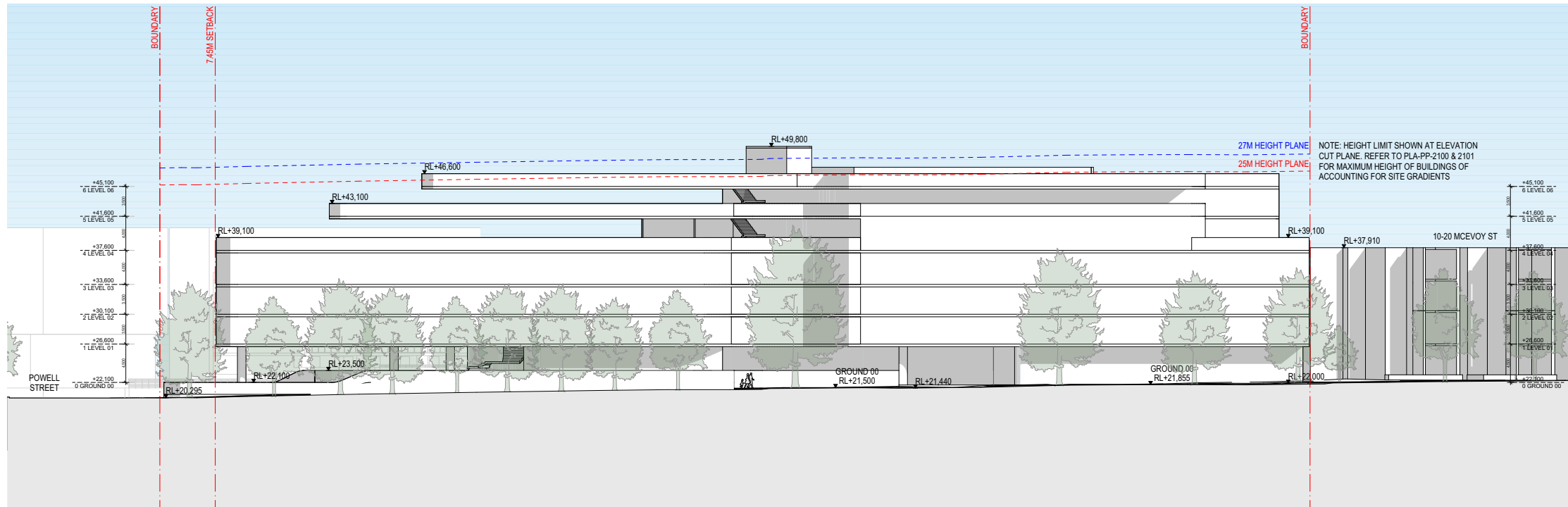
## VIEW ANALYSIS ALONG YOUNG STREET:

- Along Young Street, the scheme proposes a 4 storey podium, with additional levels above to 6 storeys, which are generally setback from the podium line. The podium height neatly ties in with the 4 storey building to the north, as shown in view 04.
- The proposal reaches 6 storeys, with the upper levels set back from the podium to reduce visual appearance of the building. The lift overrun on level 6 has minor encroachment on the 27m height line, but is not visible from the street, as illustrated in these street views.
- Overall, the scheme relates to the scale of the approved planning proposal Bourke and Young Woolworths, which sits at 27m and reaches 7 storeys. This approved building will be a defining character of the street wall height, and the reference scheme is consistent with this future scale. This is evident in view 04.
- Retention of existing mature street trees buffers views towards the built form.
- The ground floor is recessively expressed to create a lightness and relief to the base of the building. Erosion of the ground floor at the corner of Young Street and Hunter Street also softens the building's interface at the intersection, whilst allowing the building to present as a key urban marker, as shown in View 03.

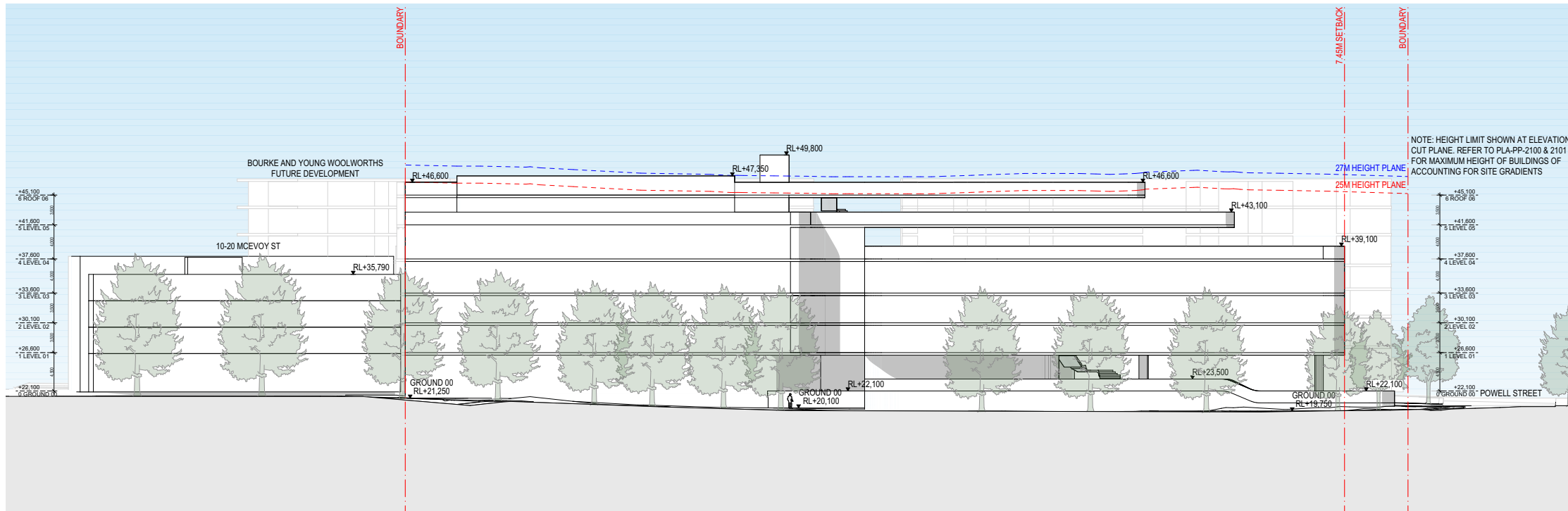




# REFERENCE SCHEME ELEVATIONS



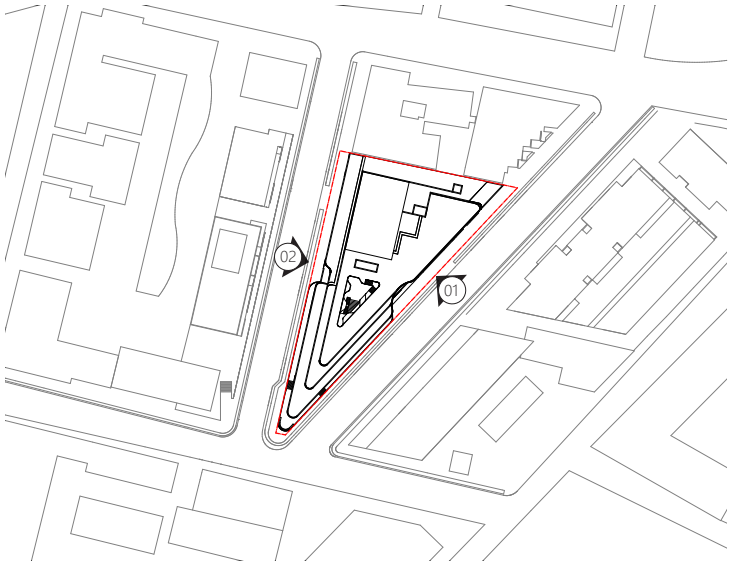
01 YOUNG STREET ELEVATION



02 HUNTER STREET ELEVATION

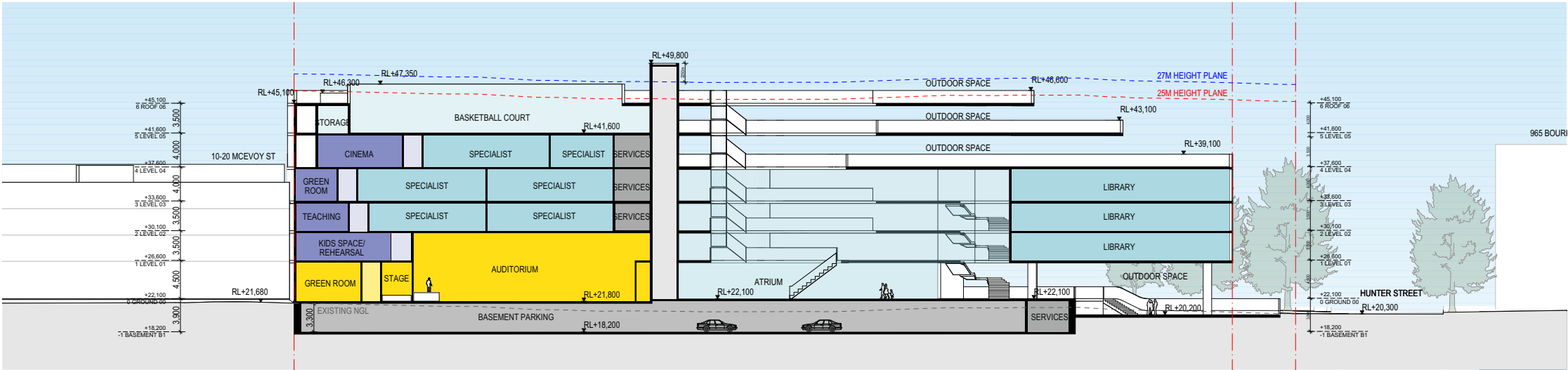
The scheme proposes the following storey heights:

- Along Hunter Street, the scheme proposes a 5 storey podium height to the north, which transitions to 4 storeys towards the south. The 4-5 storey scale appropriately ties in with the 4-5 storey scale of existing buildings along Hunter Street.
- Along Young Street, the scheme proposes a 4 storey podium, with additional levels above to 6 storeys, which are setback from the podium line. The podium height neatly ties in with the 4 storey building to the north, as shown in view 04.
- The proposal reaches 6 storeys, with the upper levels set back from the podium to reduce visual appearance of the building. The lift overrun on level 6 have minor encroachment on the 27m height line, but is not visible from the street. The building presents as a 6 storey scale to the street interfaces, and also ties in with the 7 storey scale of the future Bourke and Young Woolworths Development, as shown in view 01 and 02. The setbacks to the upper levels also allows solar access to the neighbouring existing and future developments, as well as the park to the south.
- The ground floor is recessively expressed.

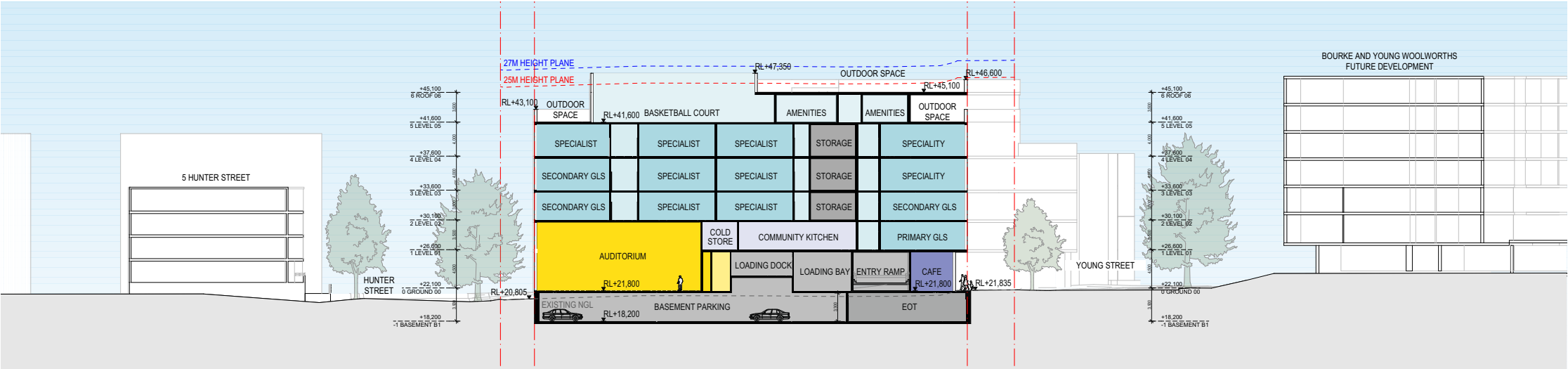




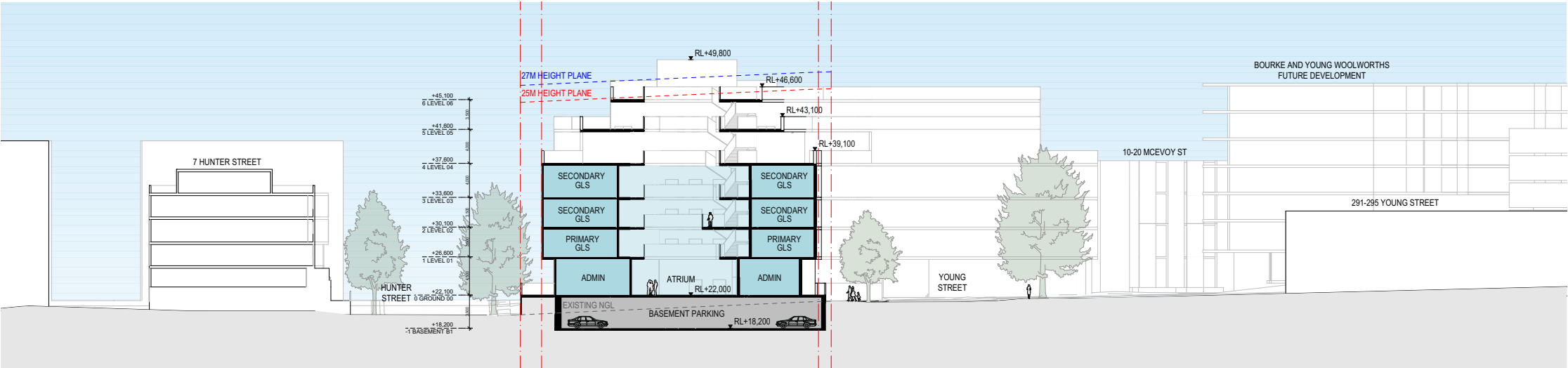
# REFERENCE SCHEME SECTIONS



SECTION 01



SECTION 02

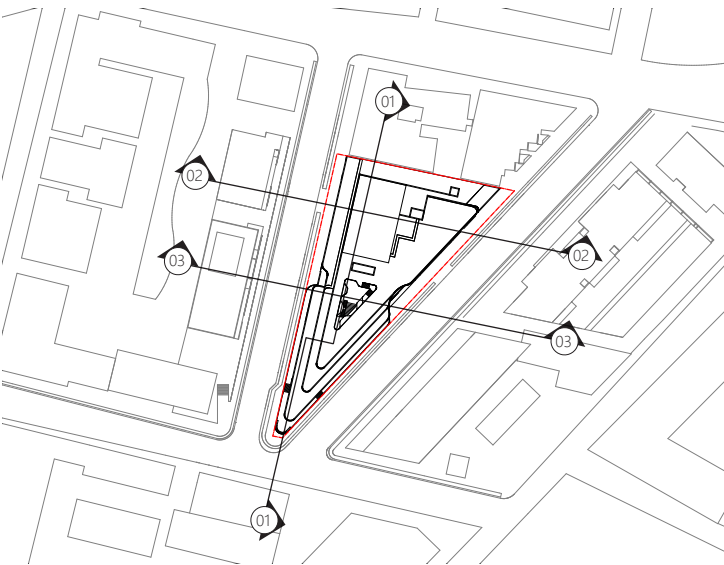


SECTION 03

The scheme is primarily composed of spaces for the K-12 school which spans from ground to level 05 , which is vertically accessed by the school lift core or the feature circulation void. The void connects to terraced open space for the school on levels 04, 05, and 06.

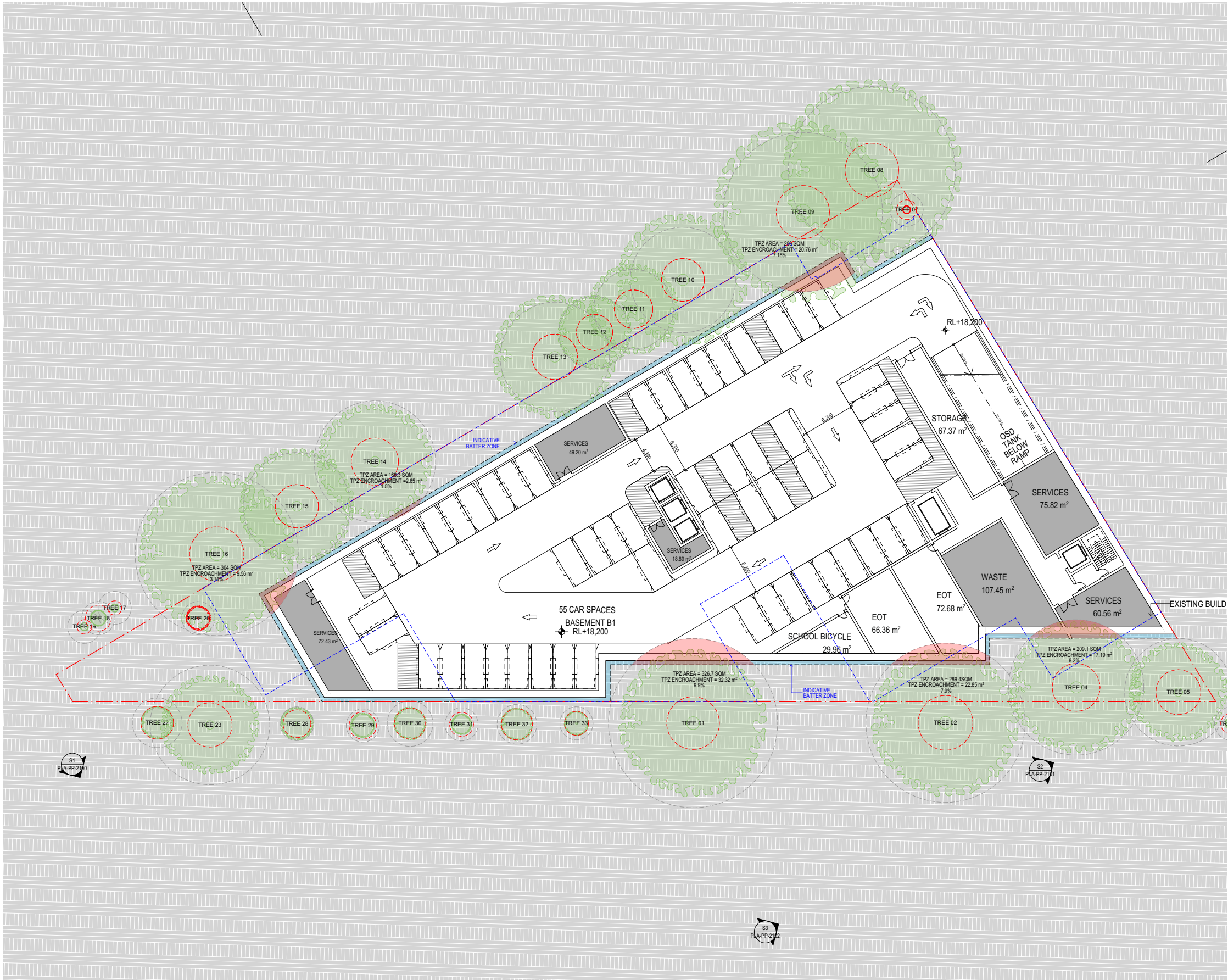
The film school similarly spans ground to level 05, and is accessed via its own lift core and its feature atrium. The double height school auditorium is located on ground, but can also be accessed from level 01. This space is intended to be shared with the community, who will have access to it after school hours, or during the weekend.

All users of the site have access to the basement carpark, which spans one level.



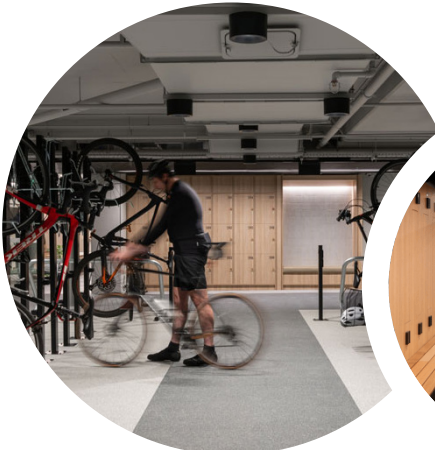


REFERENCE SCHEME  
PLANS - BASEMENT



The basement features vehicular access from ground. It is also connected to the film school lift core, school lift core, and the goods lift. The basement is also protected to the PMF flood level, and the footprint is shaped to mitigate impacts to tree TPZs.

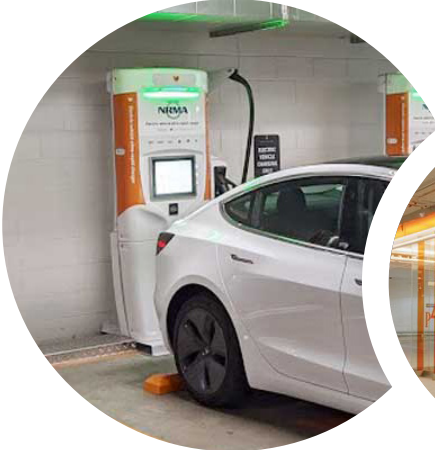
The basement incorporates 55 cars, which will be used by the school and film school on weekdays, and by the shared community during times they are using the auditorium. The basement also features end of trip facilities, waste holding rooms, and bicycle parking.



BICYCLE PARKING



END OF TRIP



ELECTRIC CHARGING STATION



LOBBY



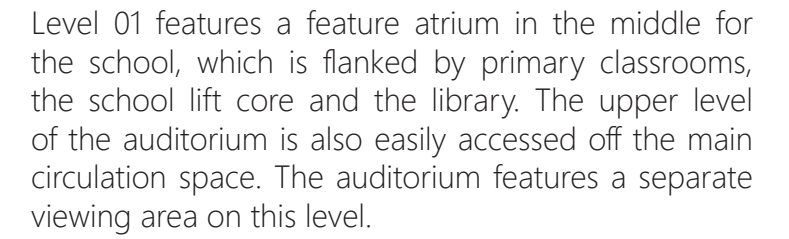




The film school lobby is located on Young Street, adding to the future mixed use nature of Young. Ground floor loading as well as basement access is located off Young Street, to minimise disruption to the residential character of Hunter Street. Pick-up/drop-off zones for the school is located on Young Street, whilst the bus zones are located on Hunter Street. Splitting up these transport modes reduces overload of traffic on one street.







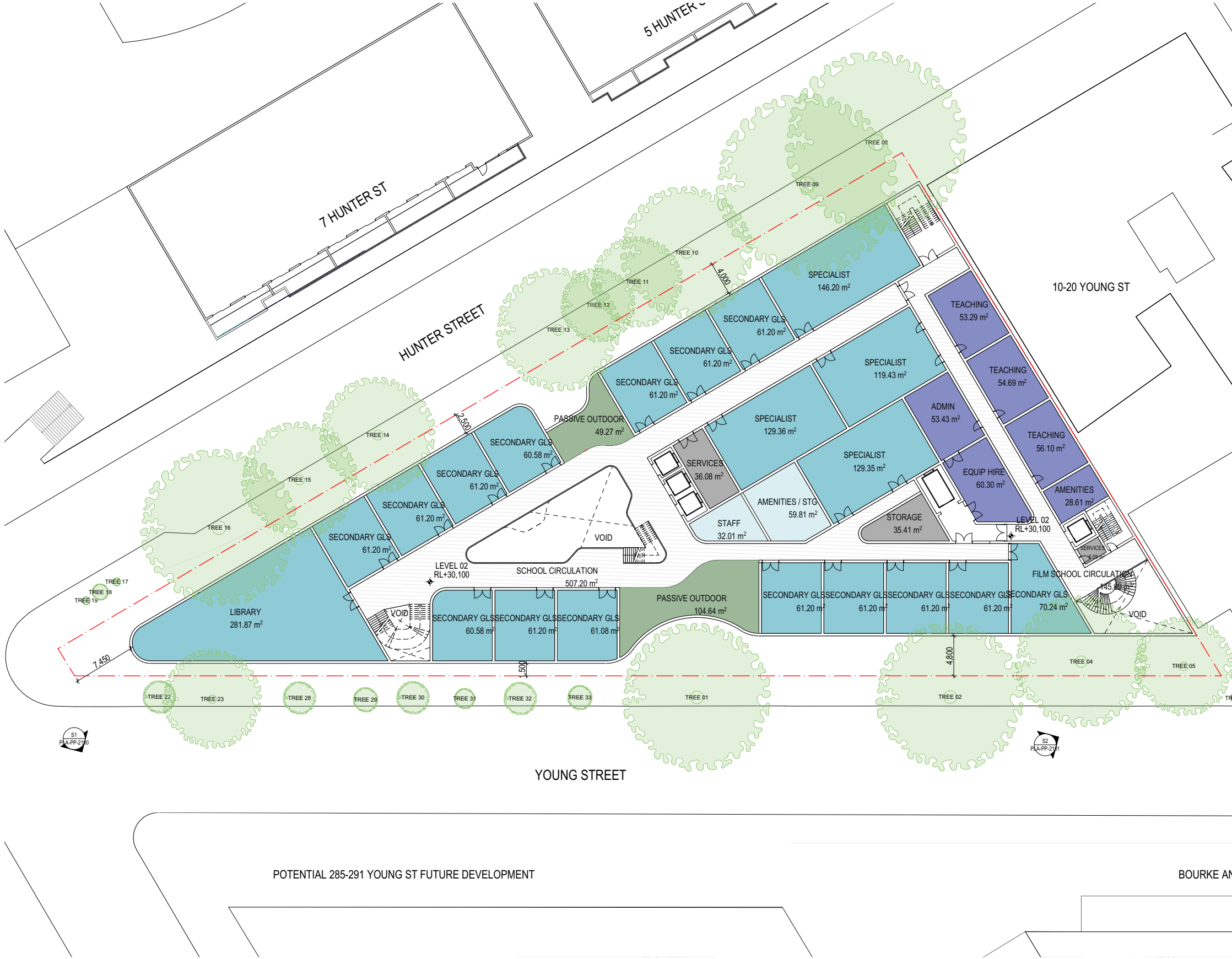
Passive open space is provided on the east and west of the building, and becomes opportunities for learning as well as breakout.

To the north of the site sits spaces for the film school, which is easily accessed off the film school core. These spaces are shared with the community on the weekends.





REFERENCE SCHEME  
PLANS - LEVEL 02



Level 02 features a feature atrium in the middle for the school, which is flanked by secondary classrooms, specialist rooms, the school lift core and the library.

Passive open space is provided on the east and west of the building, and becomes opportunities for learning as well as breakout.

To the north of the site sits spaces for the film school, which is easily accessed off the film school core.



SPECIALIST ROOM



CLASSROOM



ATRIUM CIRCULATION

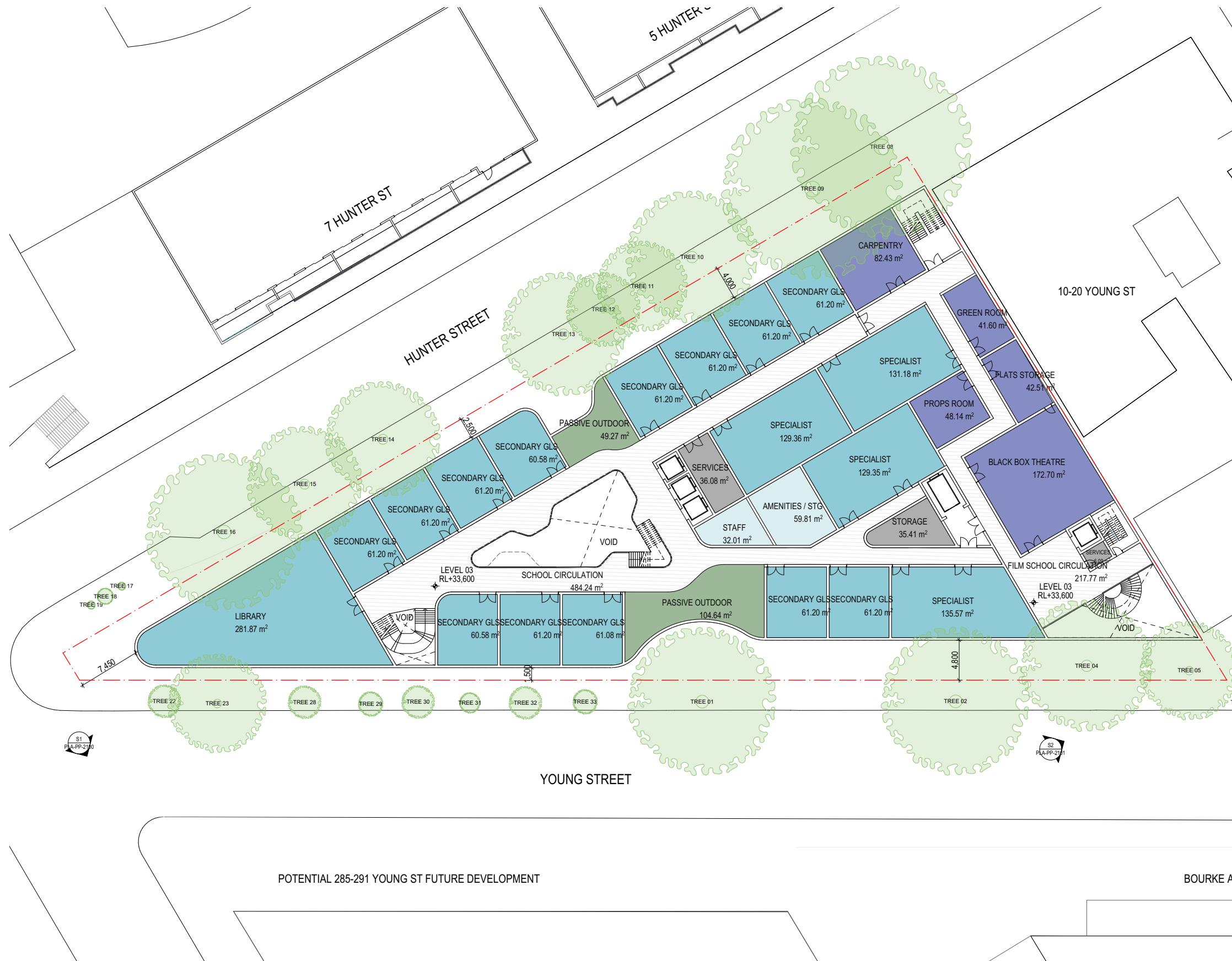


BREAKOUT SPACE





REFERENCE SCHEME  
PLANS - LEVEL 03



Level 03 features a feature atrium in the middle for the school, which is flanked by secondary classrooms, specialist rooms, the school lift core and the library.

Passive open space is provided on the east and west of the building, and becomes opportunities for learning as well as breakout.

To the north of the site sits spaces for the film school, which is easily accessed off the film school core.



SPECIALIST ROOM



CLASSROOM



BLACK BOX THEATRE

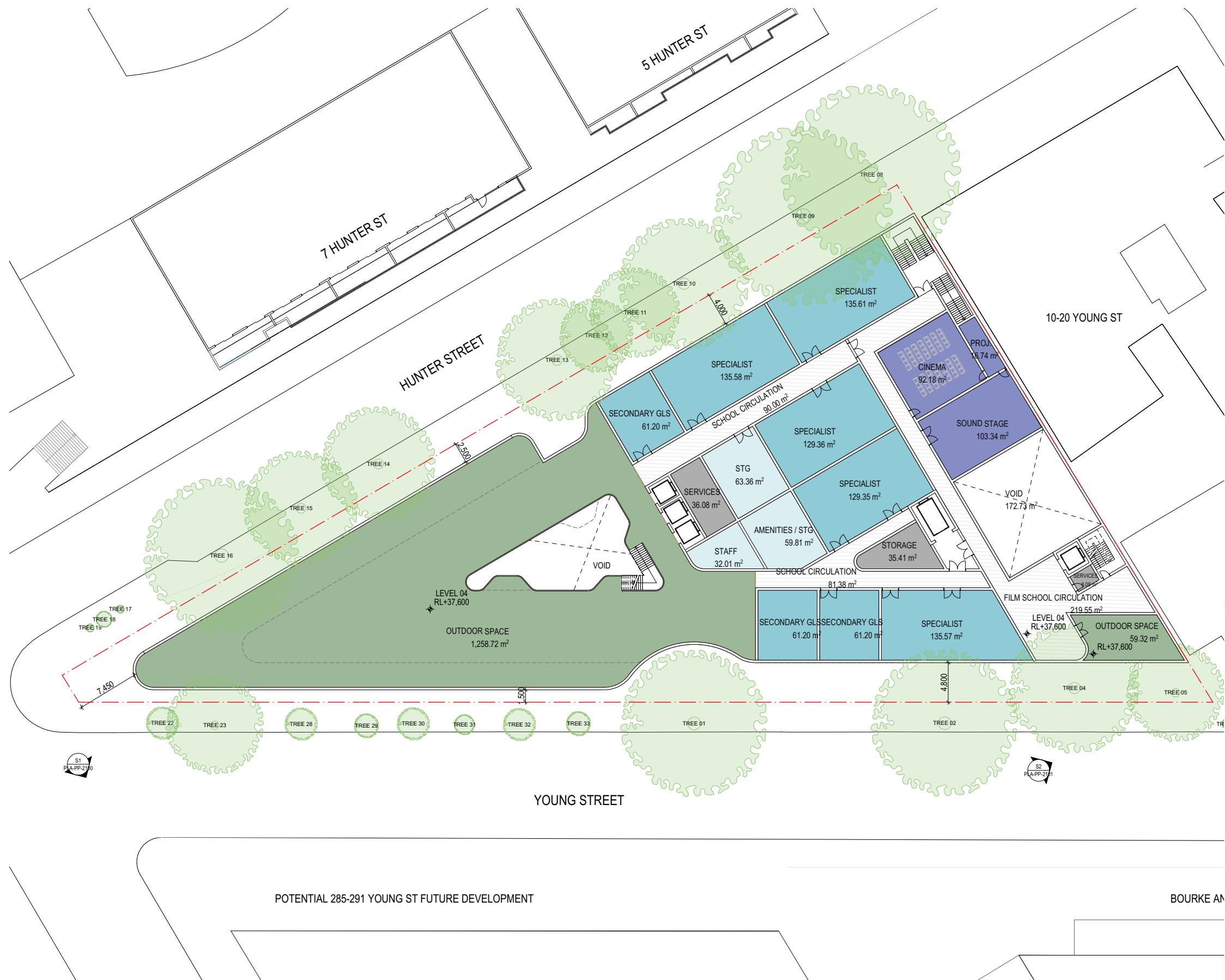


BREAKOUT SPACE





REFERENCE SCHEME  
PLANS - LEVEL 04



Level 04 sees the built form stepping back from the south, giving way to expansive open space for the school. To the north are the remaining specialist rooms and classrooms.

To the north of the site sits spaces for the film school, which is easily accessed off the film school core.



STUDIO



SPECIALIST ROOM



OUTDOOR SPACE

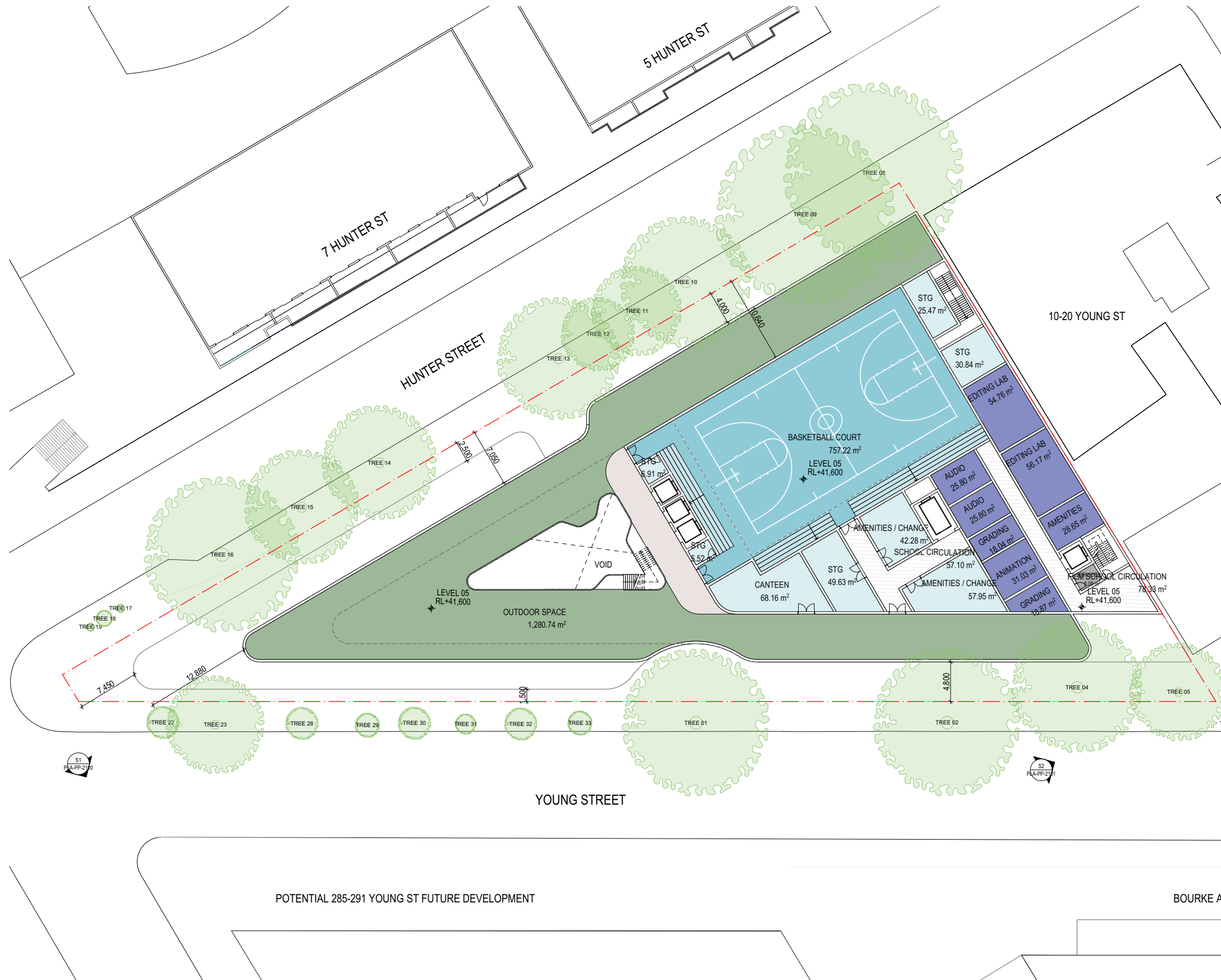


OUTDOOR LEARNING





REFERENCE SCHEME  
PLANS - LEVEL 05



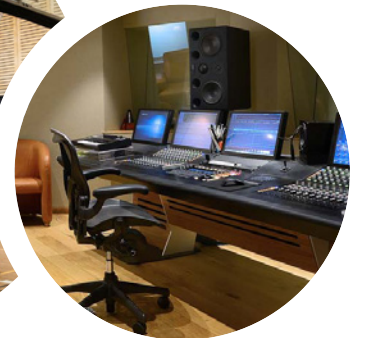
Level 05 sees the built form stepping back from the south, east and west, giving way to expansive open space for the school. This also allows appropriate solar access for the existing and future context around the site.

To the north west sits an open basketball court, which is setback from the building line to reduce acoustic and visual impacts to the street. There is additional spaces such as amenities, canteen and storage.

To the north of the site sits spaces for the film school, which is easily accessed off the film school core.



BASKETBALL COURT



AUDIO ROOM



OUTDOOR LEARNING

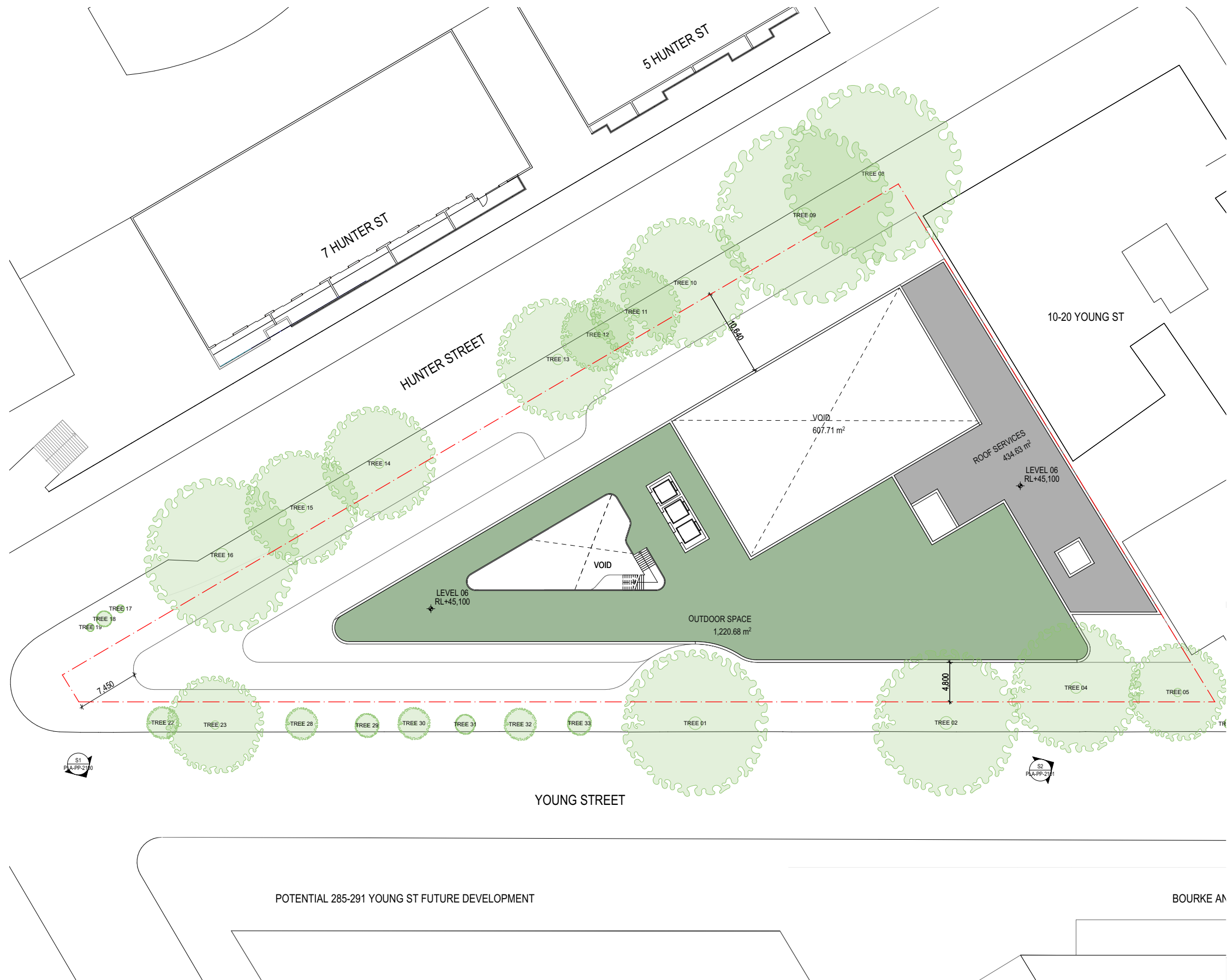


ADAPTIVE SPACE





REFERENCE SCHEME  
PLANS - LEVEL 06



Level 06 is the roof of the proposal, featuring open space to the south, and service spaces to the north. The void to the atrium provides great solar access to the levels below. The rooftop open space also receives great solar access and provides amenity for the students.



ROOFTOP GARDEN



CANOPY COVER



ROOF TERRACE

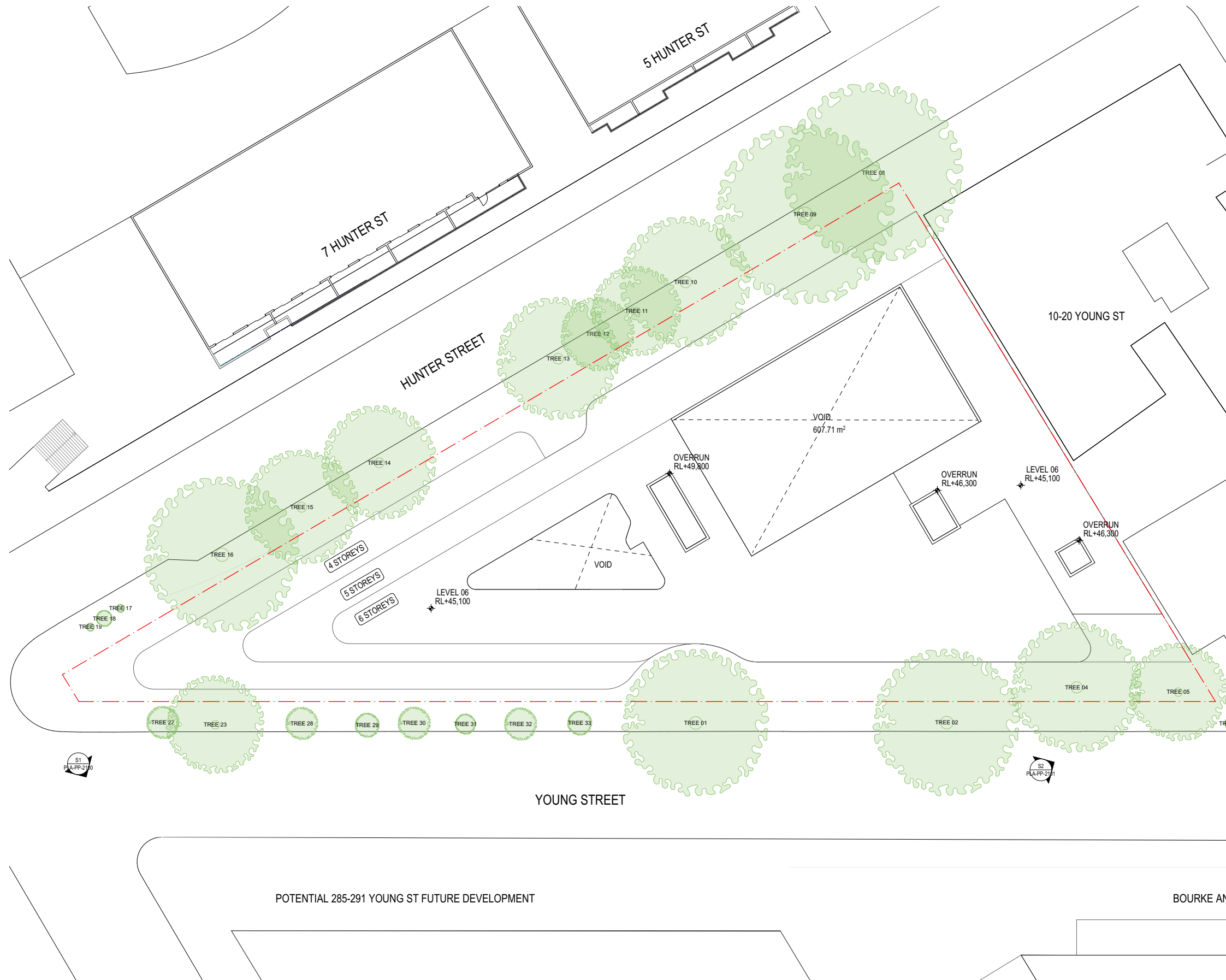


ROOFTOP SPORT





REFERENCE SCHEME  
PLANS - ROOF PLAN



The lift overrun that sits at RL+49.800 has minor enroachment on the 27m height plane. However, it is not visible on street level.



ROOFTOP GARDEN

CANOPY COVER



ROOF TERRACE

ROOFTOP SPORT





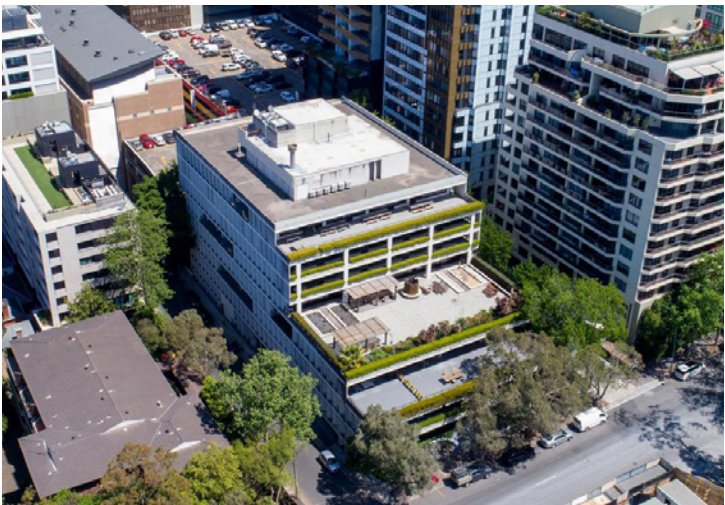
# 06

## PROGRAMMATIC OPERATIONS







PROGRAMMATIC OPERATIONS

# VERTICAL SCHOOL PRECEDENTS - COMPARISON







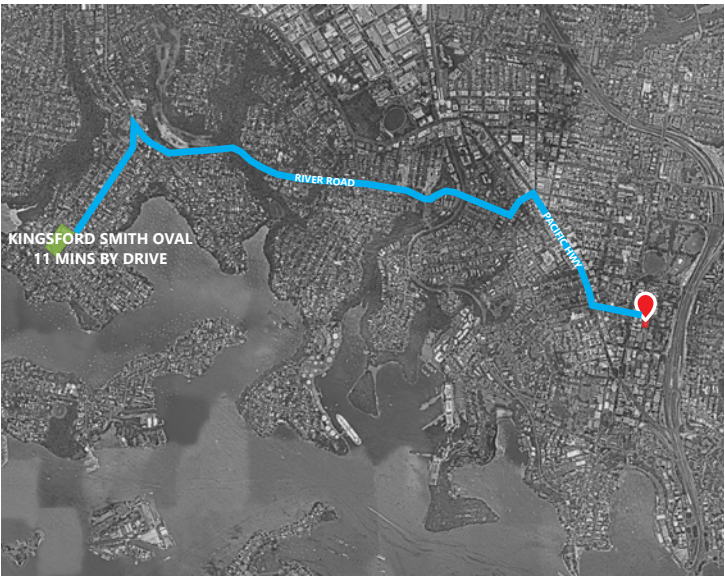
INNER SYDNEY HIGH SCHOOL

-  Y7 - Y12
-  ~ 1200 STUDENTS
-  ~5240 SQM OUTDOOR (4.4 SQM/ STUDENT)
-  1 MIN WALK TO PRINCE ALFRED PARK







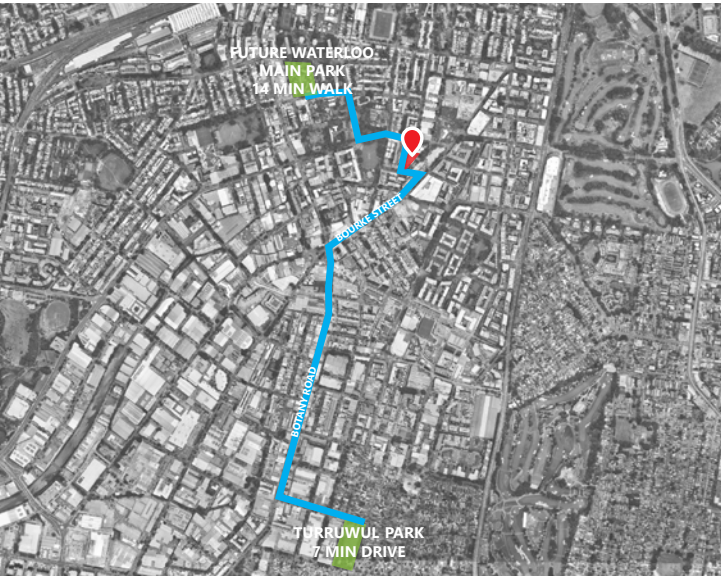
ULTIMO PUBLIC SCHOOL

-  K-Y6
-  ~ 900 STUDENTS
-  ~4500 SQM OUTDOOR (5 SQM/ STUDENT)
-  3 MIN WALK TO WENTWORTH PARK







REDDAM HOUSE NORTH SYDNEY CAMPUS

-  K-Y12
-  ~ 1550 STUDENTS
-  ~3410 SQM OUTDOOR (2.2 SQM/ STUDENT)
-  11 MIN WALK TO KINGSFORD SMITH OVAL

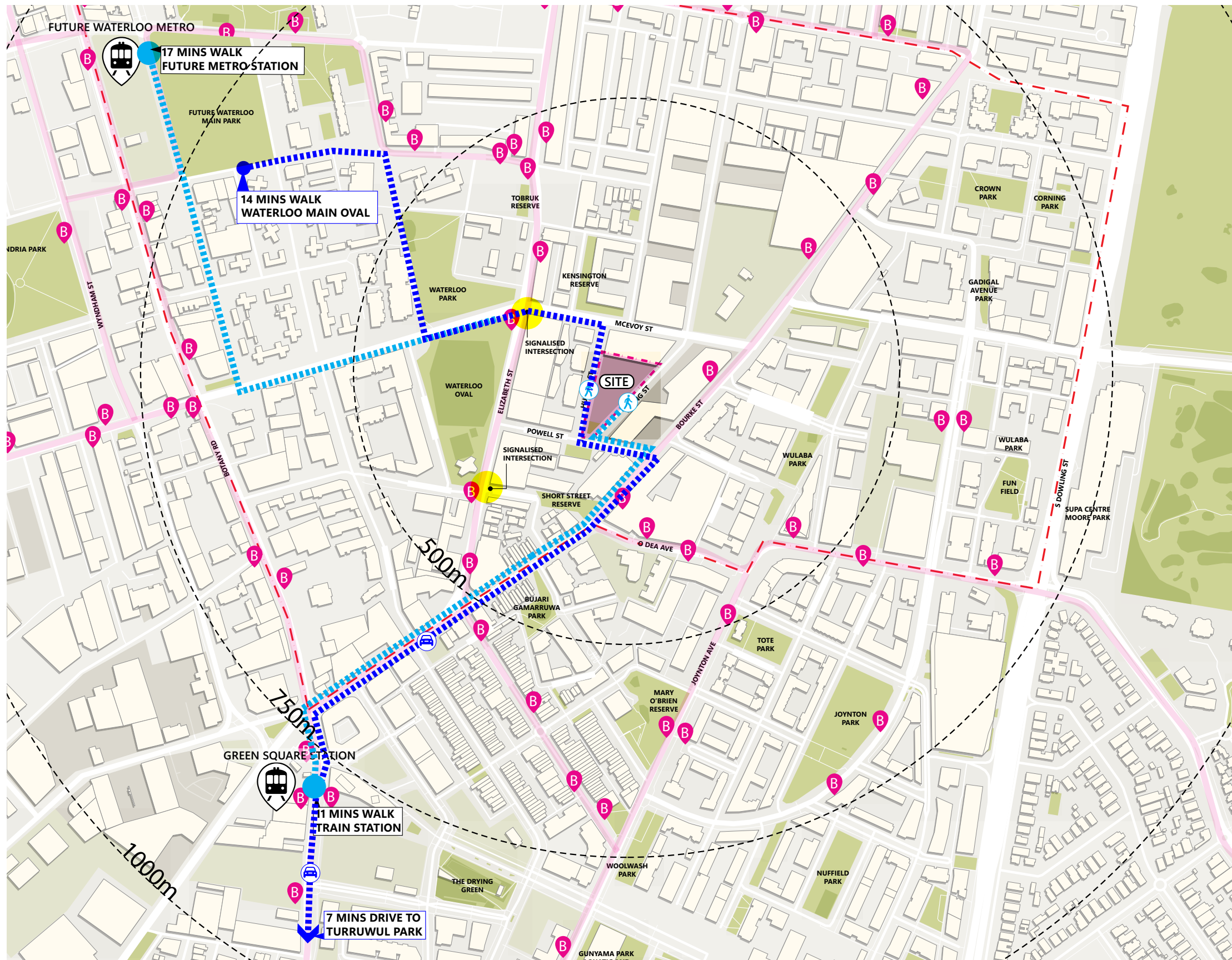


PROPOSED REFERENCE SCHEME

-  K-Y12
-  ~ 800 STUDENTS
-  ~4975 SQM OUTDOOR (6.2 SQM/ STUDENT)
-  7 MIN DRIVE TO TURRUWUL PARK  
14 MIN WALK TO FUTURE WATERLOO MAIN PARK



# CONNECTIVITY TO LOCAL FACILITIES AND TRANSPORT



The school currently achieves 6.2sqm on-site open space per student. Regarding access to open space off-site, it is currently proposed that students will have access to Turruwul Park, which is a 7 minute drive from the school. This park includes a soccer field, two tennis courts, a tennis wall, and cricket facilities. Council has confirmed the space has availability Monday to Friday 8:00am-5:00pm.

Additionally, the future Waterloo Main Park provides two hectares of open space and include two playing fields. It is approximately 800m walk from the proposed school site and provides another option for potential shared use. If this could be achieved this option would be the preferred option given its proximity to the site.

Regarding connectivity to transport, the school is also well connected to Green Square (11min walk) as well as the future Waterloo Metro Station (17min walk).



FUTURE WATERLOO MAIN PARK



TURRUWUL PARK



PROGRAMMATIC OPERATIONS

SCHOOL SPACES BREAKDOWN

YEAR	STUDENTS	GLS	SPECIALIST	LIBRARY	SCHOOL GFA	OUTDOOR
K	40	2	0	870 SQM	870 SQM	8,000 SQM
1	40	2				
2	40	2				
3	40	2				
4	40	2				
5	40	2				
6	40	2				
7	90	31	13	870 SQM	870 SQM	8,000 SQM
8	90					
9	90					
10	90					
11	80					
12	80					
TOTAL REQ.* <small>*AS PER SCHOOL OPER- ATION'S CONSULTANT'S ADVICE</small>	800	45	13	870 SQM	9,694 SQM	8,000 SQM (10 SQM PER STUDENT)
TOTAL PROV.		45	13	846 SQM	10,609 SQM	4,975 SQM (6.2 SQM PER STUDENT)

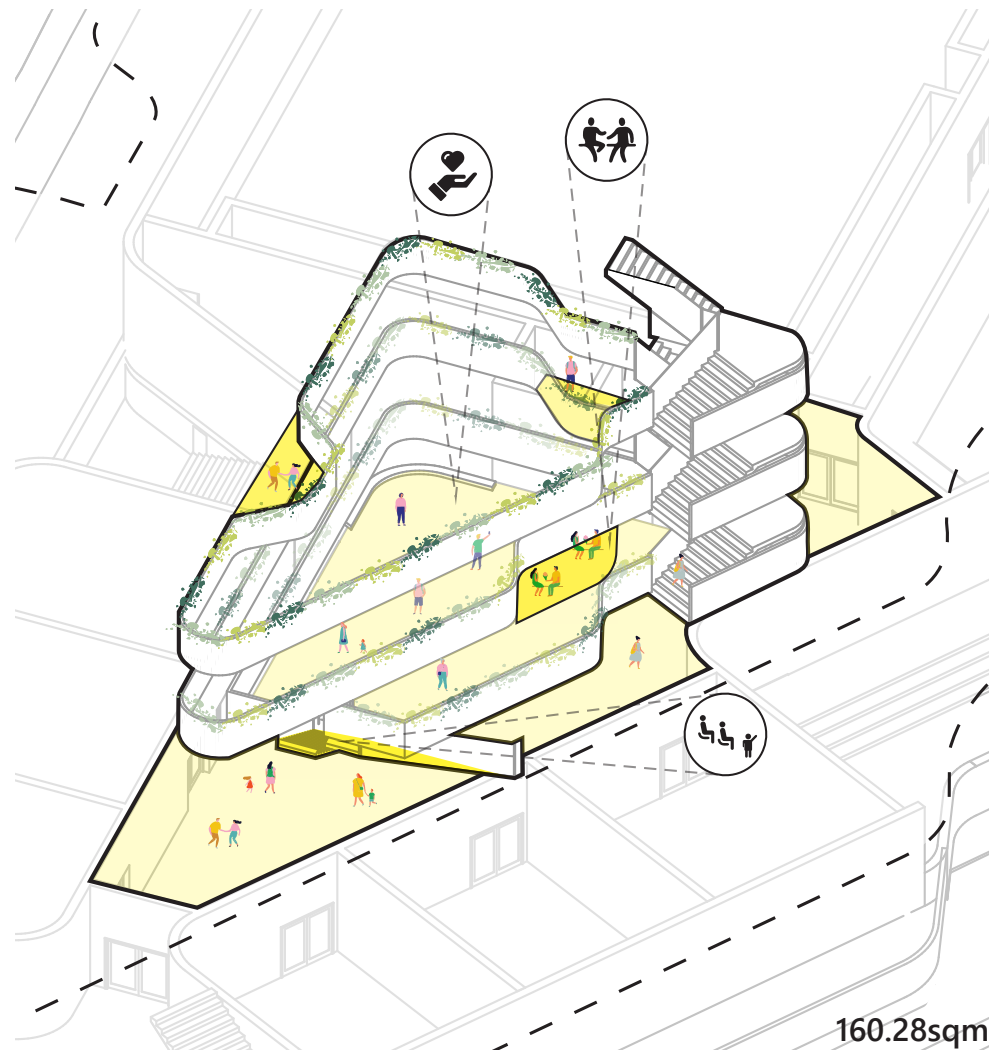
The reference scheme has been tailored to reflect the required spaces needed for a school of 800 students. The following table summarises the required spaces as well as what has been provided in the reference scheme.



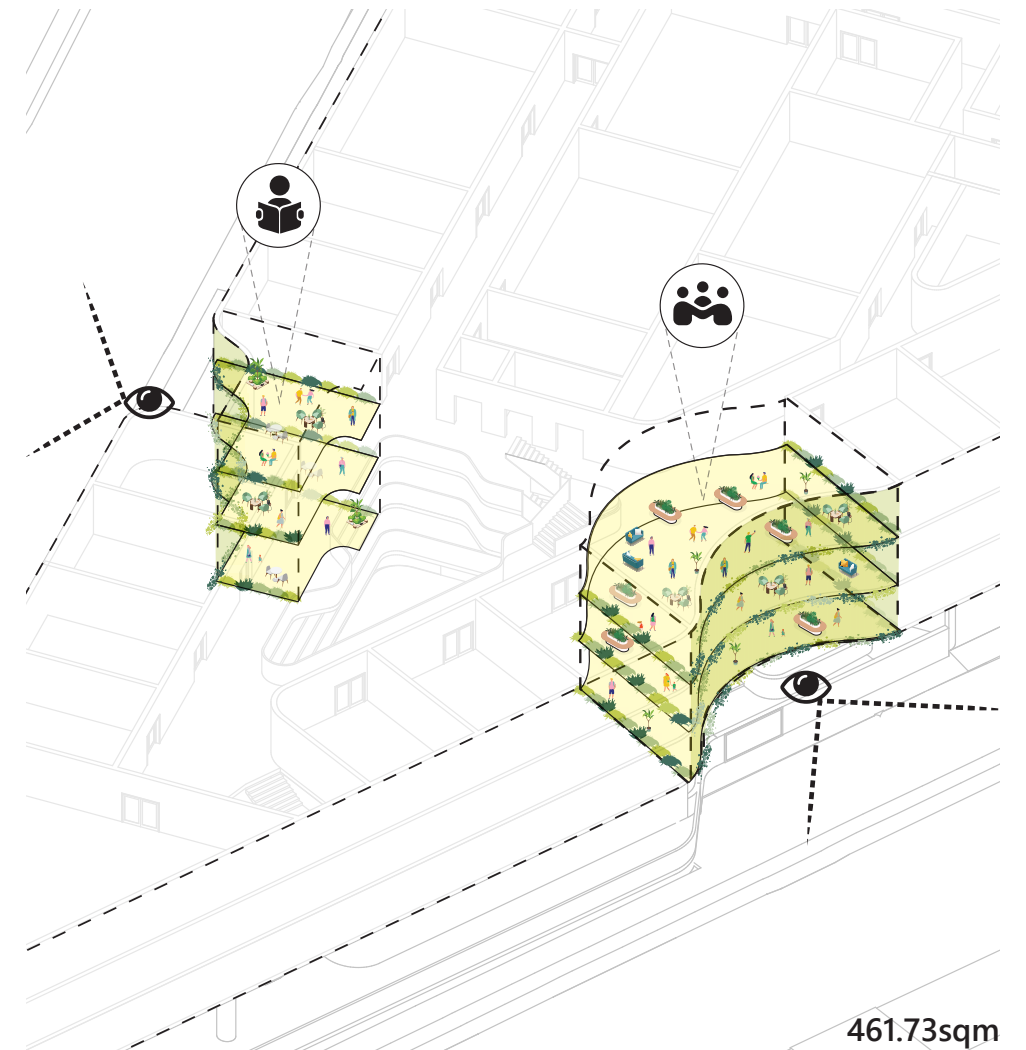
## OPEN SPACE ON GROUND



## SCHOOL ATRIUM



## PASSIVE LEARNING SPACES



PRIMARY PLAY  
ADAPTIVE SPACE  
CONNECTION WITH COMMUNITY



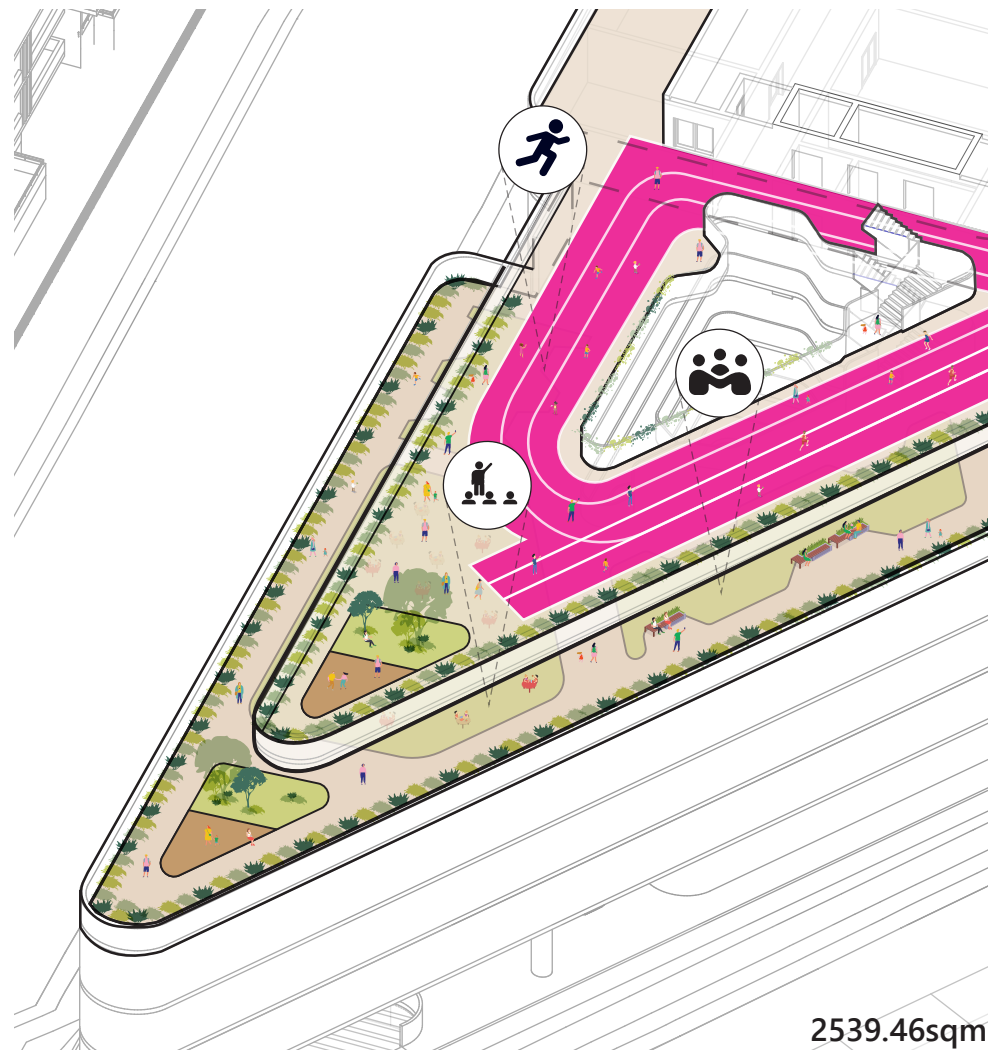
LEARNING AREA  
COMMUNAL SPACE  
BREAKOUT AREA



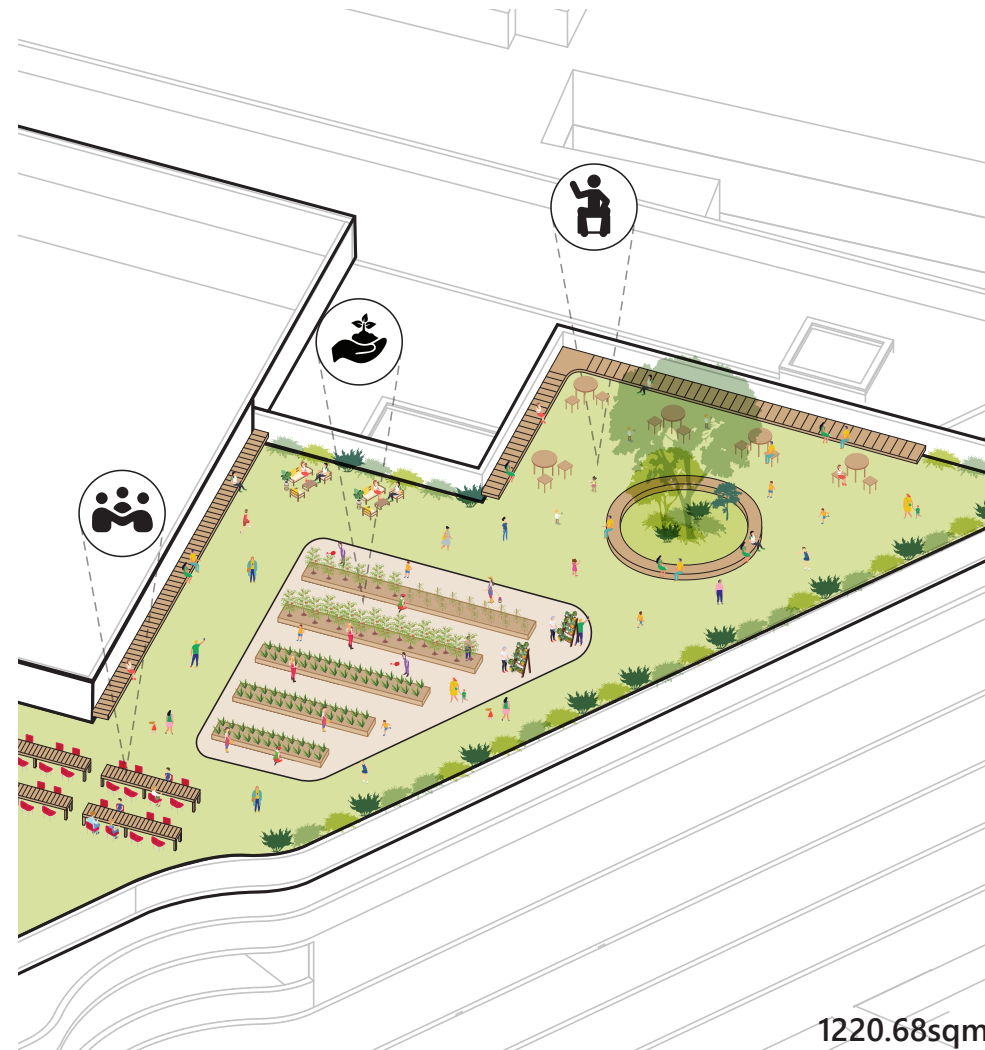
SECONDARY PLAY ZONE  
OUTDOOR LEARNING  
ADAPTIVE SPACE



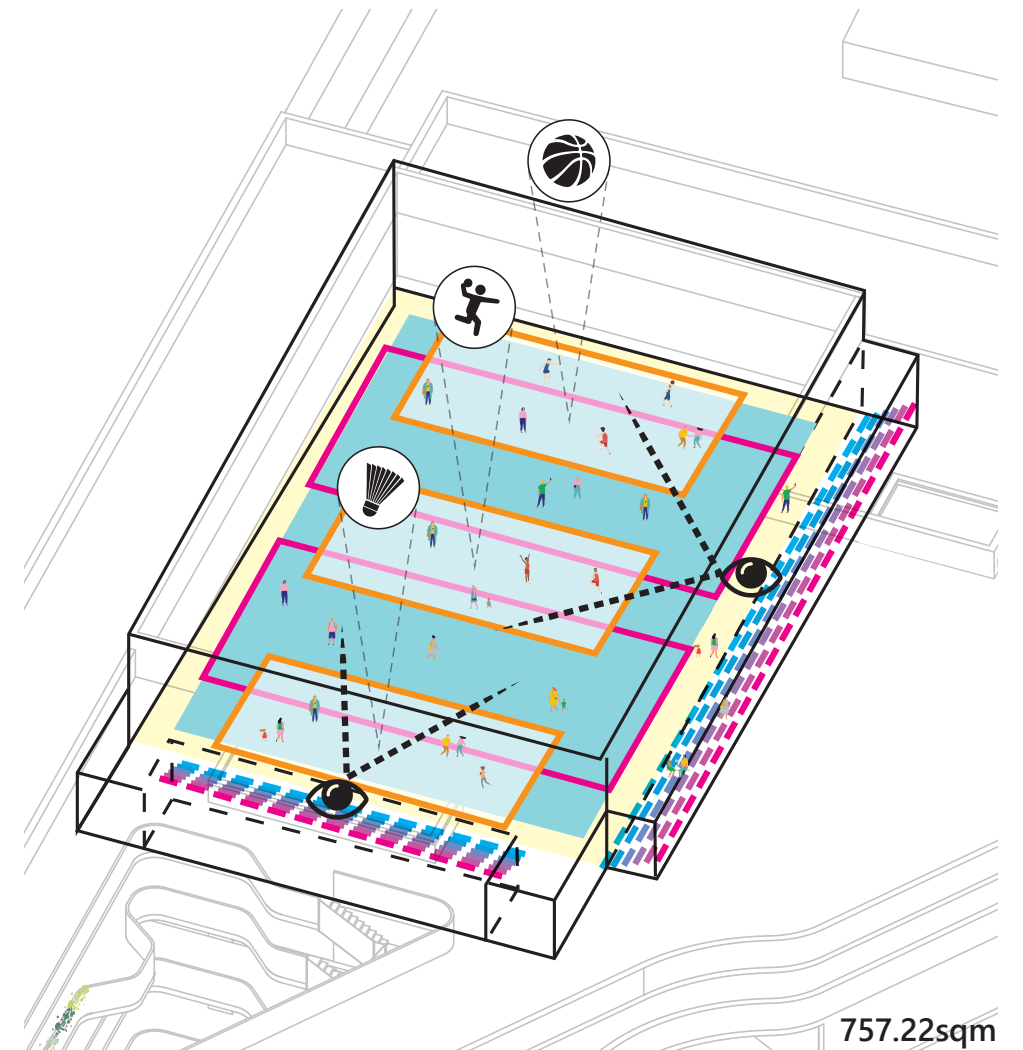
## LEVEL 4-5 OPEN SPACE



## ROOFTOP OPEN SPACE



## ROOFTOP BASKETBALL COURT



OUTDOOR LEARNING  
OUTDOOR GYM  
CONNECTION WITH ENVIRONMENT



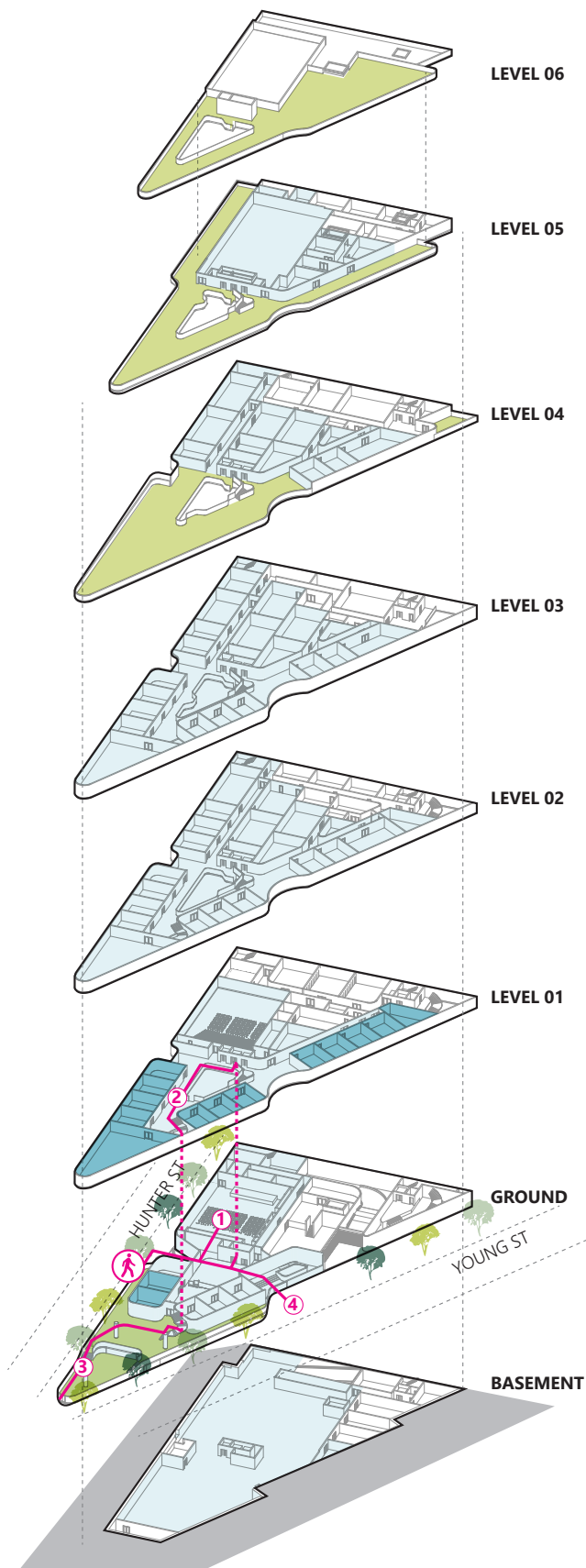
FOOD PRODUCTION  
OUTDOOR LEARNING  
COMMUNAL SPACE



SPORT AREA  
HOSTING EVENTS  
ADAPTIVE SPACE

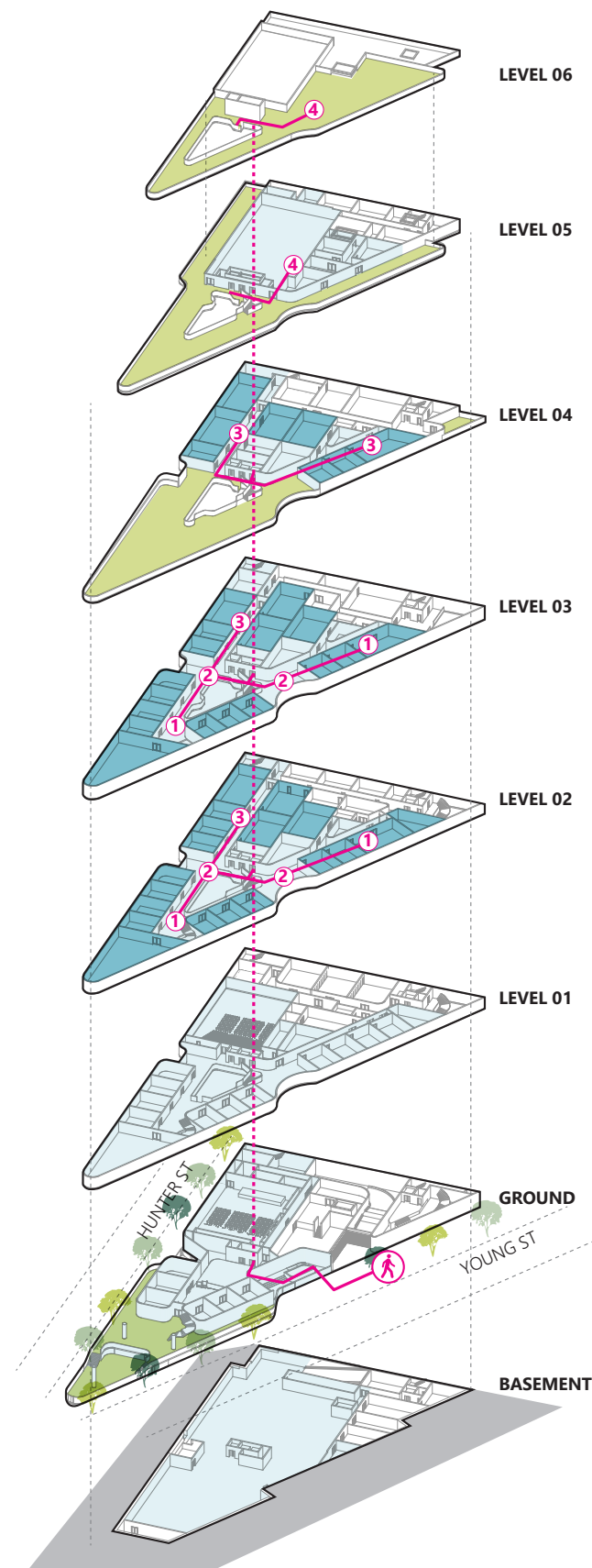


SCHOOL - PRIMARY  
Weekday



1. In the morning, students go to the auditorium for morning assembly.
2. They then proceed to their classrooms where they engage in various subjects such as english, and mathematics.
- 3 In the afternoon, students move to the amphitheatre (open space on ground) for science class for collaborative learning.
4. At the end of the day, students wait at the pick-up zone on ground for pick up from their parents.

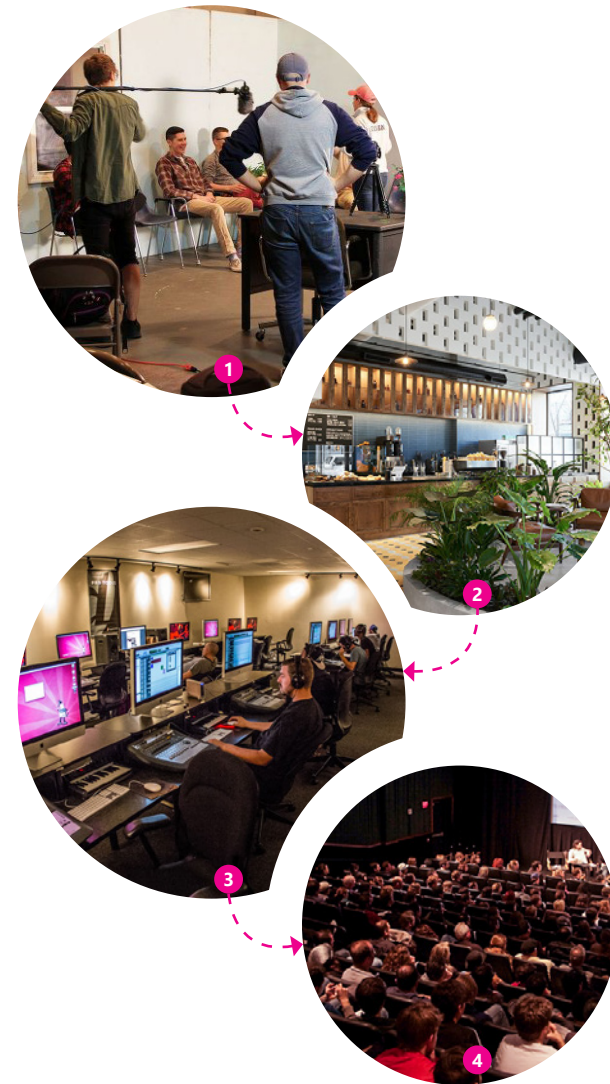
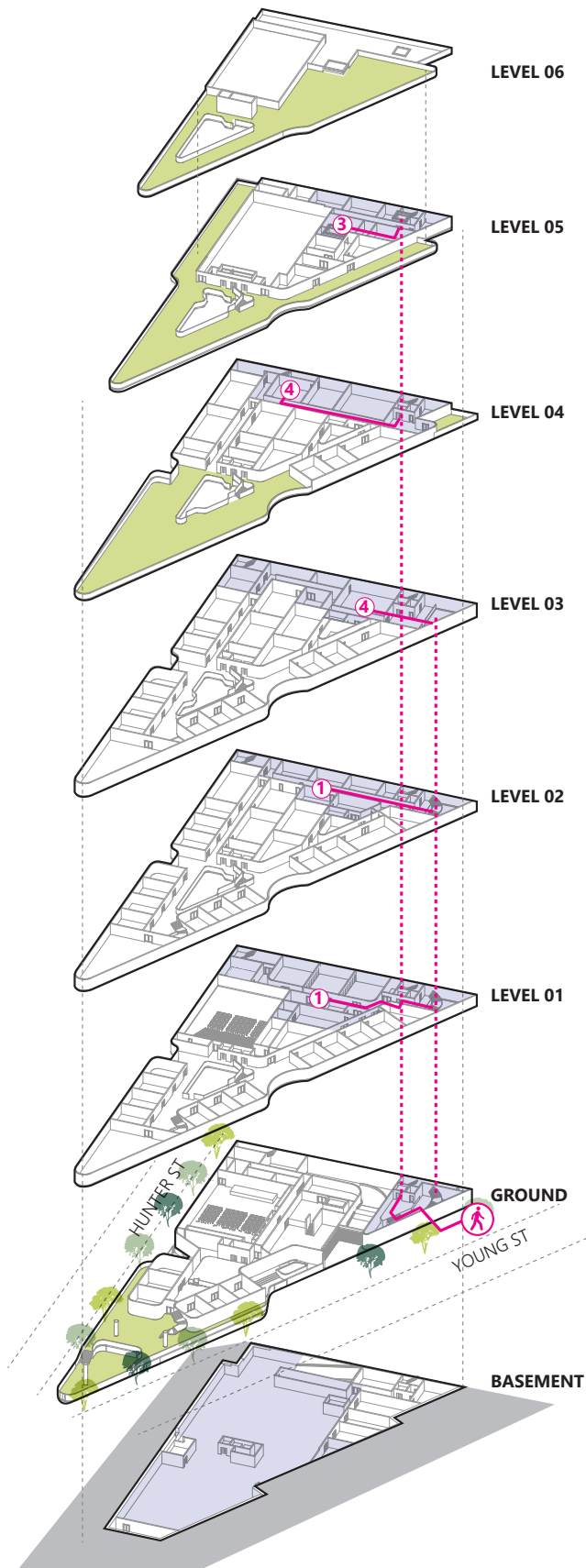
SCHOOL - SECONDARY  
Weekday



1. In the morning, students move to their classrooms after morning assembly for academic lessons.
2. During recess/lunch time, students go to the passive outdoor space or breakout space to hang out.
3. For creative/technolgoies class, students move to the specialist classrooms for design, woodworking, computer lessons.
4. During 'free period' for the senior students, some go to the sports court to play games. Others tend to the food production garden.

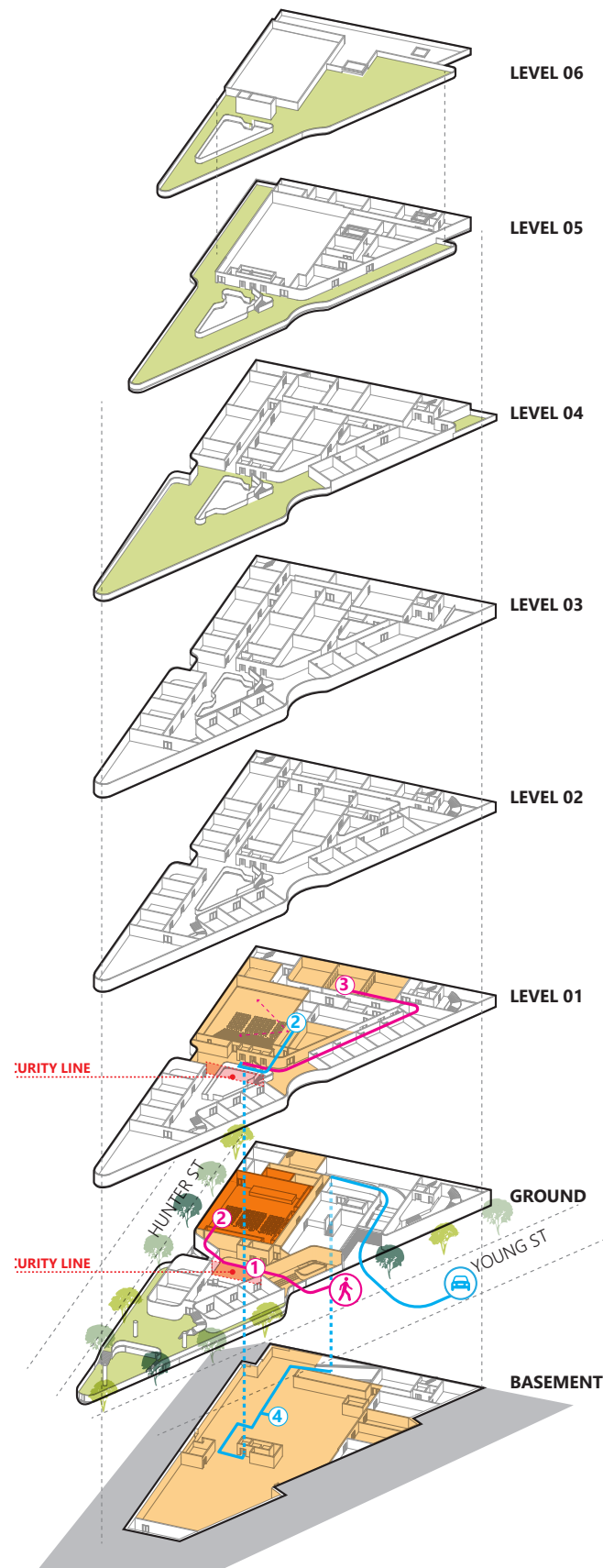


FILM SCHOOL  
Weekday, weekend



1. Students start their day by attending lectures/workshops.
2. In the afternoon, students head to the cafe on ground for lunch.
3. In preparation for the film screening, students go to the sound and editing lab for final adjustments.
4. Students and guests attend the screening in the cinema to watch and enjoy the final film.

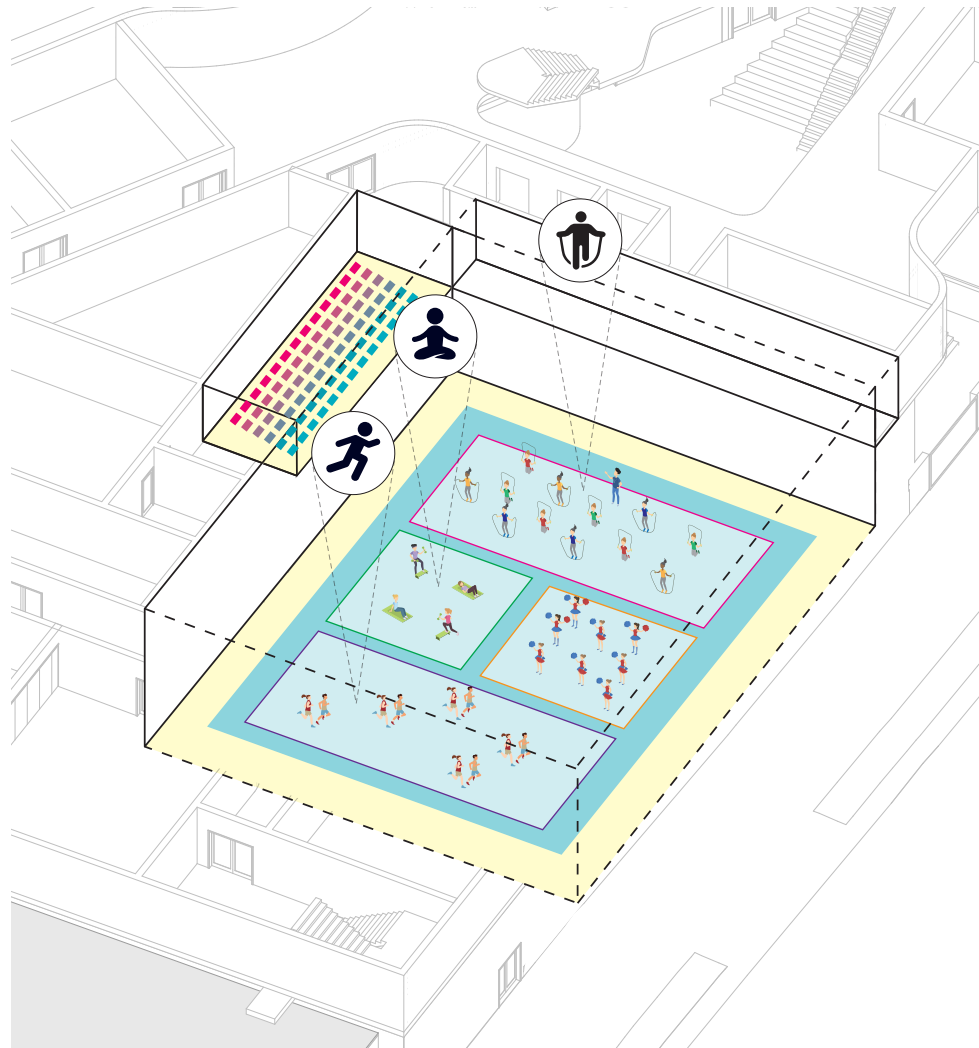
COMMUNITY / SHARED USE  
Before & after school hours, weekends



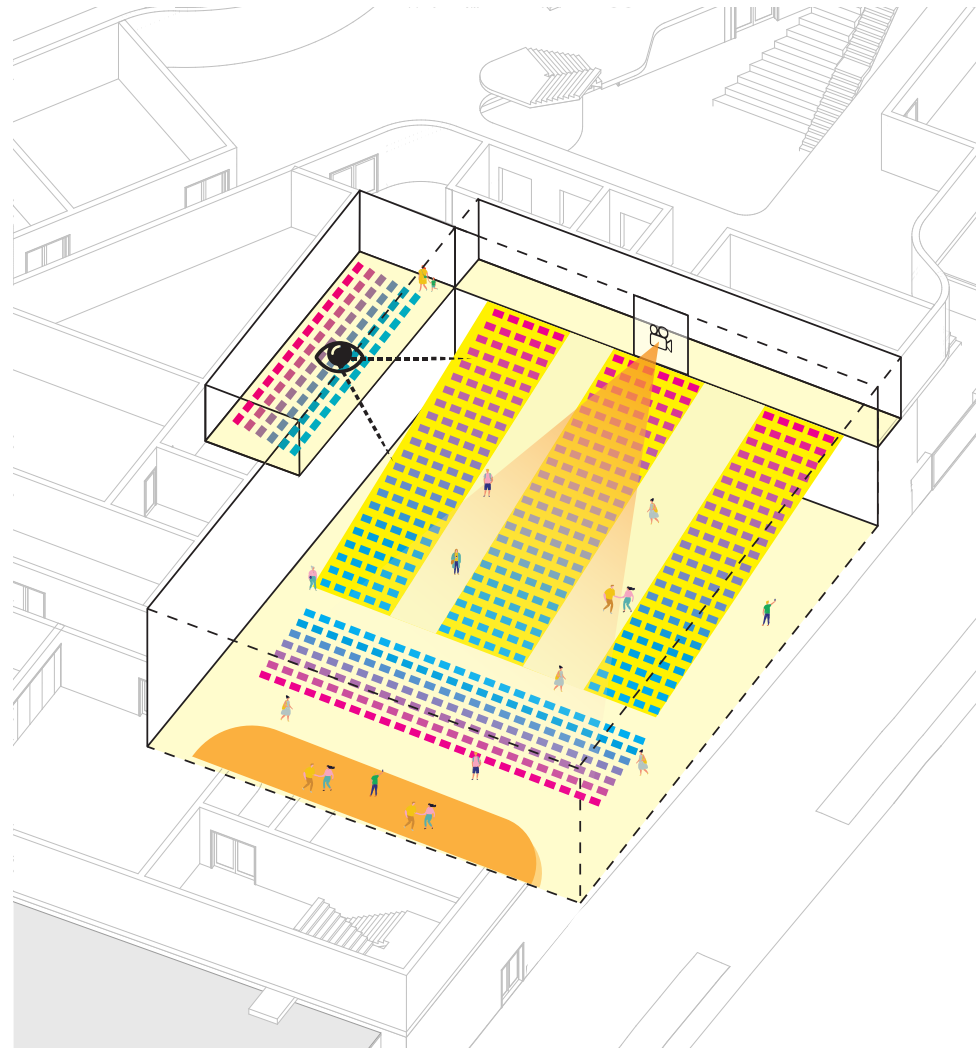
1. In the morning, people gather in the foyer space before going into the auditorium for the community gathering.
2. During the gathering, people intently listen to the various guest speakers.
3. After the various guest presentations, some people head to the flexible rooms on level 01 to have further community discussions.
4. People go back to the basement to pick up their car and drive to their next activity/destination.



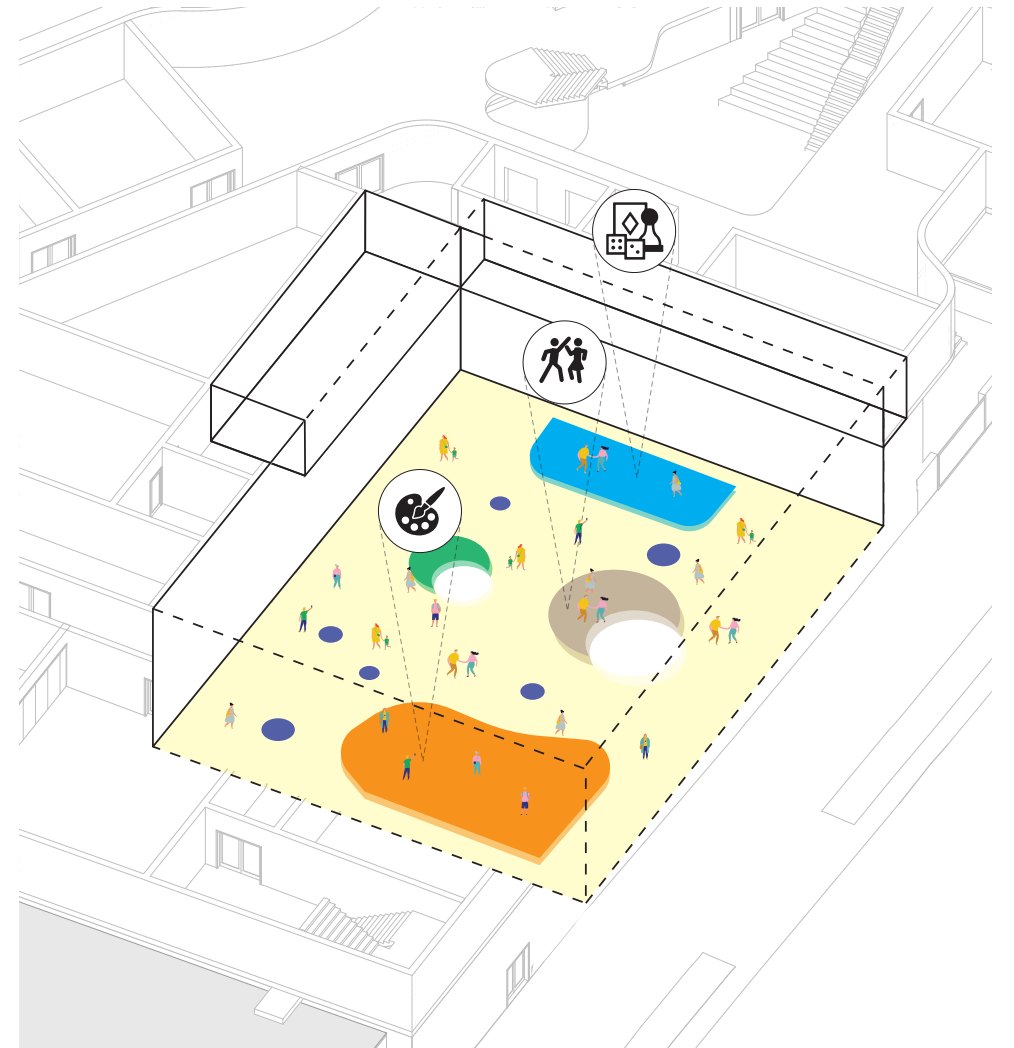
## SPORT MODE



## SEATING MODE



## FLAT MODE



SCHOOL EXERCISE PROGRAM  
COMMUNITY SPORT COMPETITION  
WEEKEND YOGA CLASS  
REGULAR SCHOOL HIRE



PERFORMANCE AND PLAYS  
SCHOOL ASSEMBLY  
COMMUNITY GATHERING  
GUEST SPEAKER

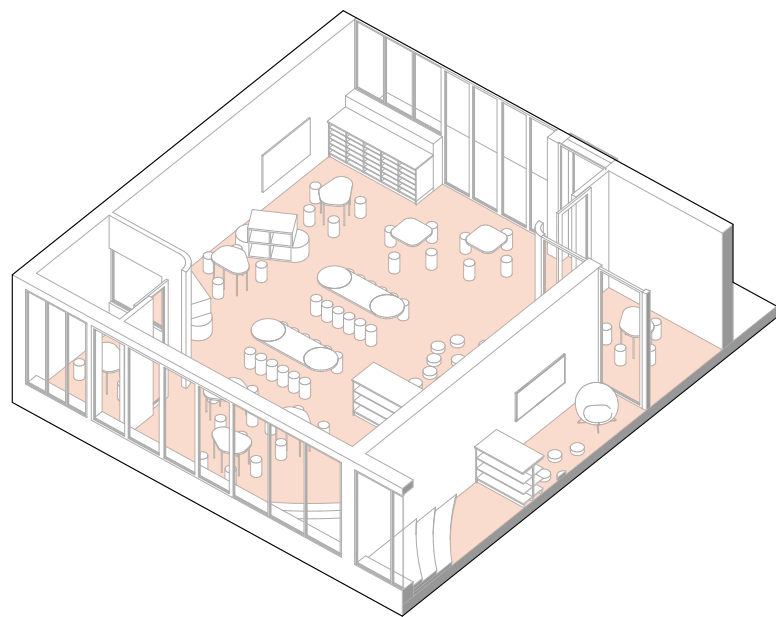
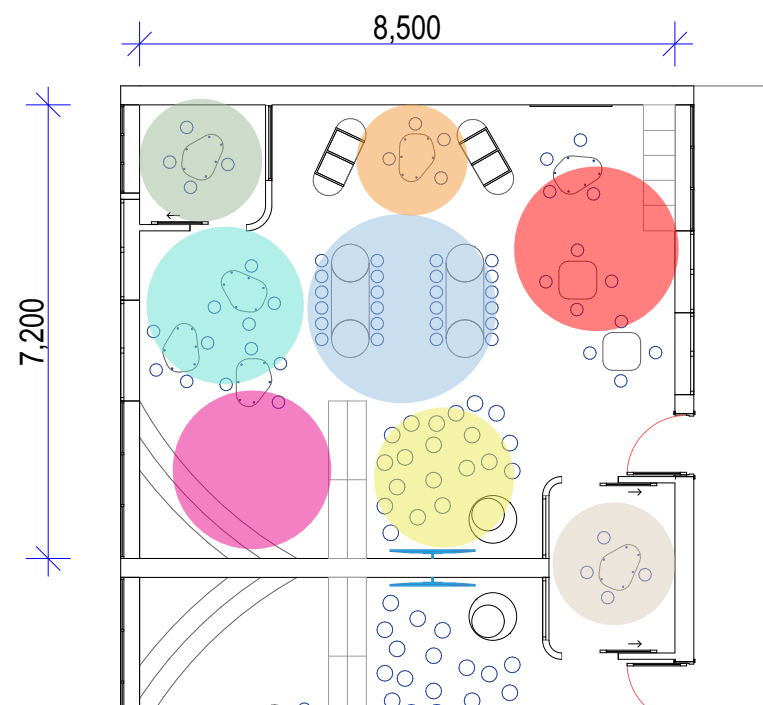


SCHOOL ART EXHIBITION  
WEEKEND LOCAL MARKET  
SCHOOL DISCO  
FASHION HALL



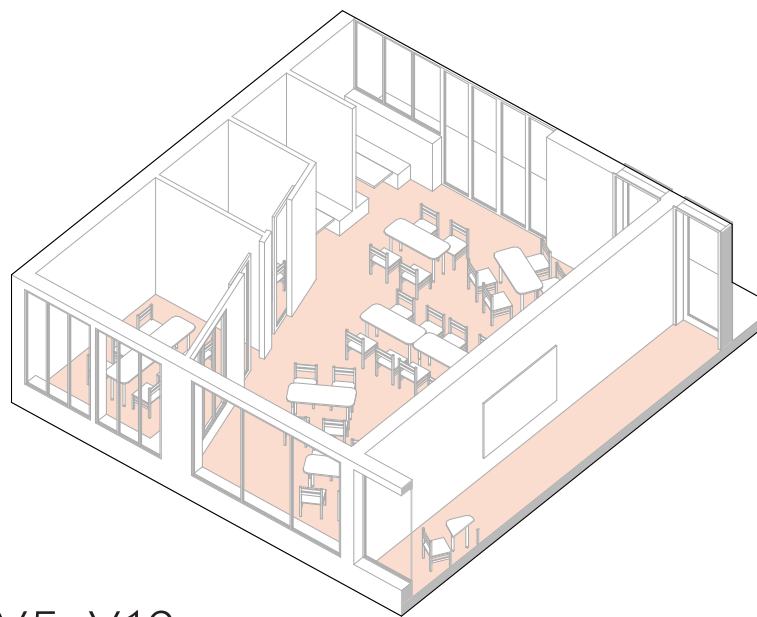
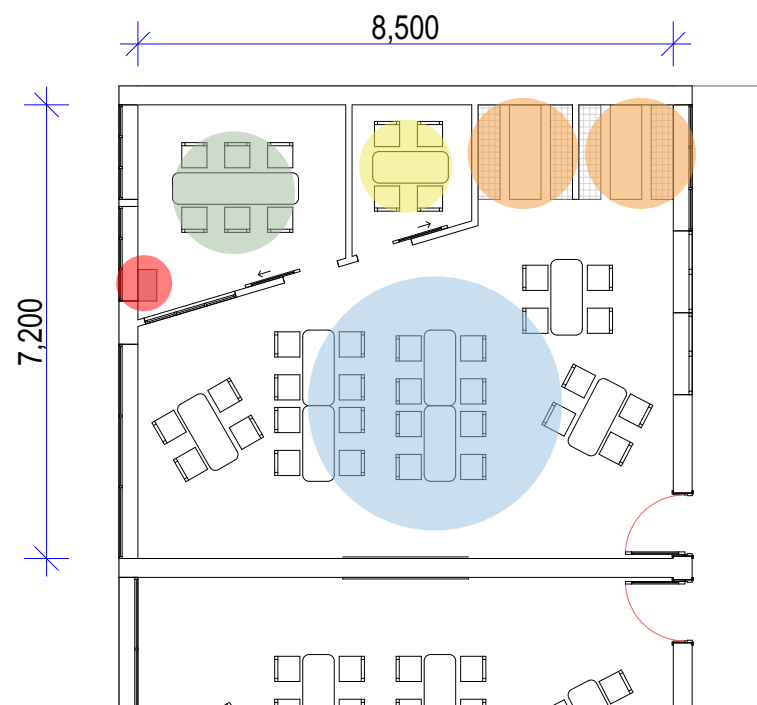
PROGRAMMATIC OPERATIONS

# FLEXIBLE CLASSROOM MODULES



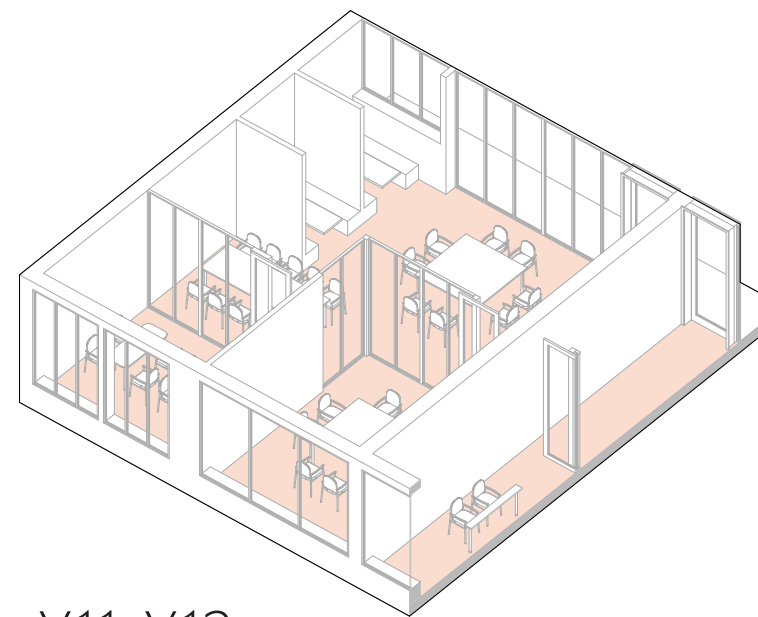
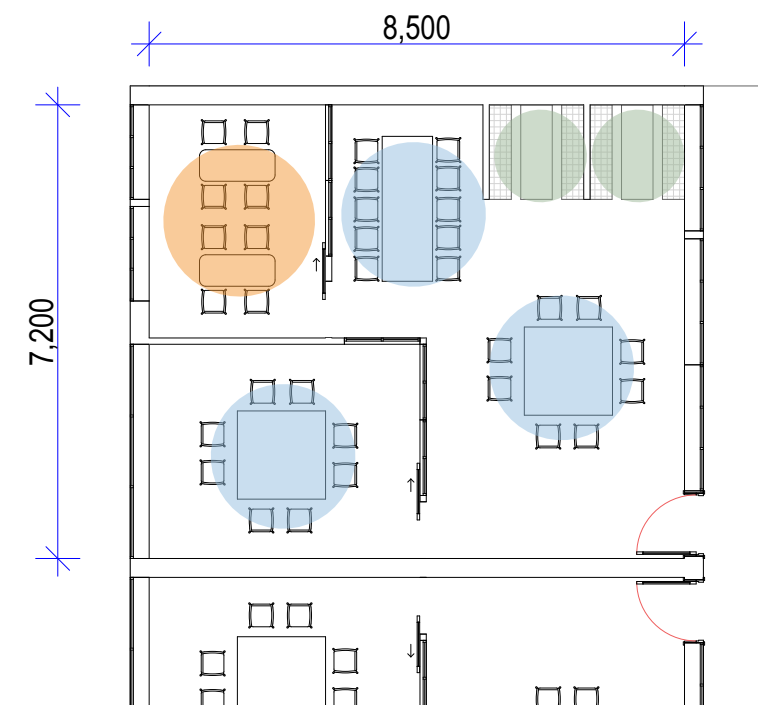
K-Y4

- SHARED READING HUB**  
1 x WALL MOUNTED LCD  
1 x MODULAR BOOK SHELF
- CENTRALISE LEARNING SPACE**  
24 x SEATS  
2 x LONG TABLE  
1 x MOBILE WHITE BOARD
- MATHS WALL**  
1 x MATHS WALL  
30 x TRAY STORAGE
- READERS HUB**  
PLATFORM SEATINGS  
1 x MODULAR BOOK SHELF
- WRITER SPACE**  
12 x SEATS  
3 x TABLE
- ACCELERATED INTERVENTION**  
1 x TEACHING STATION
- READERS HUB**  
TECH HUB STORAGE  
1 x TABLE
- SHARED BREAKOUT ROOM**  
5 x SEATS



Y5-Y10

- BREAK OUT ROOM**  
1 x TABLE  
4 x CHAIRS
- CENTRALISE LEARNING SPACE**  
24 x SEATS  
6 x LONG TABLE  
1 x WALL MOUNTED WHITE BOARD
- PEER REVIEW OBSERVATION**
- COLLABORATION BOOTH**  
4 x STUDENT PER BOOTH WITH LCD



Y11-Y12

- COLLABORATION BOOTH**  
4 x STUDENT PER BOOTH WITH LCD
- ELECTIVE LEARNING SPACE**  
26 x SEATS  
3 x LARGE TABLE
- PEER REVIEW OBSERVATION**
- WITHDRAWAL**  
4 x STUDENT PER TABLE  
2 x TABLE



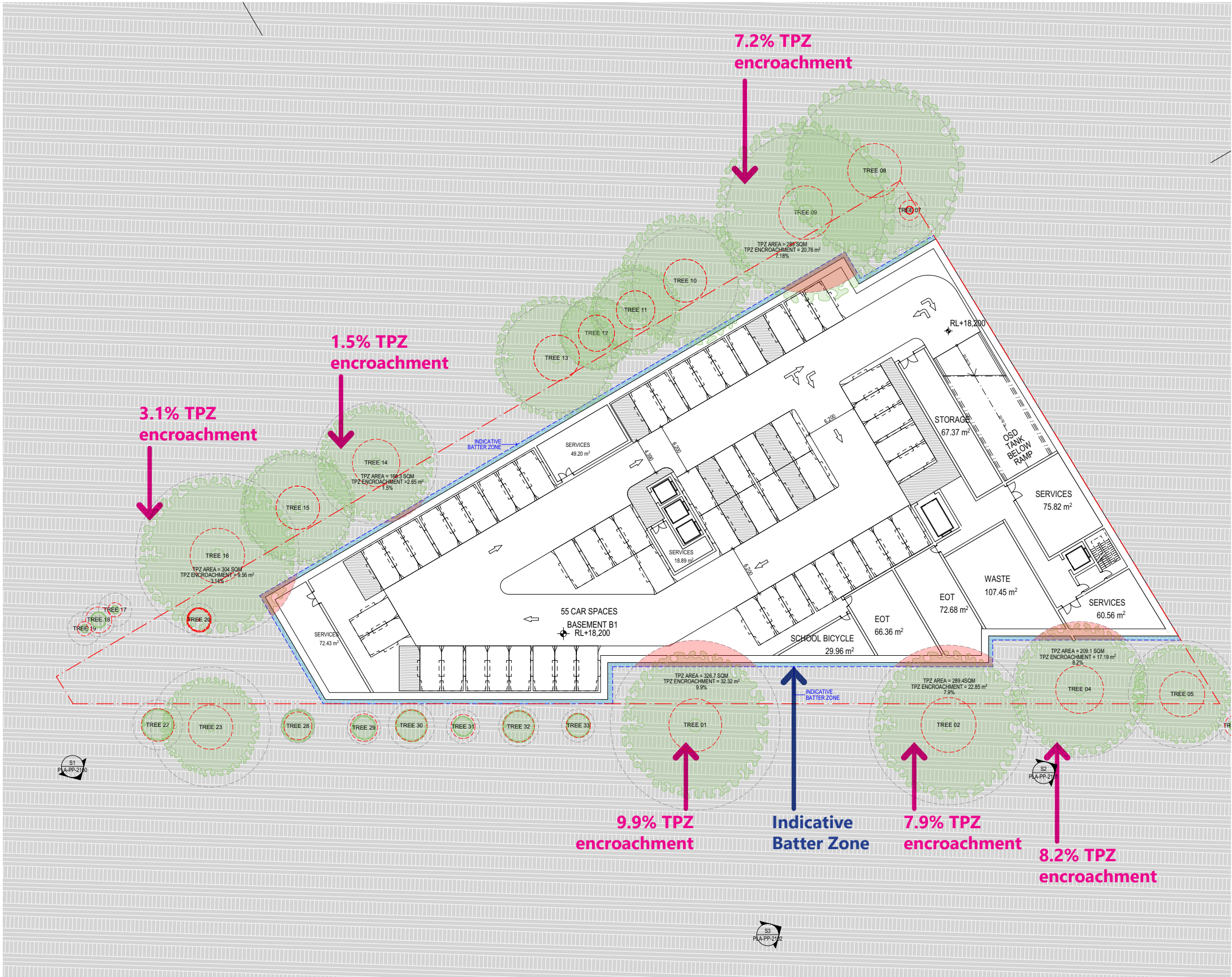
# 07

## APPENDIX



# APPENDIX

## TREES STRATEGY - BASEMENT



There are several street trees surrounding the site with a mix of reduced quality and high value.

Following an arborist report and further development on the plans, the current proposal achieves the following:

### General

- There is no SRZ encroachment
- All street trees maintained, except the ones identified as Retention Value R or C, which are trees recommended to be removed, or of reduced quality.

### B01

- All TPZ encroachments in basement are less than 10%. The TPZ encroachments also factor in an indicative batter zone.

### Ground

- Two trees have a TPZ encroachment higher than 10%, however, in each case, the existing built form had an even greater TPZ encroachment. Note: TPZ encroachments also factor in the indicative batter zone from basement.

### Upper Levels

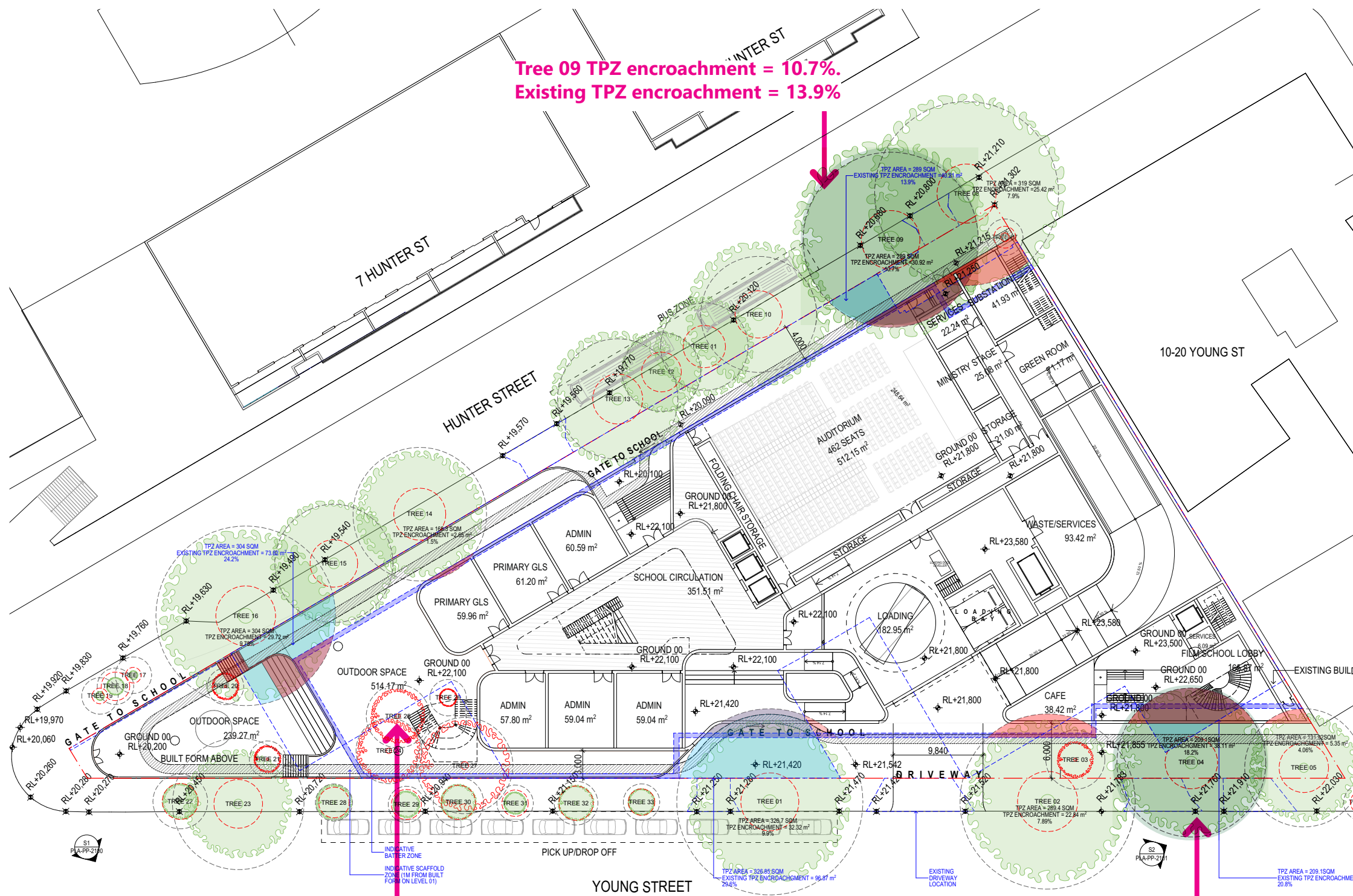
- Several tree canopies are encroached on the upper levels. 3D views comparing the massing and the 3d point cloud have been prepared





# APPENDIX

## TREES STRATEGY - GROUND



There are several street trees surrounding the site with a mix of reduced quality and high value.

Following an arborist report and further development on the plans, the current proposal achieves the following:

### General

- There is no SRZ encroachment
- All street trees maintained, except the ones identified as Retention Value R or C, which are trees recommended to be removed, or of reduced quality.

### B01

- All TPZ encroachments in basement are less than 10%. The TPZ encroachments also factor in an indicative batter zone.

### Ground

- Two trees have a TPZ encroachment higher than 10%, however, in each case, the existing built form had an even greater TPZ encroachment. Note: TPZ encroachments also factor in the indicative batter zone from basement.

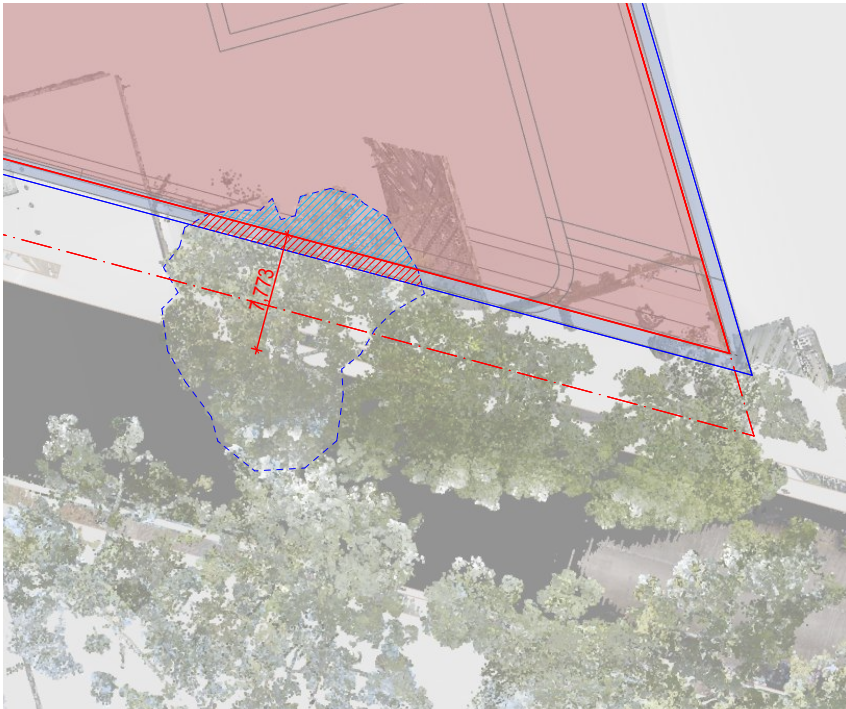
### Upper Levels

- Several tree canopies are encroached on the upper levels. 3D views comparing the massing and the 3d point cloud have been prepared

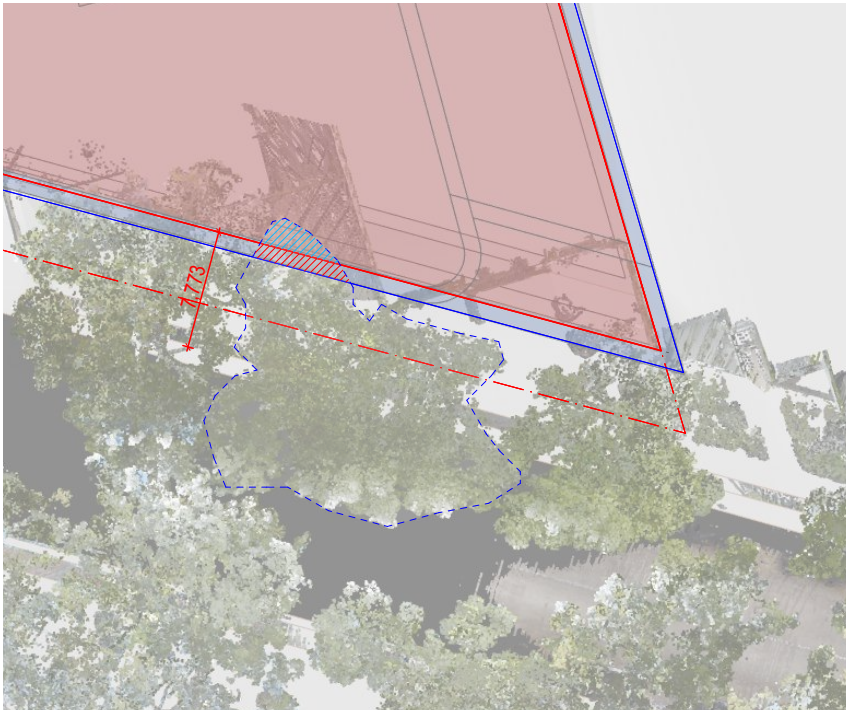
- Retained Tree - TPZ encroachment <10%
- Retained Tree - TPZ encroachment >10% (minor)
- Tree to be demolished (Retention Value R or C)



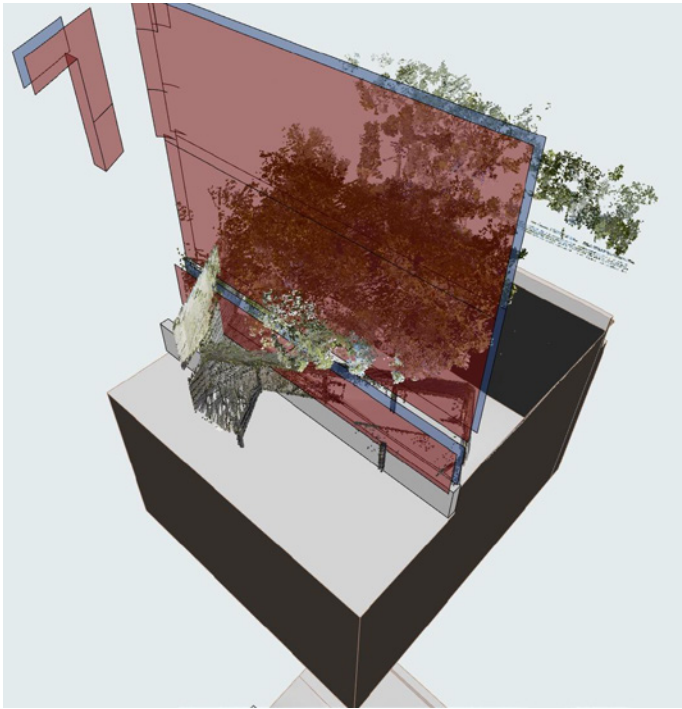




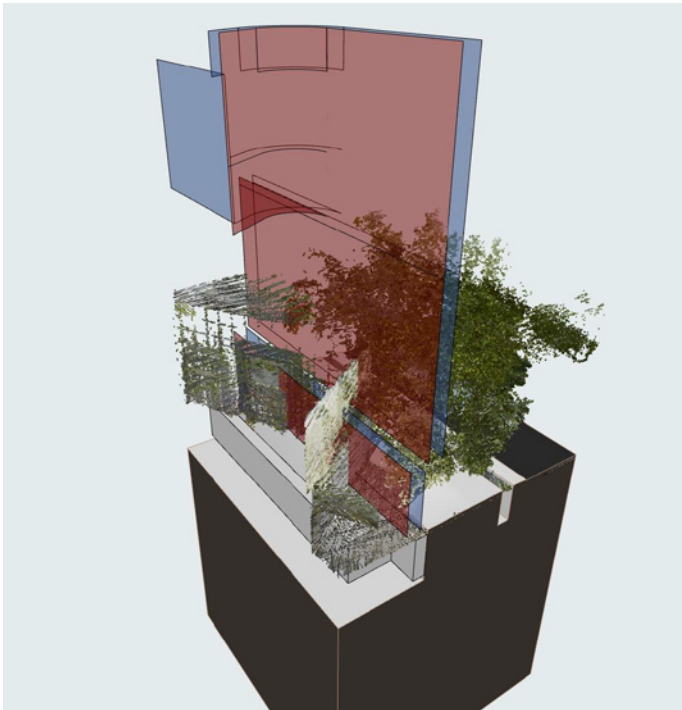
TREE 02 - PLAN



TREE 04 - PLAN



TREE 02 - 3D VIEW



TREE 04 - 3D VIEW



TREE 02 - 3D VIEW



TREE 04 - 3D VIEW

There are several street trees surrounding the site with a mix of reduced quality and high value.

Following an arborist report and further development on the plans, the current proposal achieves the following:

**General**

- There is no SRZ encroachment
- All street trees maintained, except the ones identified as Retention Value R or C, which are trees recommended to be removed, or of reduced quality.

**B01**




- All TPZ encroachments in basement are less than 10%. The TPZ encroachments also factor in an indicative batter zone.

**Ground**

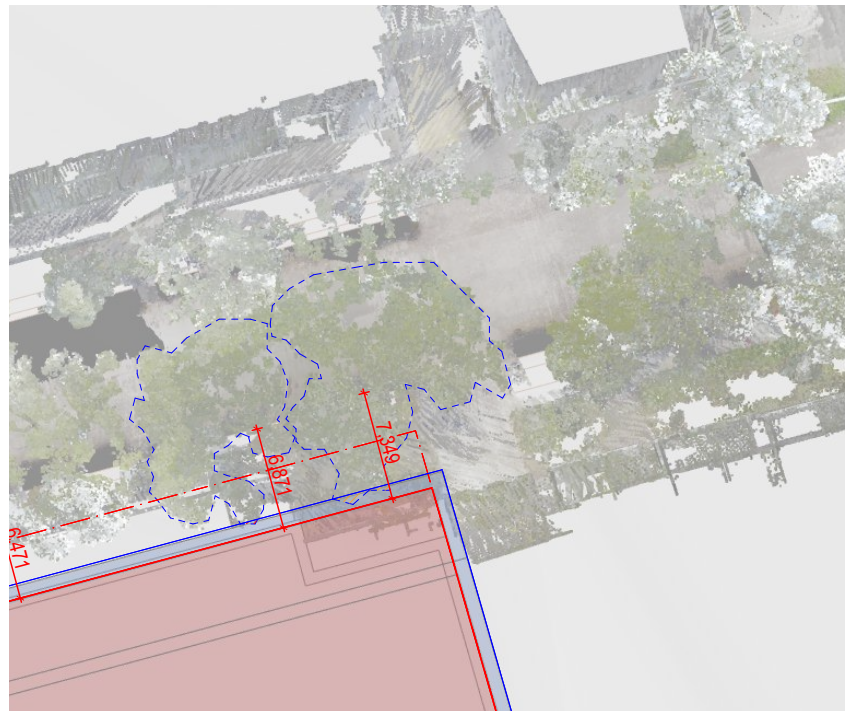
- Two trees have a TPZ encroachment higher than 10%, however, in each case, the existing built form had an even greater TPZ encroachment. Note: TPZ encroachments also factor in the indicative batter zone from basement.

**Upper Levels**

- Several tree canopies are encroached on the upper levels. 3D views comparing the massing and the 3d point cloud have been prepared

-  Tree Canopy (as derived from Point Cloud)
-  Proposed Built Form
-  Scaffolding

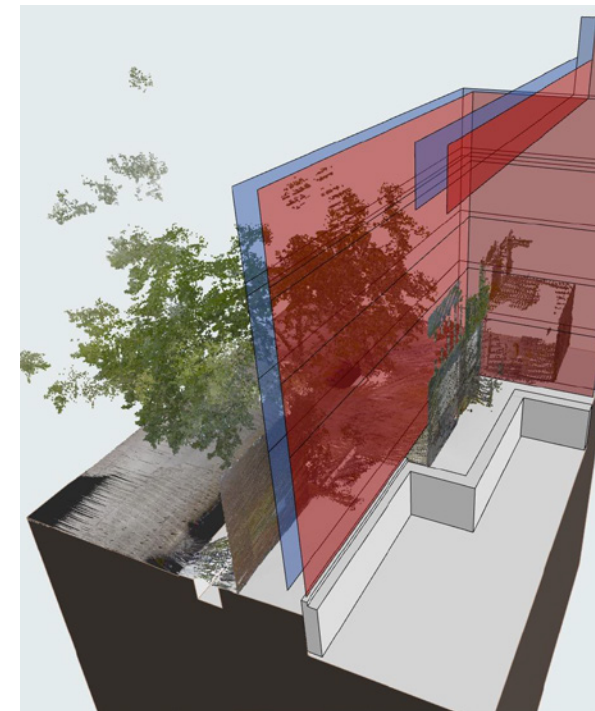




TREE 08+09 - PLAN



TREE 08+09 - 3D VIEW



TREE 08+09 - 3D VIEW



TREE 10 - PLAN



TREE 10 - 3D VIEW



TREE 10 - 3D VIEW

There are several street trees surrounding the site with a mix of reduced quality and high value.

Following an arborist report and further development on the plans, the current proposal achieves the following:

#### General

- There is no SRZ encroachment
- All street trees maintained, except the ones identified as Retention Value R or C, which are trees recommended to be removed, or of reduced quality.

#### B01

- All TPZ encroachments in basement are less than 10%. The TPZ encroachments also factor in an indicative batter zone.

#### Ground

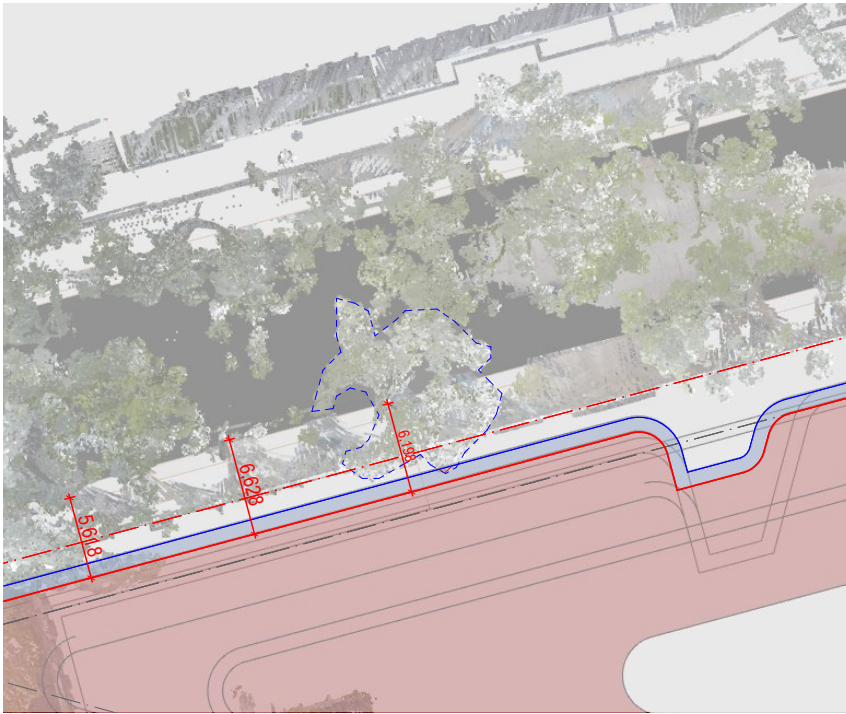
- Two trees have a TPZ encroachment higher than 10%, however, in each case, the existing built form had an even greater TPZ encroachment. Note: TPZ encroachments also factor in the indicative batter zone from basement.

#### Upper Levels

- Several tree canopies are encroached on the upper levels. 3D views comparing the massing and the 3d point cloud have been prepared

- Tree Canopy (as derived from Point Cloud)
- Proposed Built Form
- Scaffolding

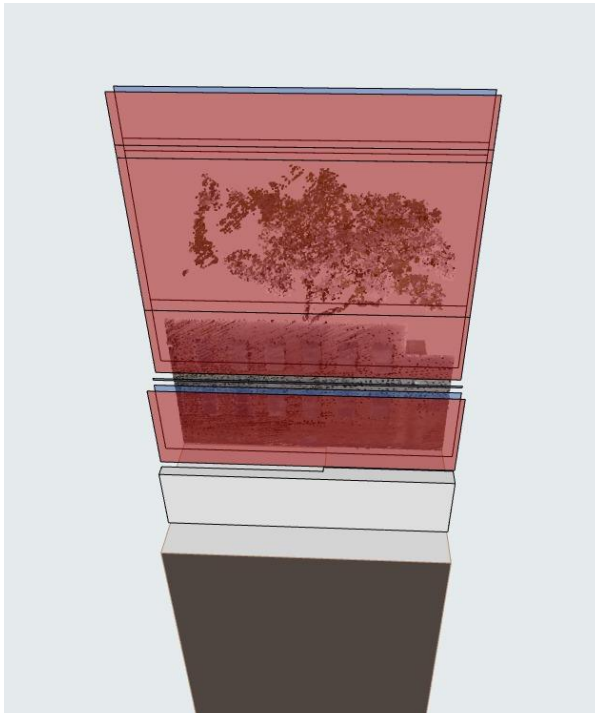




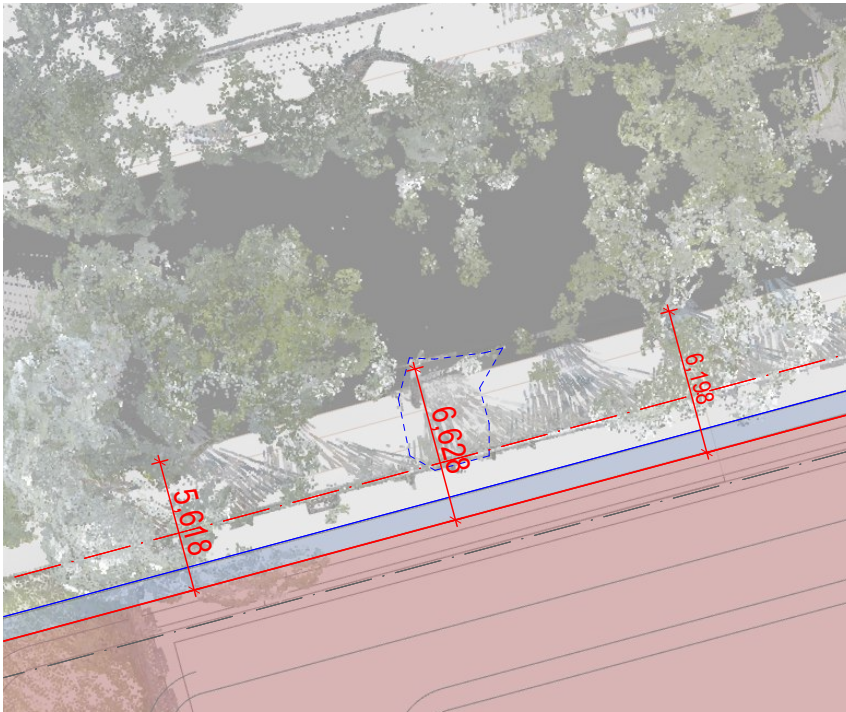
TREE 14 - PLAN



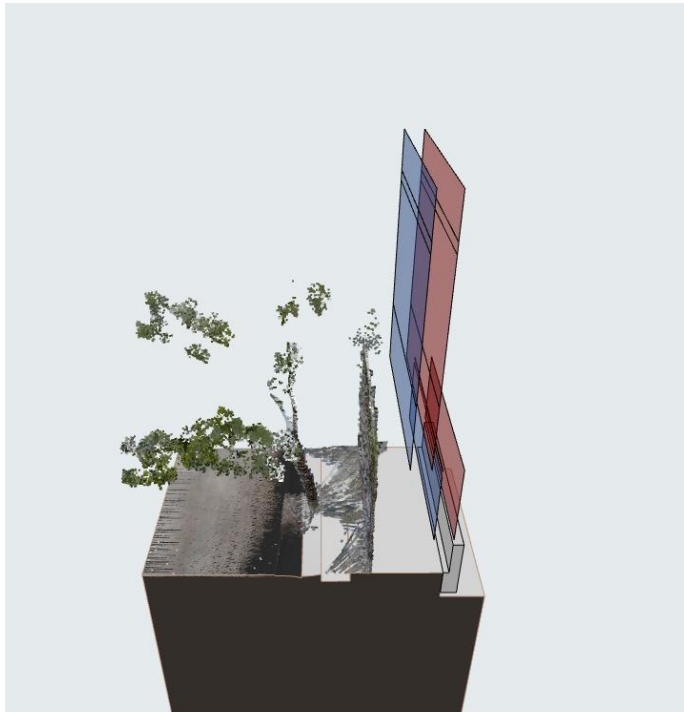
TREE 14 - 3D VIEW



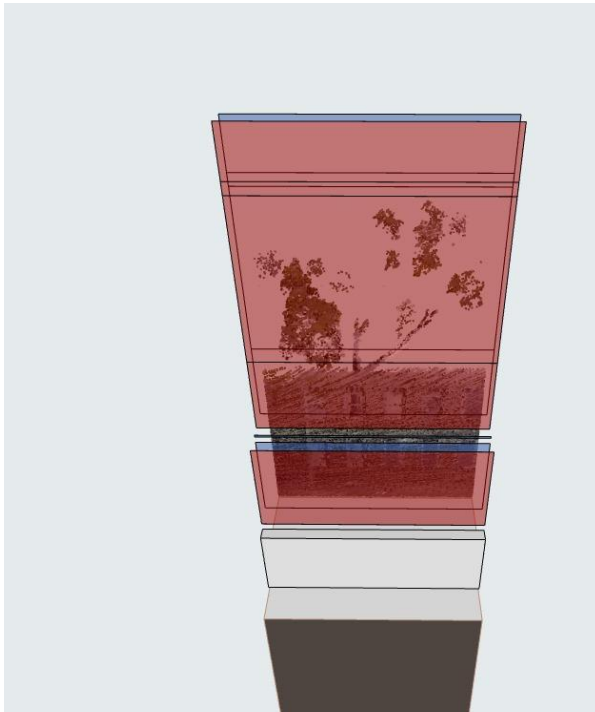
TREE 14 - 3D VIEW



TREE 15 - PLAN



TREE 15 - 3D VIEW



TREE 15 - 3D VIEW

There are several street trees surrounding the site with a mix of reduced quality and high value.

Following an arborist report and further development on the plans, the current proposal achieves the following:

**General**

- There is no SRZ encroachment
- All street trees maintained, except the ones identified as Retention Value R or C, which are trees recommended to be removed, or of reduced quality.

**B01**

- All TPZ encroachments in basement are less than 10%. The TPZ encroachments also factor in an indicative batter zone.

**Ground**

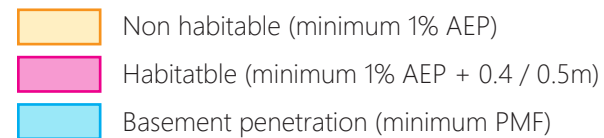
- Two trees have a TPZ encroachment higher than 10%, however, in each case, the existing built form had an even greater TPZ encroachment. Note: TPZ encroachments also factor in the indicative batter zone from basement.

**Upper Levels**

- Several tree canopies are encroached on the upper levels. 3D views comparing the massing and the 3d point cloud have been prepared

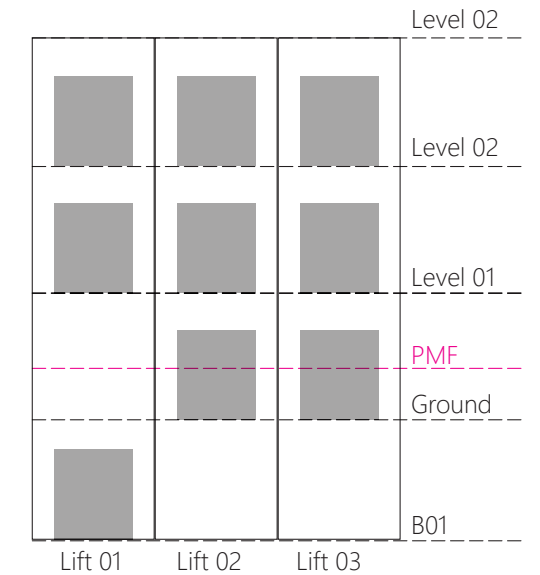
- Tree Canopy (as derived from Point Cloud)
- Proposed Built Form
- Scaffolding





- All basement penetrations (ramps, stairs, lifts) are at the PMF level
- Most ground floor habitable areas are at 1% AEP + freeboard (0.4m or 0.5m depending on circumstance) except for some areas near entrances

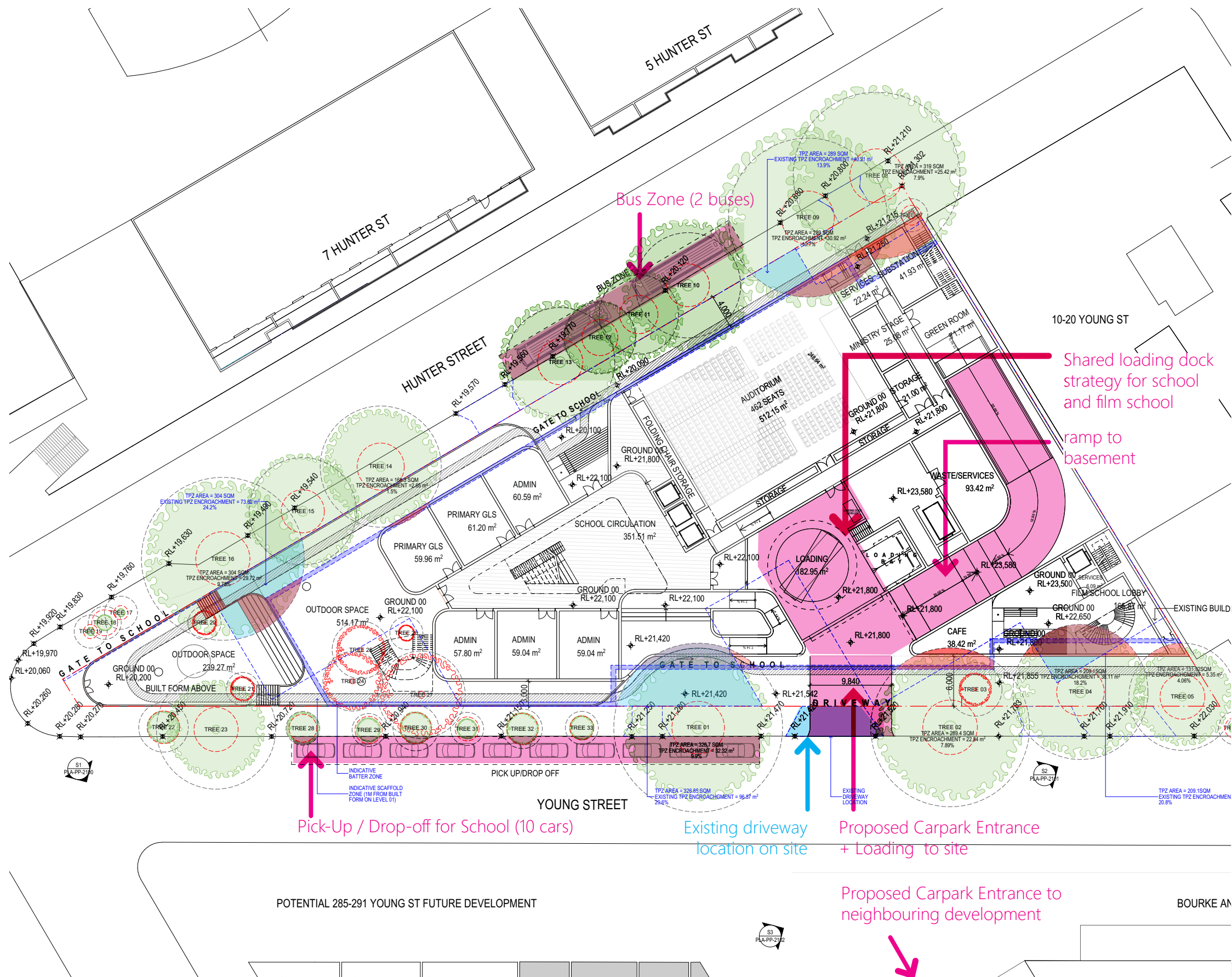
### School Lift Core Arrangement





# APPENDIX

## TRAFFIC STRATEGY - GROUND

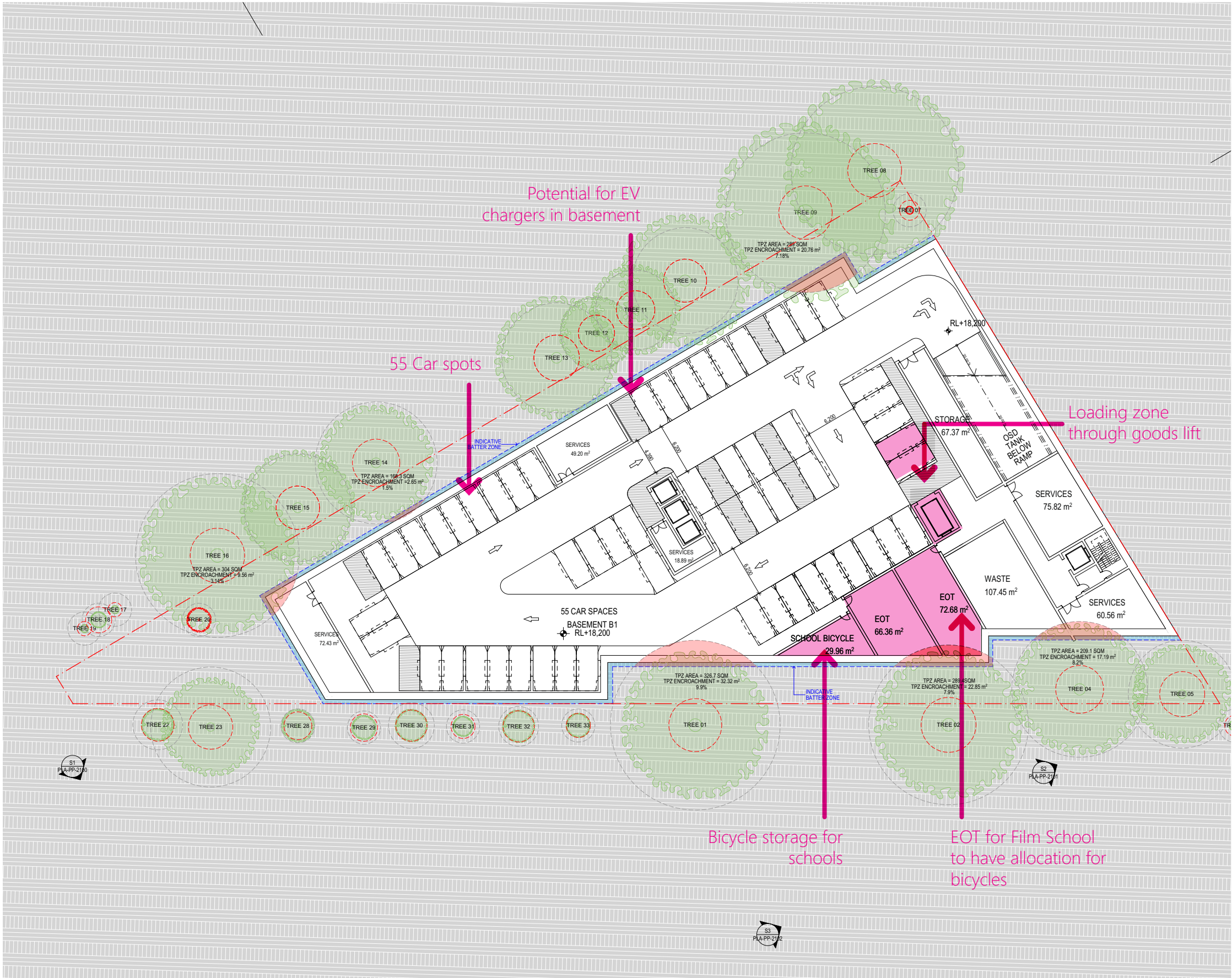


- The proposed carpark entrance and loading dock entrance is off Young Street, which is located at an existing driveway to the site.
- Loading dock is used by the school and the film school during the weekdays, and by the shared community on the weekend.
- The proposed pick-up/drop-off zone for the school sits along Young Street. These locations are to reduce impacts to Hunter Street.
- A bus zone for the school is located on Hunter Street.



# APPENDIX

## TRAFFIC STRATEGY - LOWER GROUND



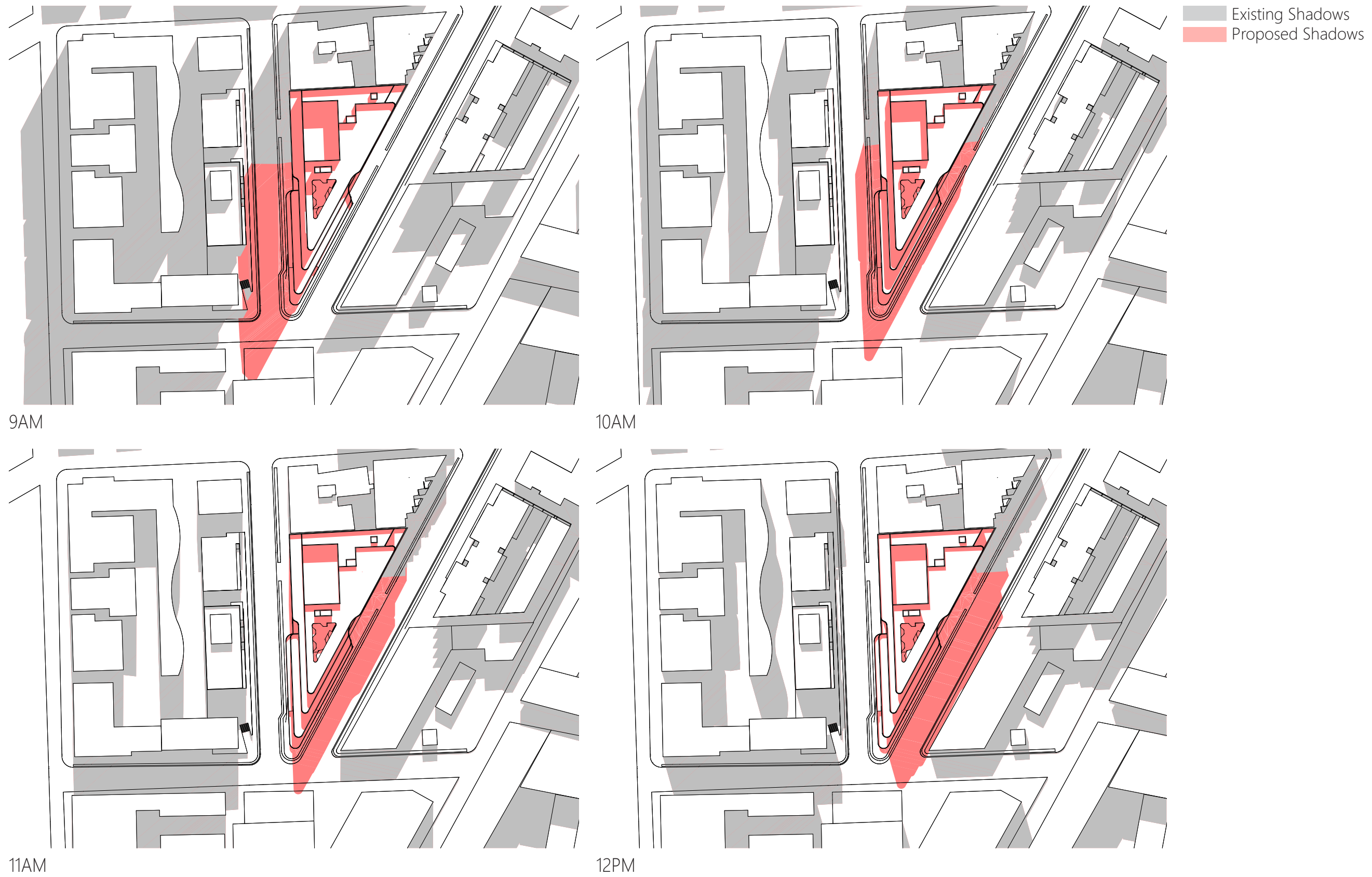
- The basement holds 55 car spots, which will be used by the school and film school during the weekdays, and the shared community during the weekend.
- The basement car park will have the potential for EV chargers
- EOT for the film school will have the option for bicycles
- Bicycle parking for the school will also be stored in the basement





APPENDIX

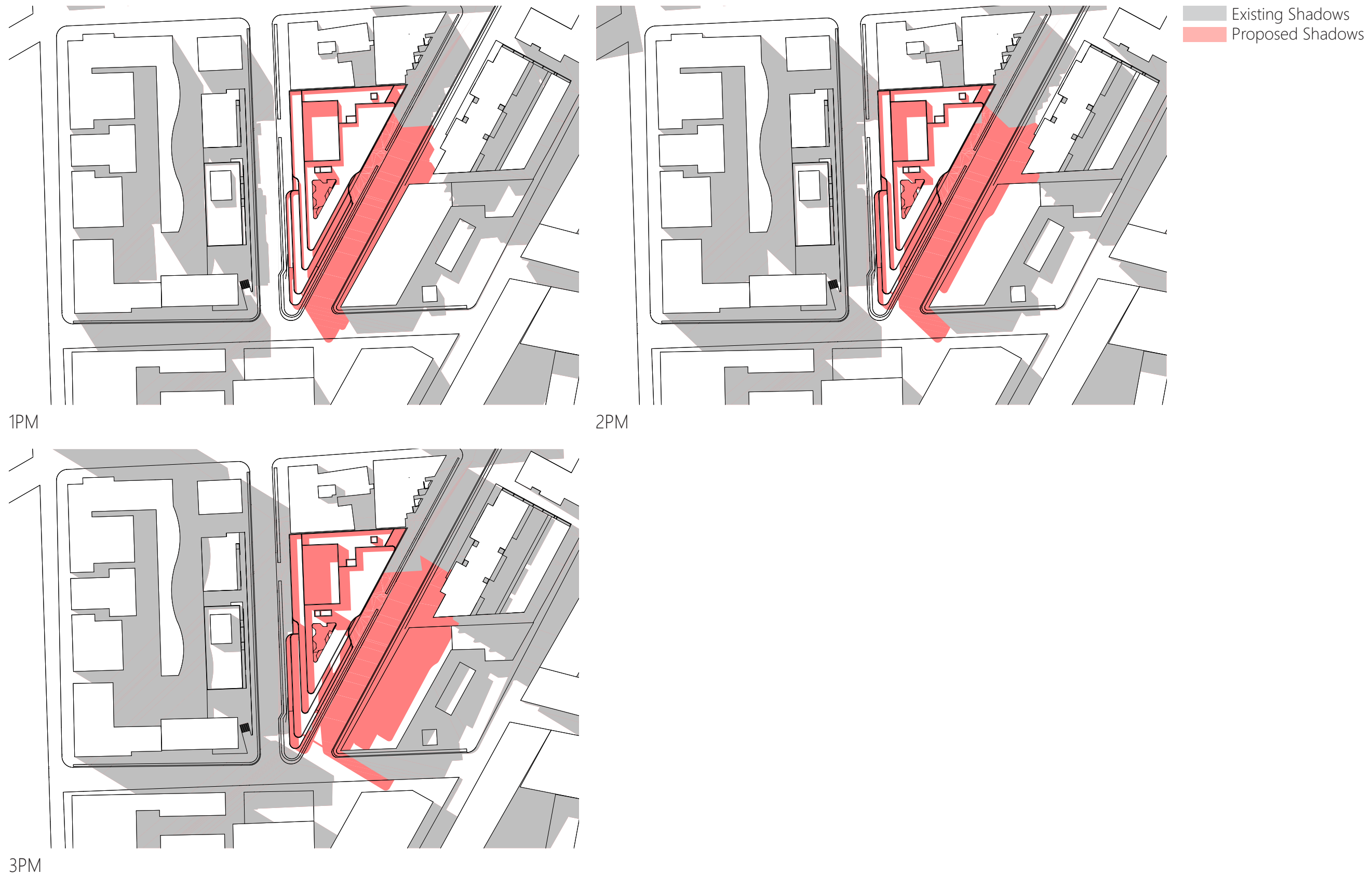
# SHADOW DIAGRAMS (WINTER SOLSTICE)





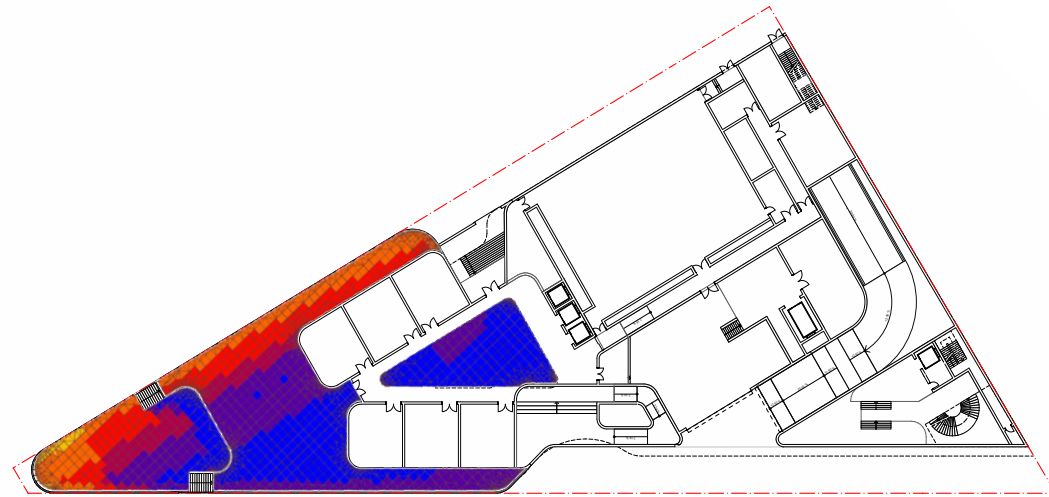
APPENDIX

# SHADOW DIAGRAMS (WINTER SOLSTICE)





# OPEN SPACE SOLAR STUDY (WINTER SOLSTICE)



GROUND 00



LEVEL 01

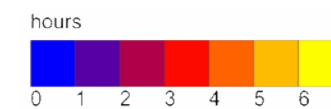


LEVEL 02



LEVEL 03

These diagrams illustrates the amount of time the school open space receives direct sunlight during winter solstice (9am-3pm).

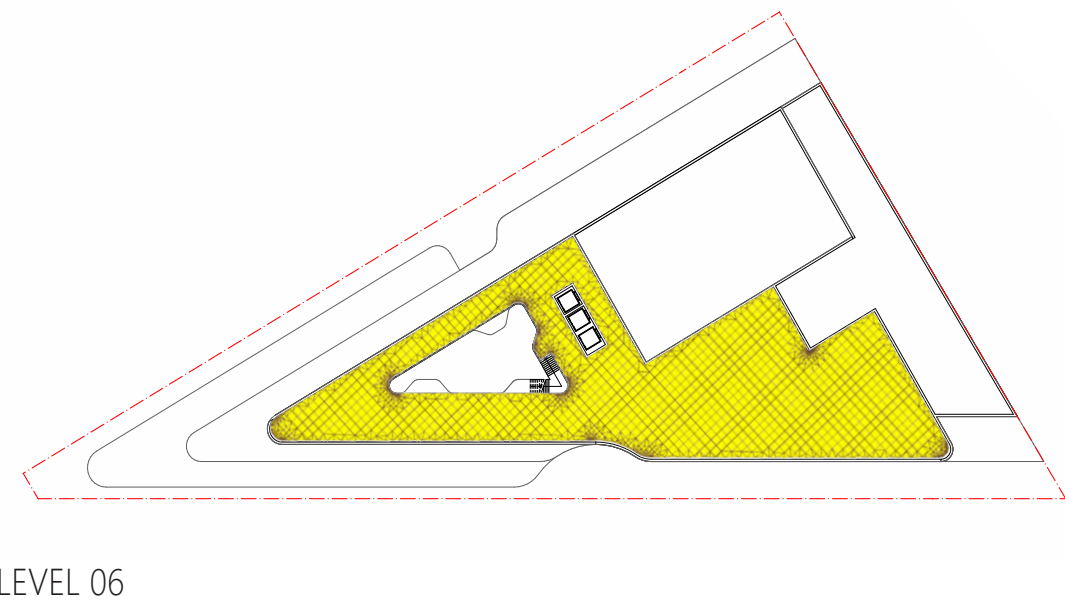
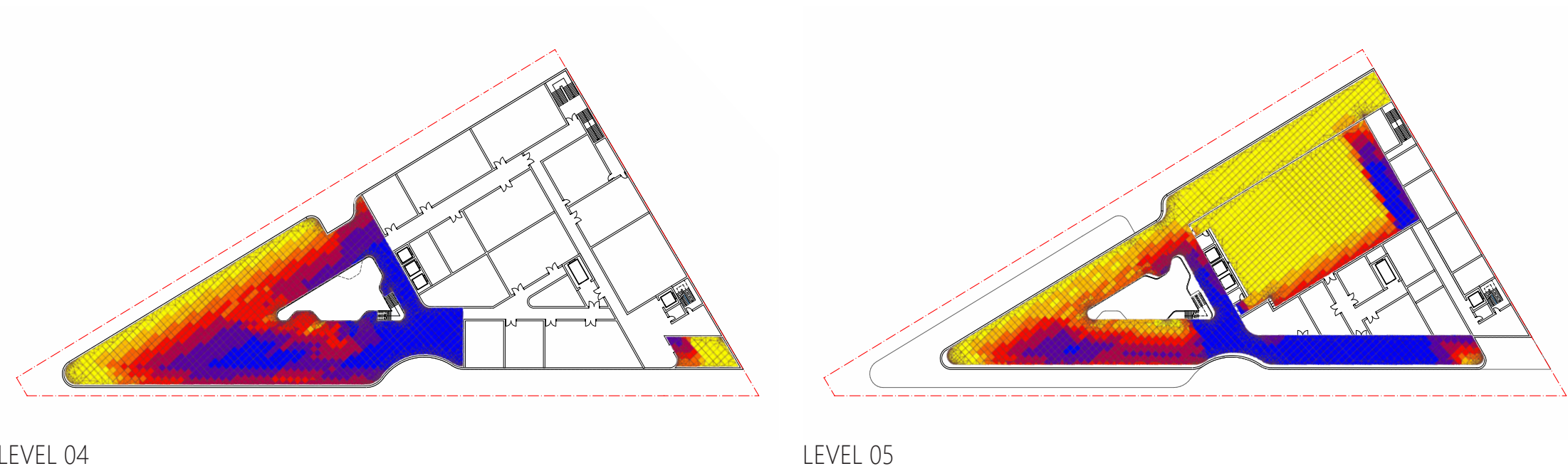


Note:  
This is an indicative solar study taken on winter solstice between 9am to 3pm. Data is indicative only and is subject to being verified by an expert consultant.



APPENDIX

# OPEN SPACE SOLAR STUDY (WINTER SOLSTICE)



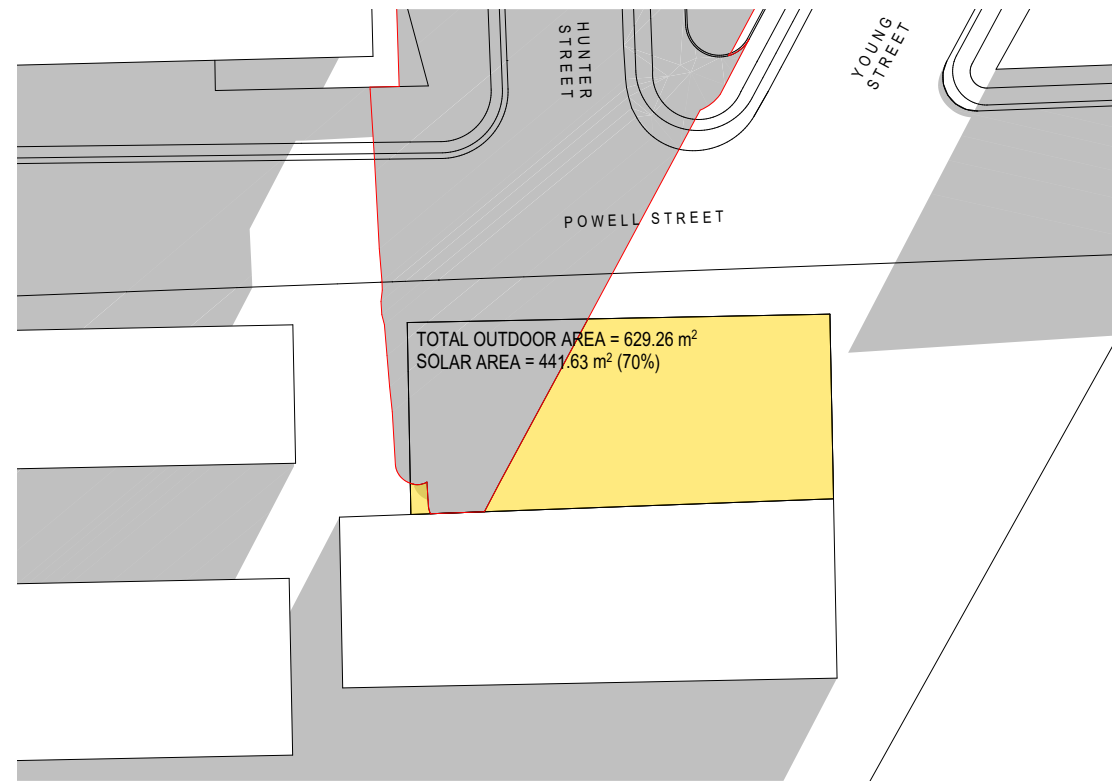
These diagrams illustrates the amount of time the school open space receives direct sunlight during winter solstice (9am-3pm).



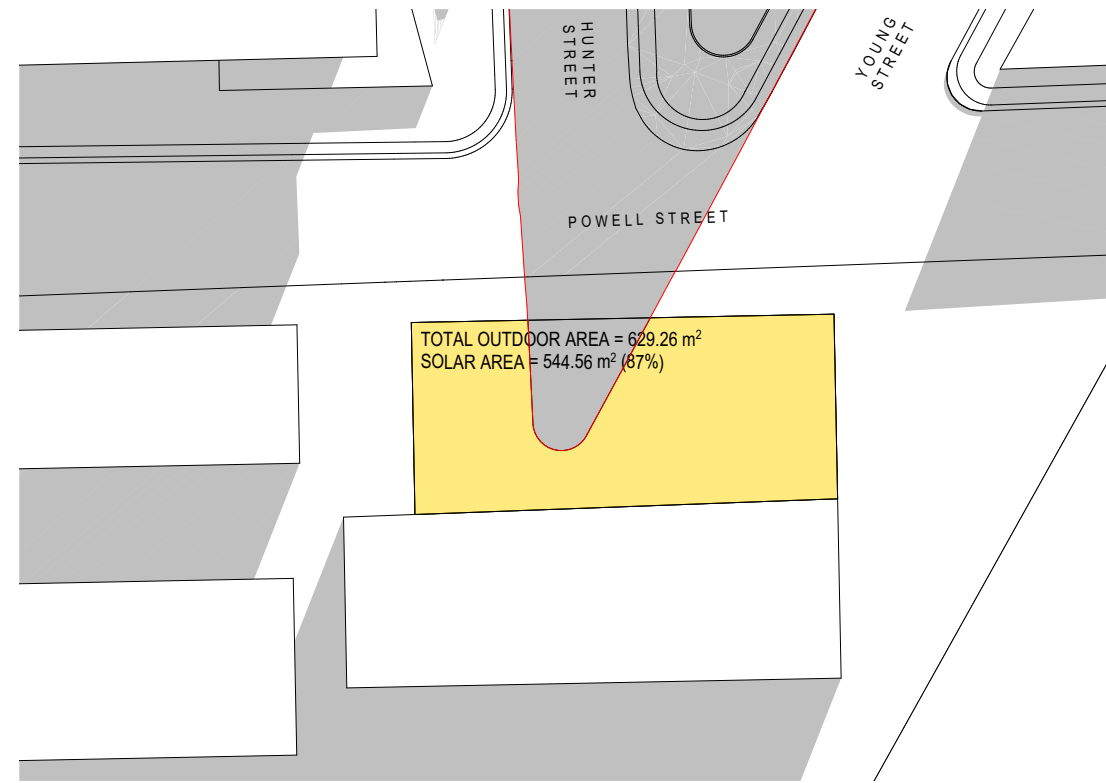
Note:  
This is an indicative solar study taken on winter solstice between 9am to 3pm. Data is indicative only and is subject to being verified by an expert consultant.



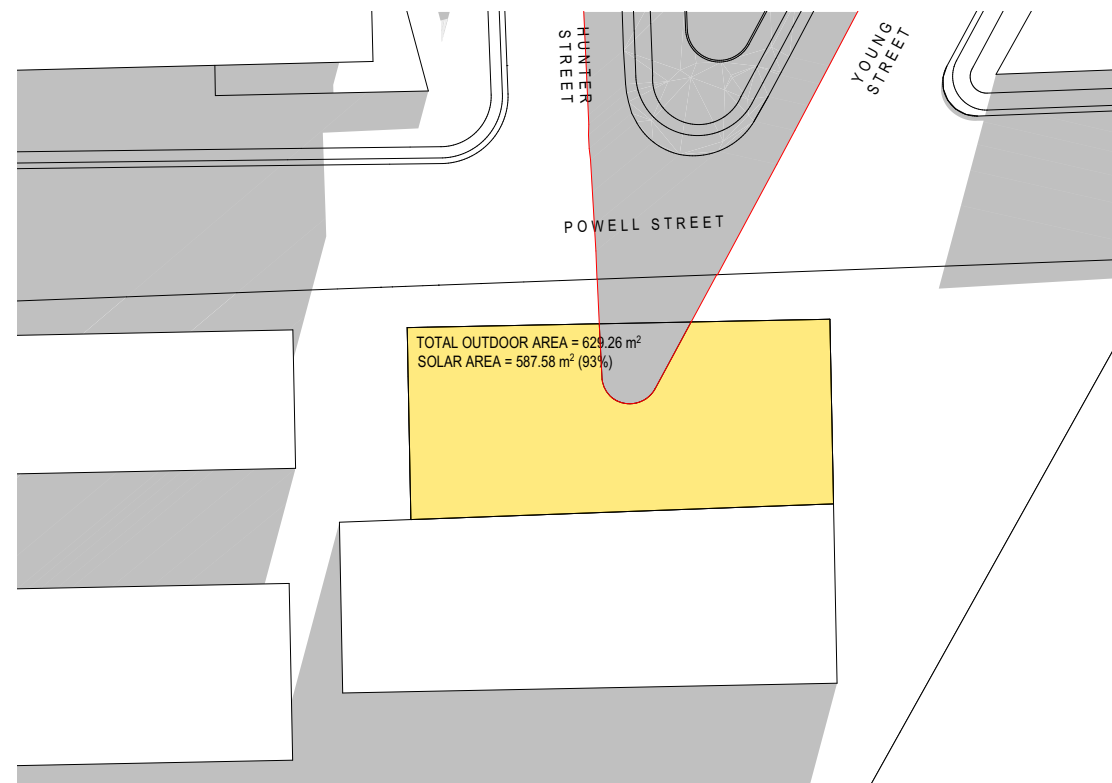
## SOLAR ACCESS TO EXISTING NEIGHBOURING OUTDOOR AREA



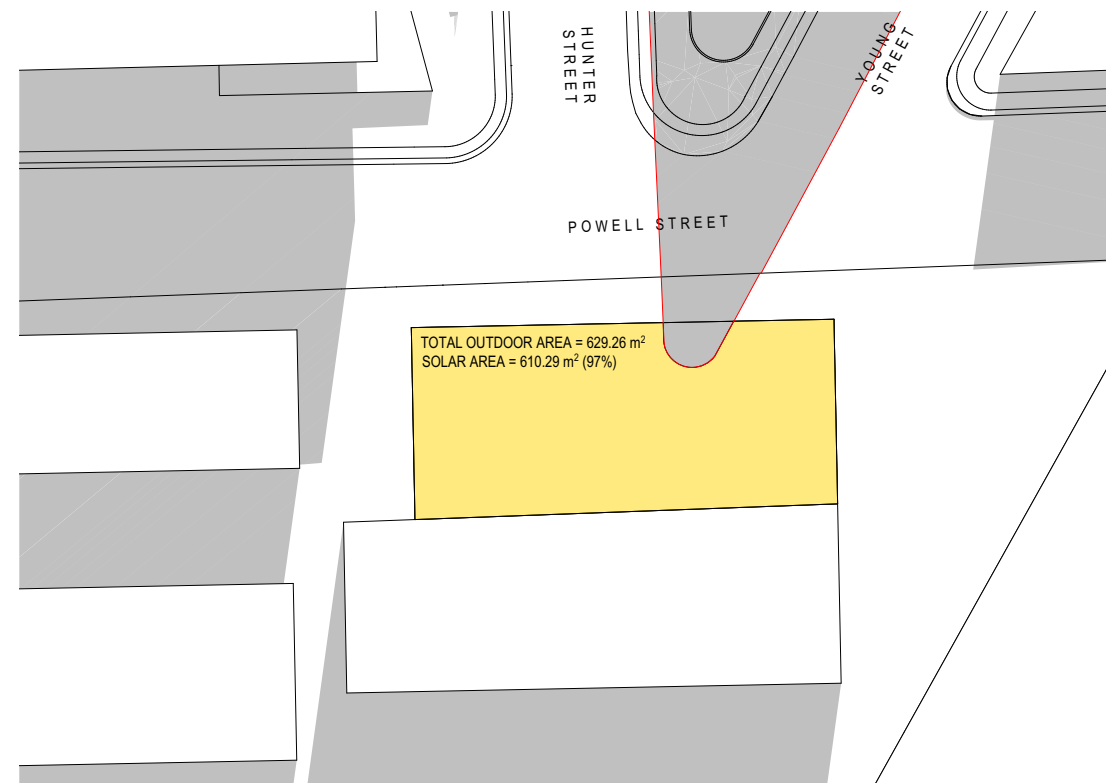
9AM



9:30AM



10AM



10:30AM

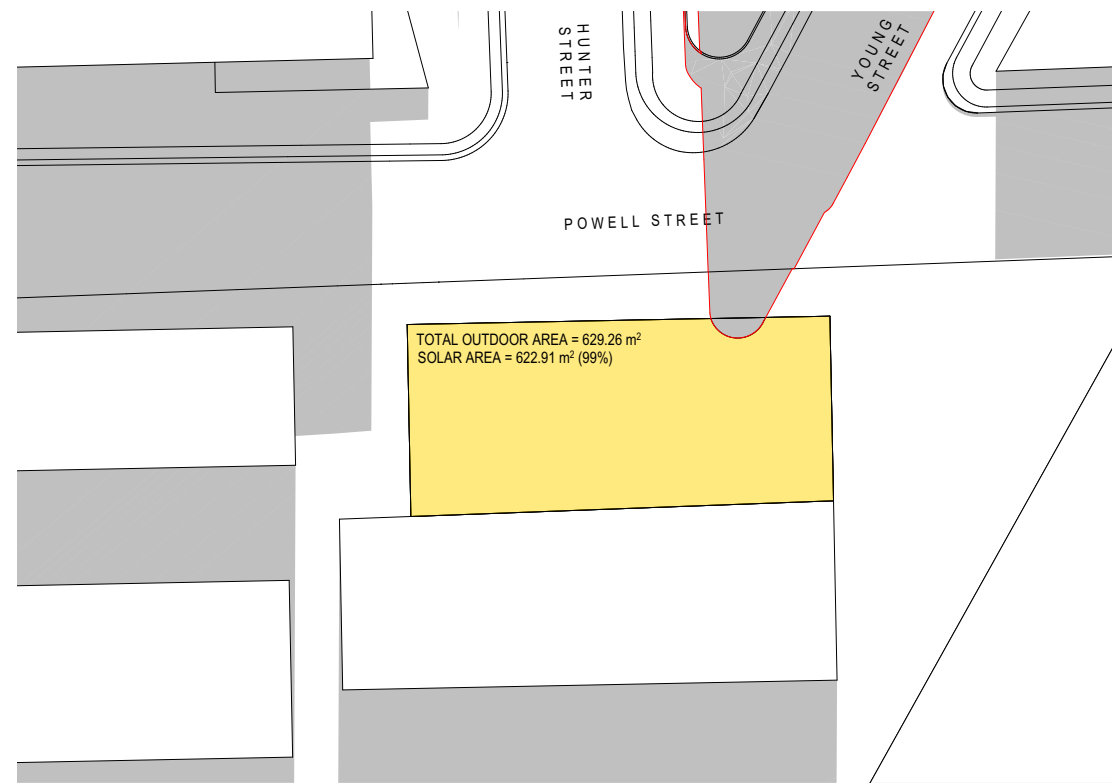
The neighbouring outdoor area to the south achieves the minimum 4 hours of solar access to more than 85% of its area from 9am to 3pm (winter solstice).

Existing Shadows  
Proposed Shadows  
Solar Access in Neighbouring Outdoor Area

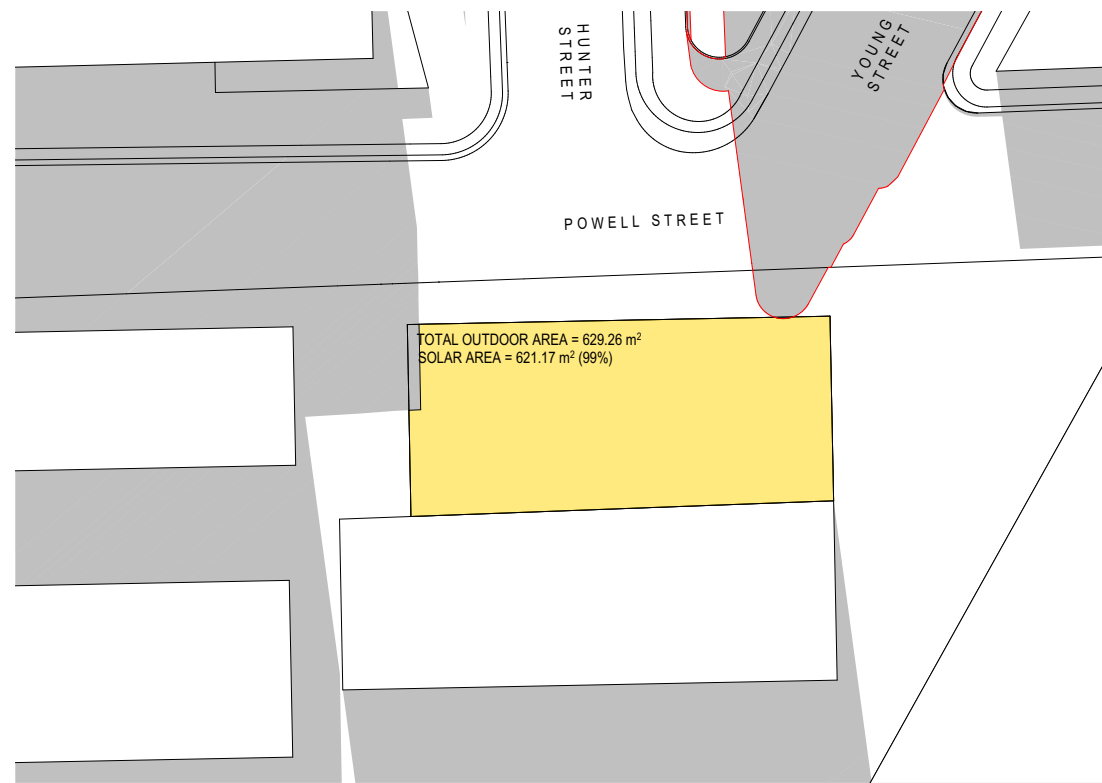




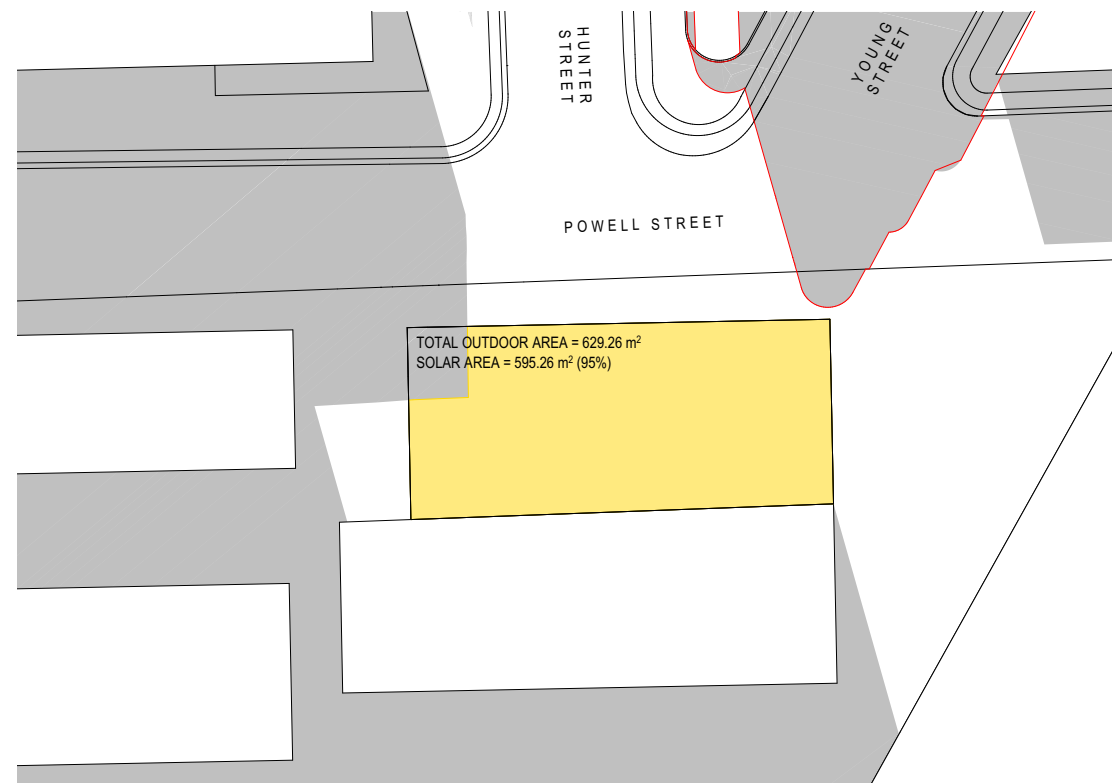
# SOLAR ACCESS TO EXISTING NEIGHBOURING OUTDOOR AREA



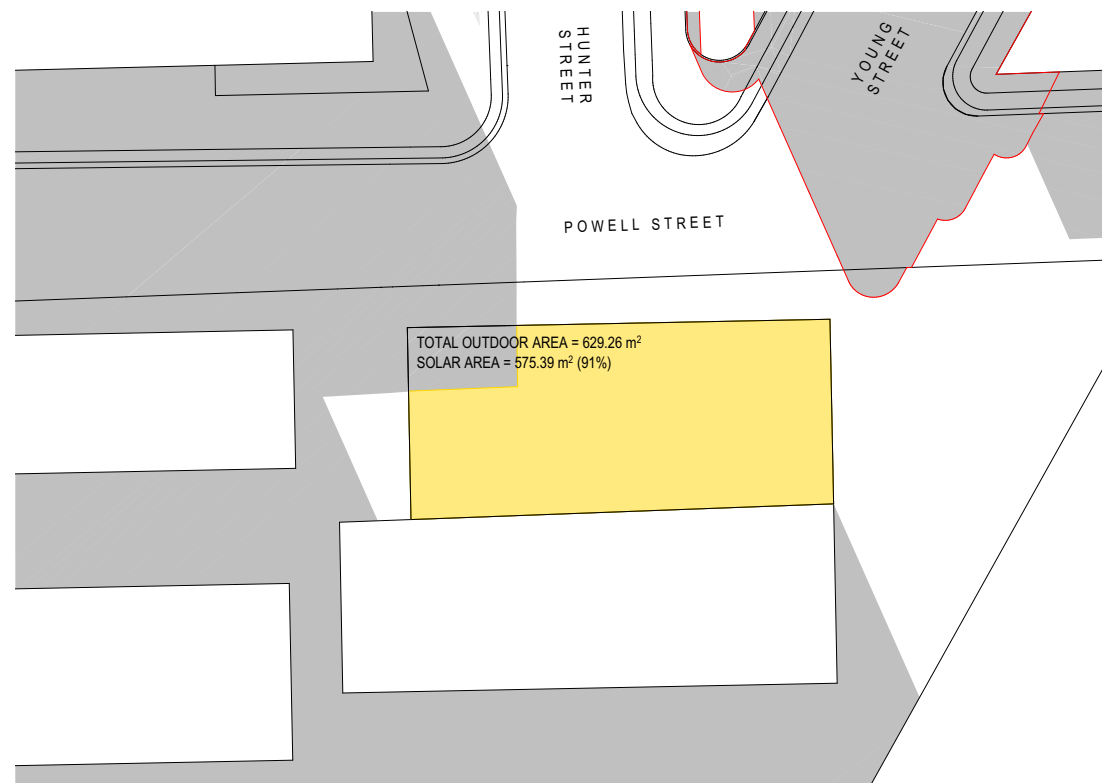
11AM



11:30AM



12PM



12:30PM

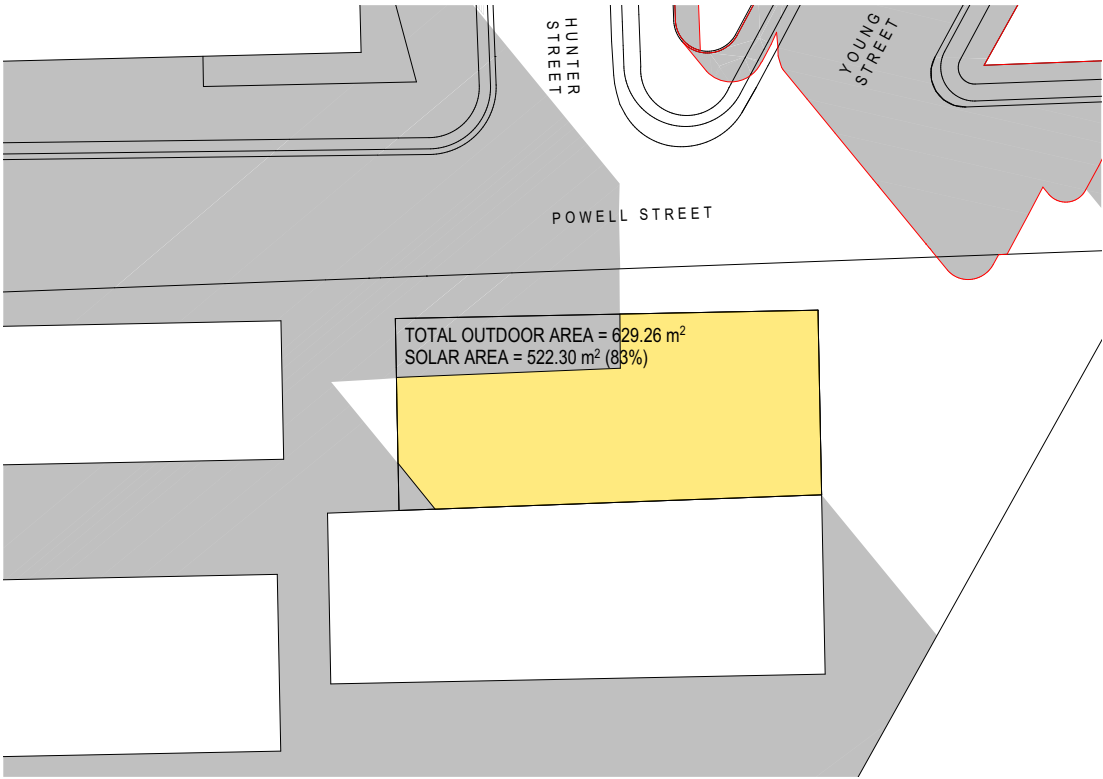
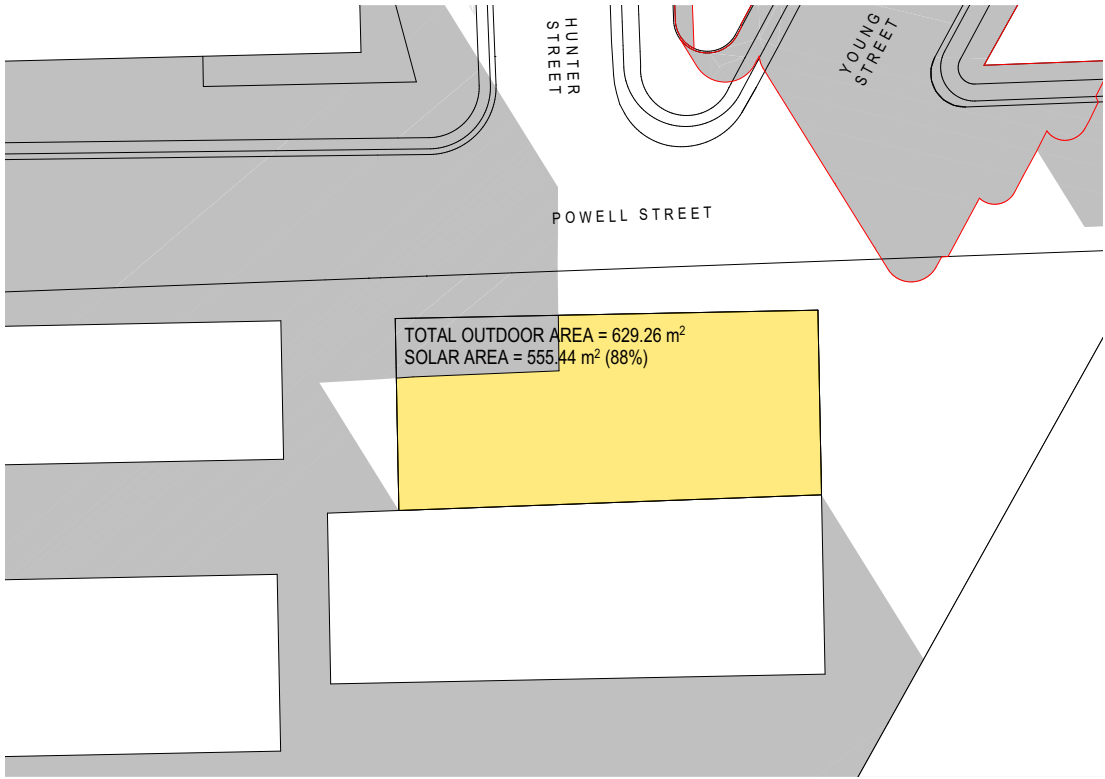
The neighbouring outdoor area to the south achieves the minimum 4 hours of solar access to more than 85% of its area from 9am to 3pm (winter solstice).

- Existing Shadows
- Proposed Shadows
- Solar Access in Neighbouring Outdoor Area

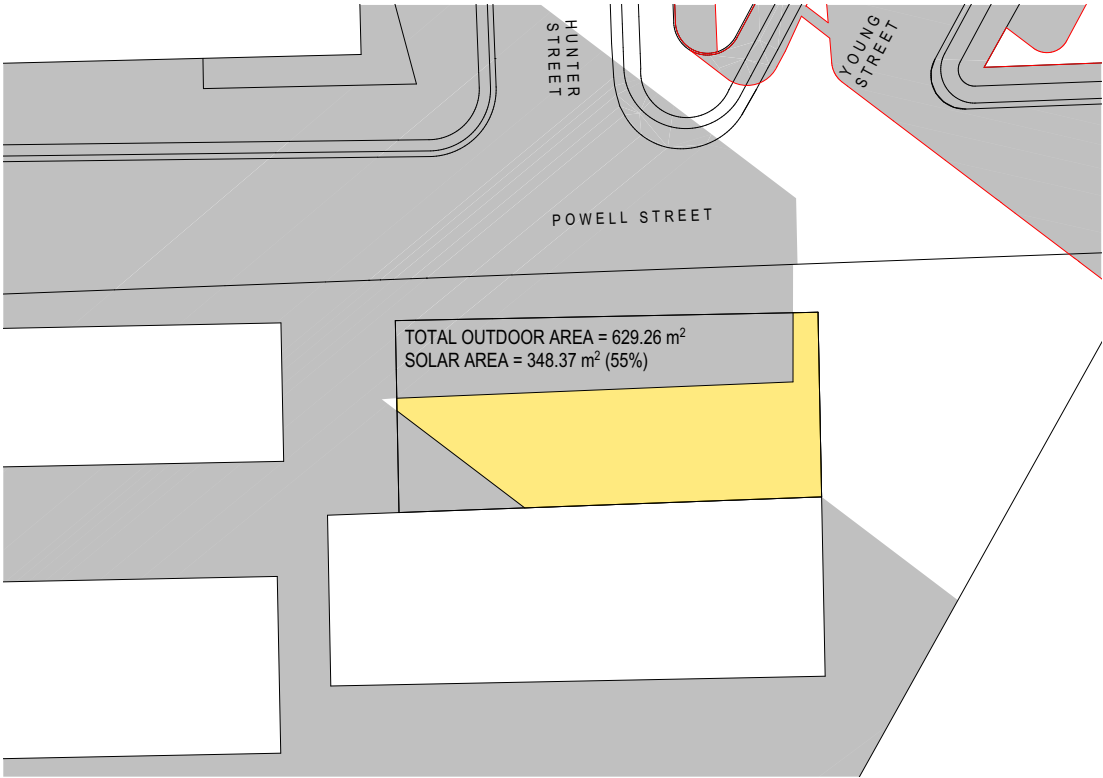
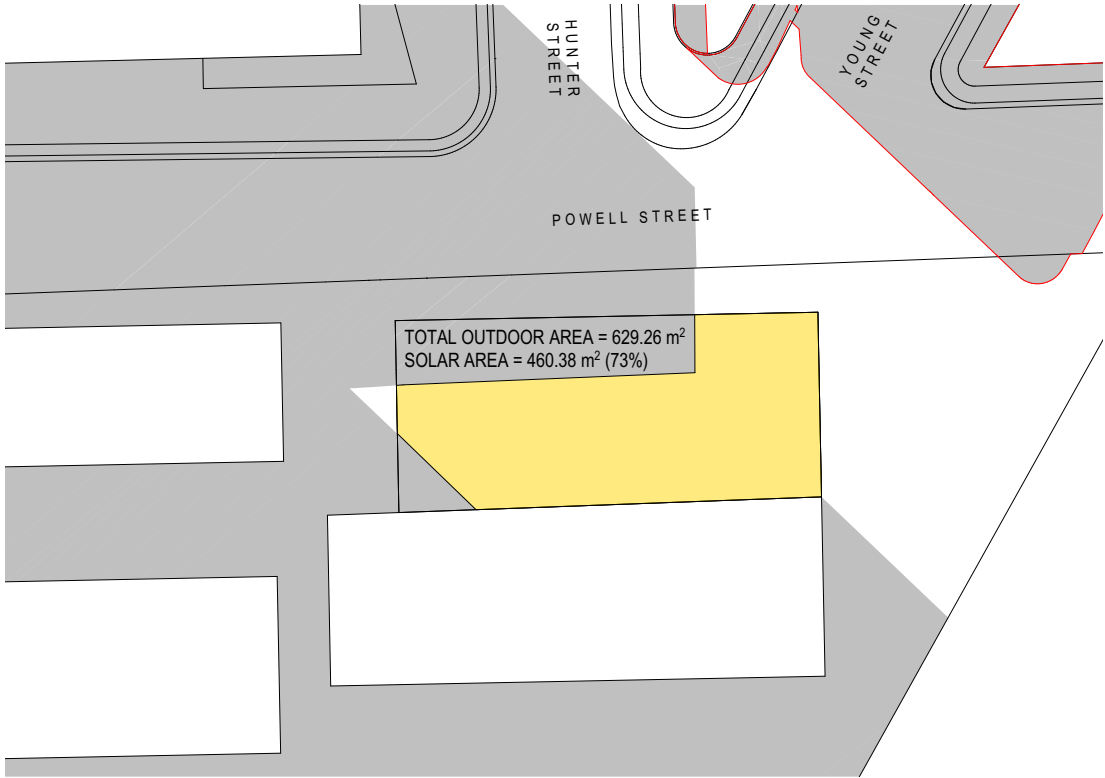




# SOLAR ACCESS TO EXISTING NEIGHBOURING OUTDOOR AREA



The neighbouring outdoor area to the south achieves the minimum 4 hours of solar access to more than 85% of its area from 9am to 3pm (winter solstice).

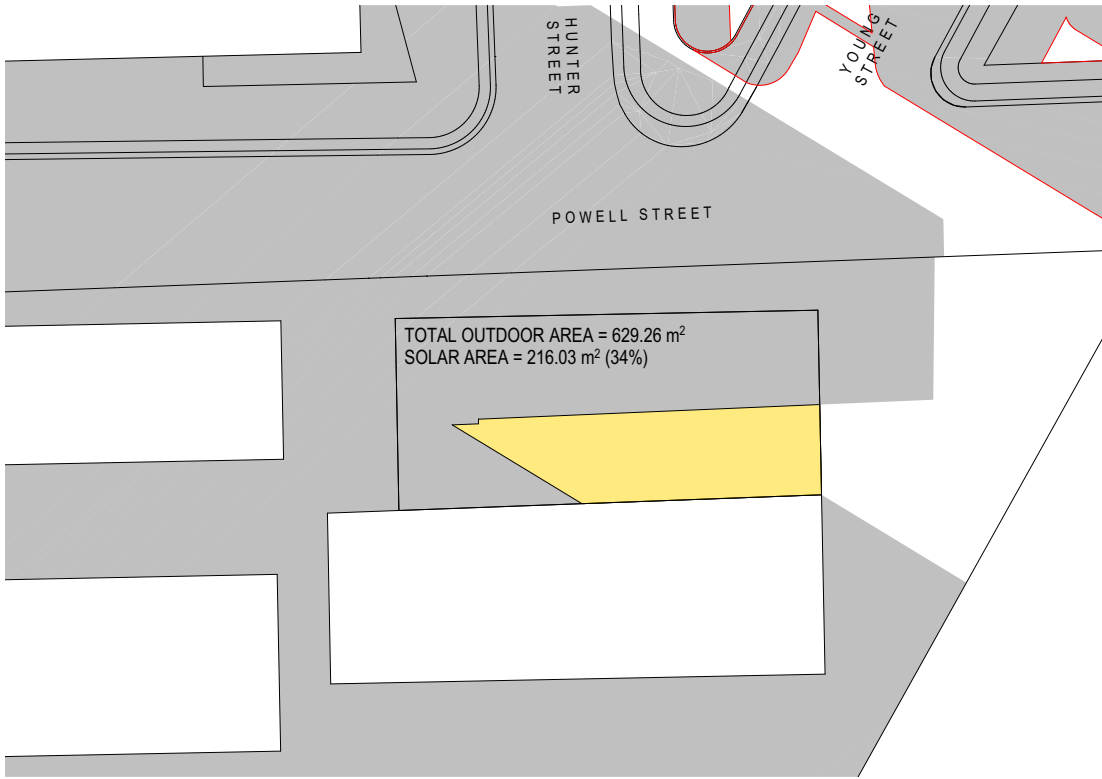


- Existing Shadows
- Proposed Shadows
- Solar Access in Neighbouring Outdoor Area





# SOLAR ACCESS TO EXISTING NEIGHBOURING OUTDOOR AREA



3PM

The neighbouring outdoor area to the south achieves the minimum 4 hours of solar access to more than 85% of its area from 9am to 3pm (winter solstice).

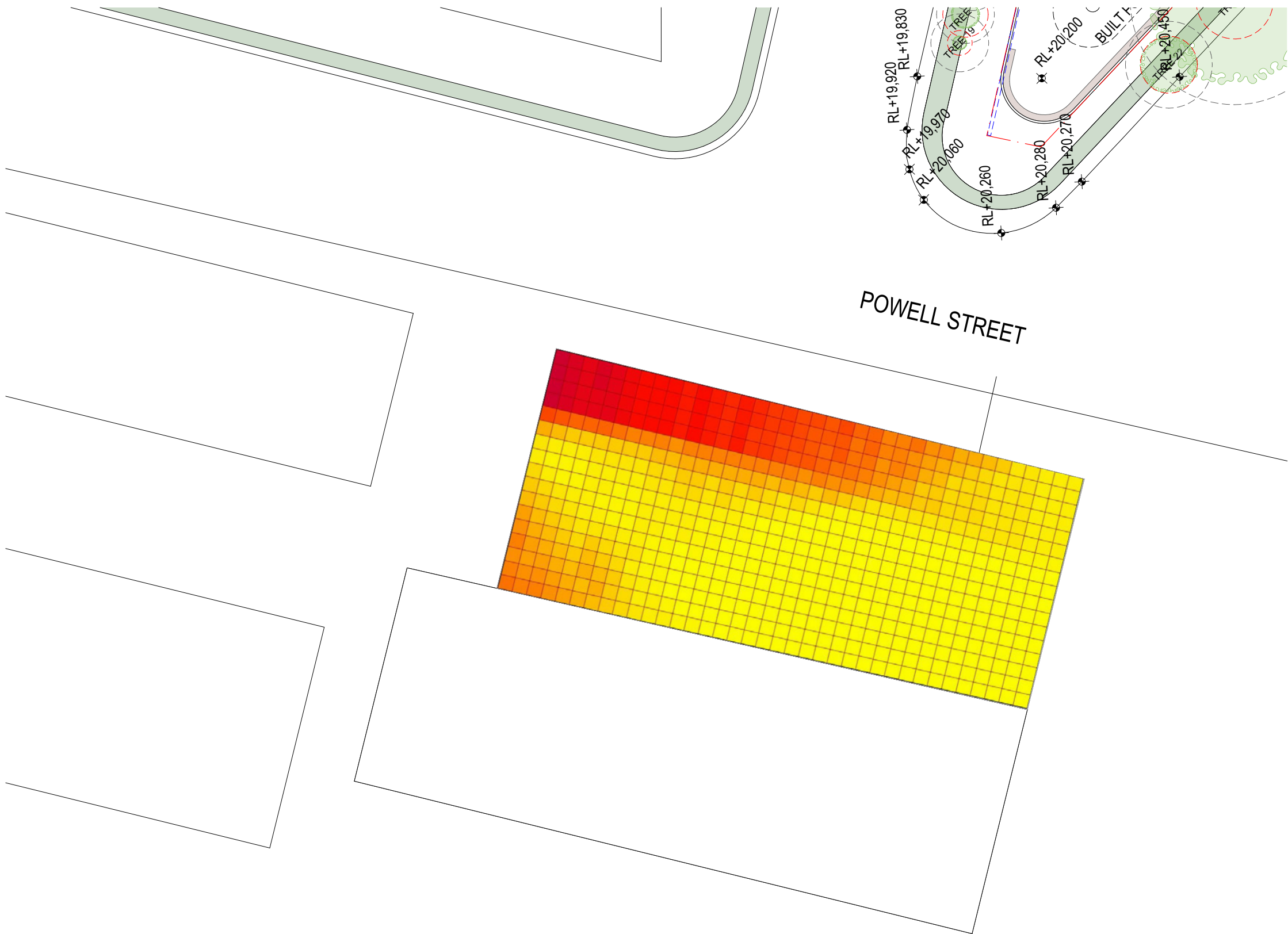
- Existing Shadows
- Proposed Shadows
- Solar Access in Neighbouring Outdoor Area





APPENDIX

SOLAR ACCESS TO EXISTING NEIGHBOURING PARK



City of Sydney has sought a solar insolation analysis that demonstrates 4 hours of sunlight can be provided continuously over 50% of the park to the south of Powell Street.

The Solar Study demonstrates that 4 hours of sunlight is achieved to 86.7% of the park on June 21 between 9am-3pm, when sunlight is measured at 10-minute intervals. These intervals have been calculated to be exposed to sunlight throughout the interval.

SITE AREA (SQM)	> 3 HRS	> 4 HRS	> 5 HRS	6 HRS
629.26	604.9	545.5	462.1	232.5
	96.1%	86.7%	73.4%	36.9%

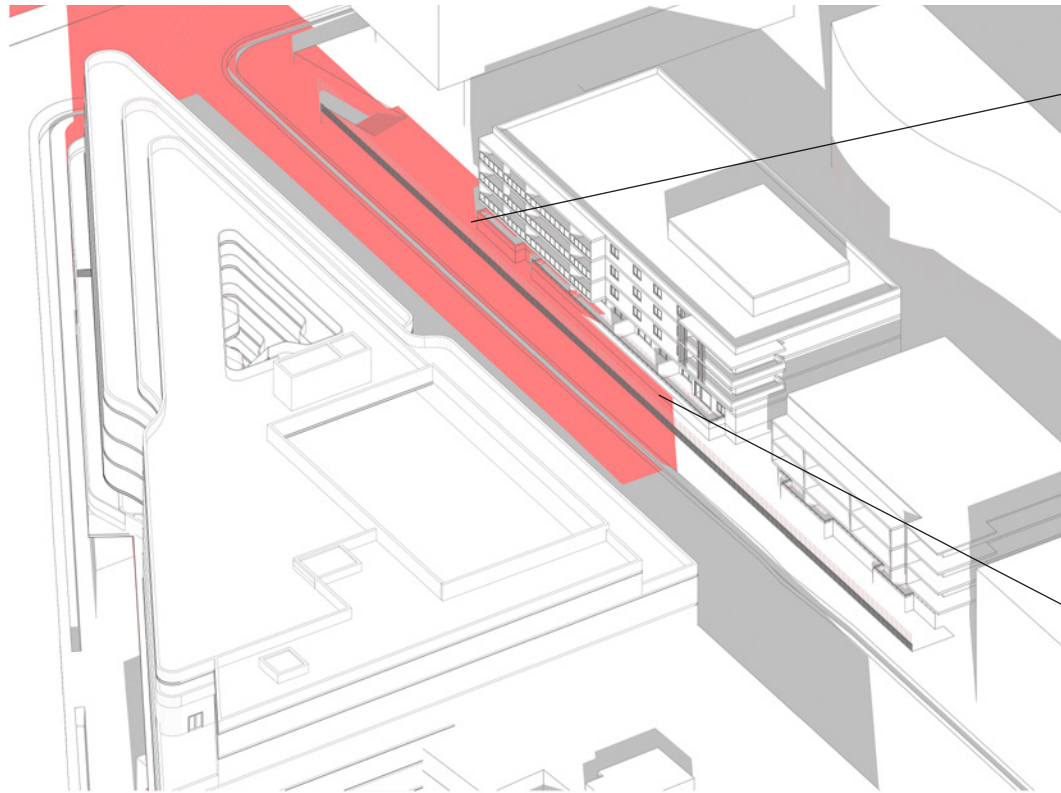
Note:  
This solar study is taken on winter solstice between 9am to 3pm at a 10 minute interval.

4 Hour Requirement: **50%**  
4 Hour Achieved: **86.7%**

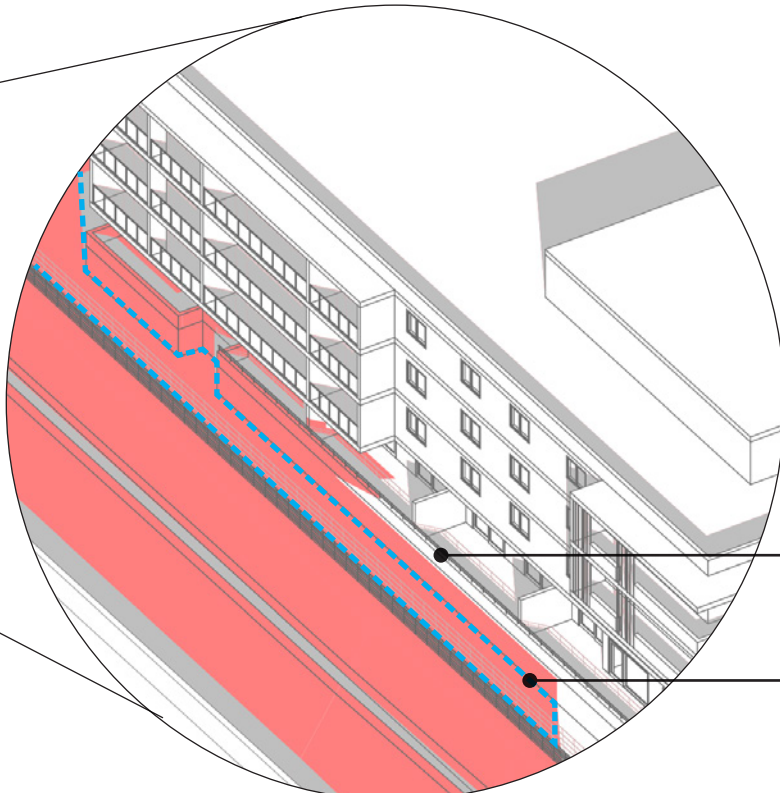




# EXISTING HUNTER STREET APARTMENTS - SOLAR ACCESS

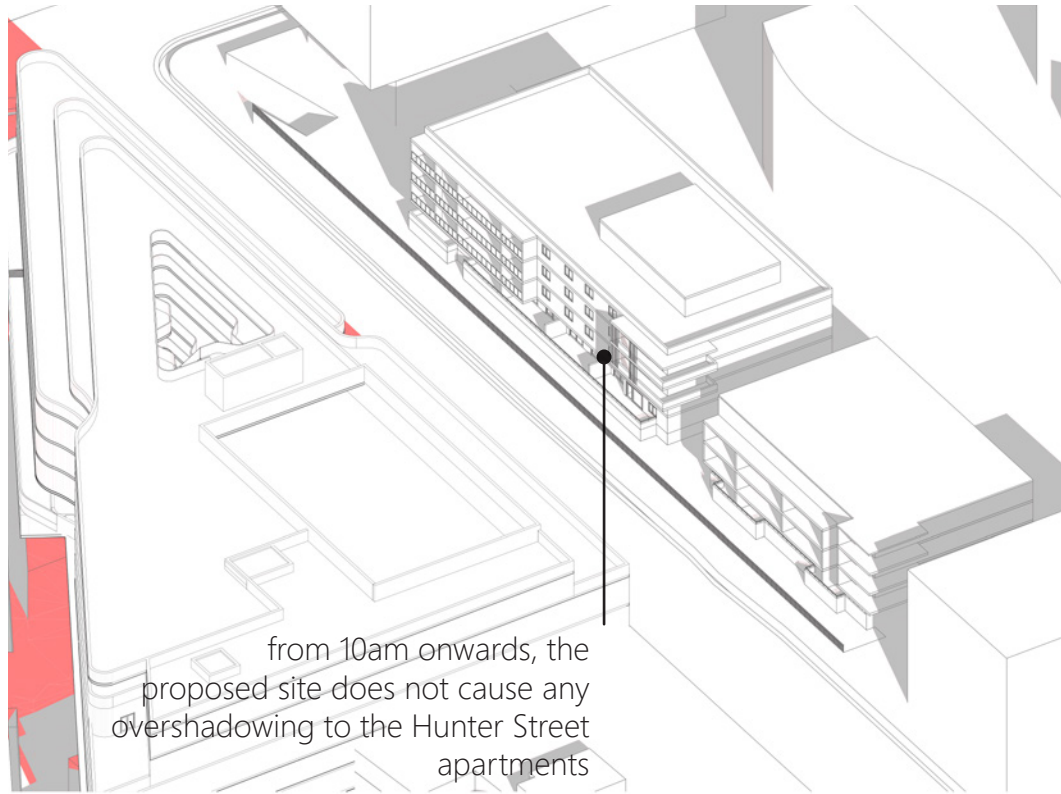


9AM

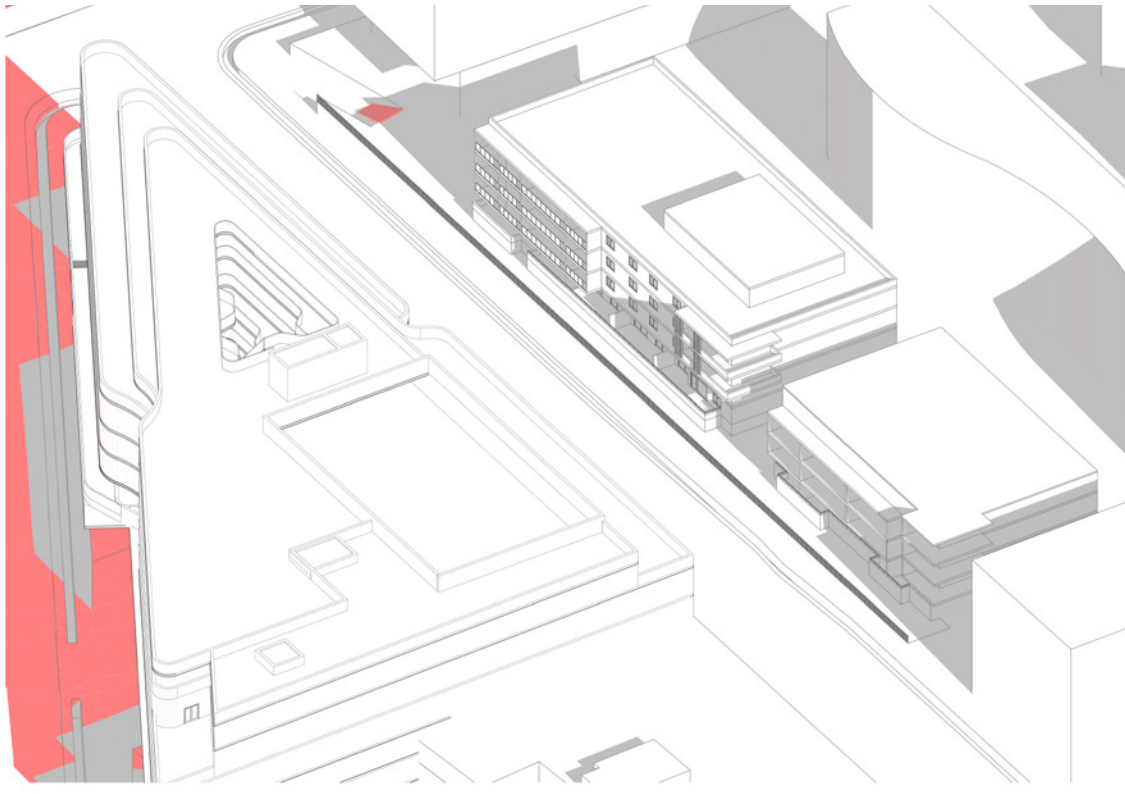


The existing developments along Hunter Street are residential apartment blocks. The proposed built form does not cause any additional overshadowing to the apartment living rooms during winter solstice from 9am to 3pm. There is minor overshadowing to three balconies, which only occurs at 9am.

- Existing Shadows
- Proposed Shadows



10AM



11AM

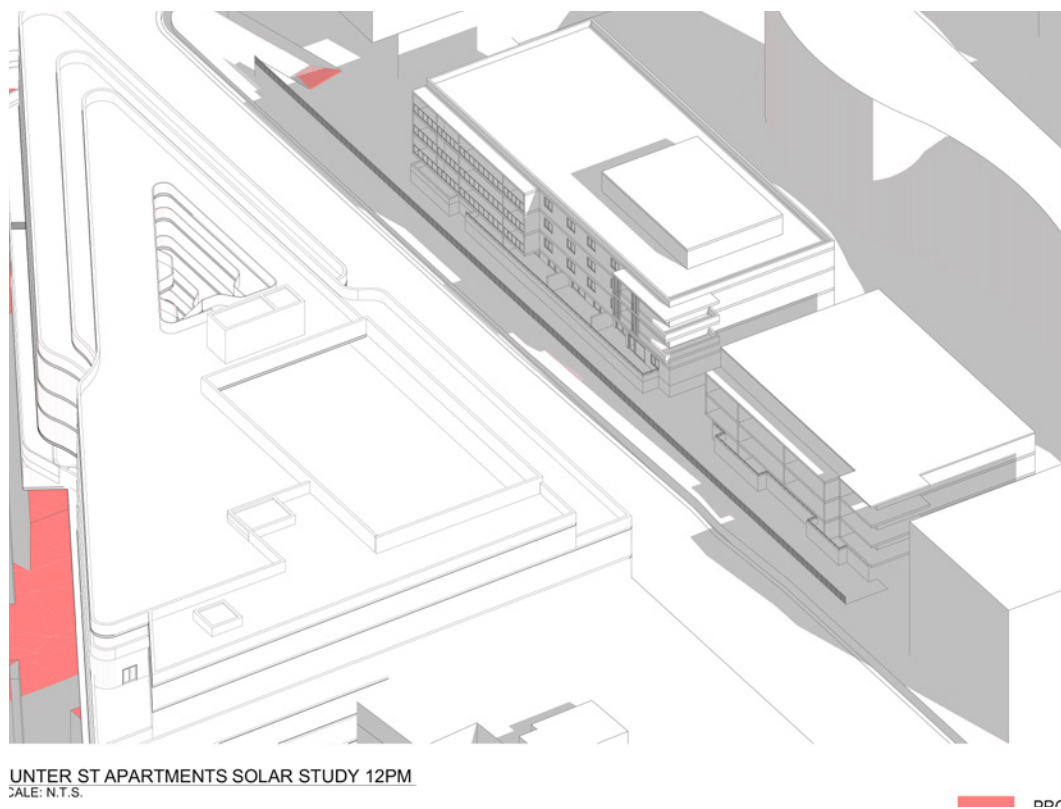
- Pedestrian walkway (not P.O.S.)
- Balconies and living space
- Private open space



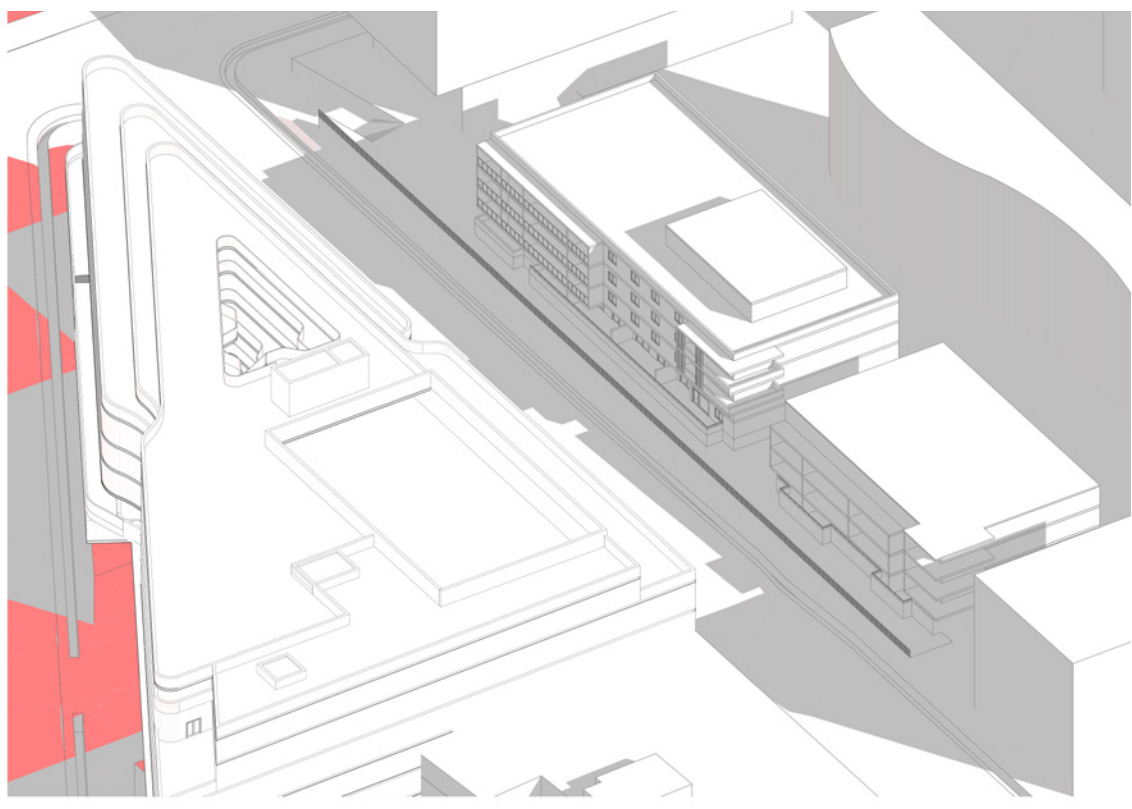
HUNTER STREET APARTMENTS



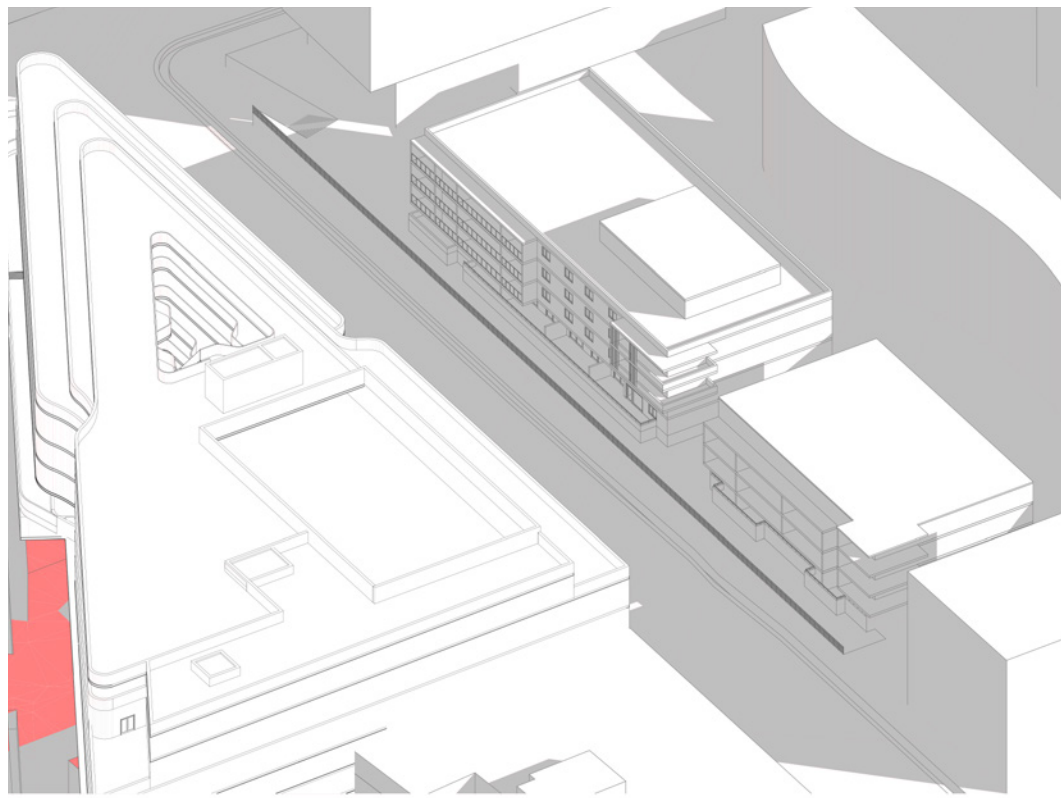
# EXISTING HUNTER STREET APARTMENTS - SOLAR ACCESS



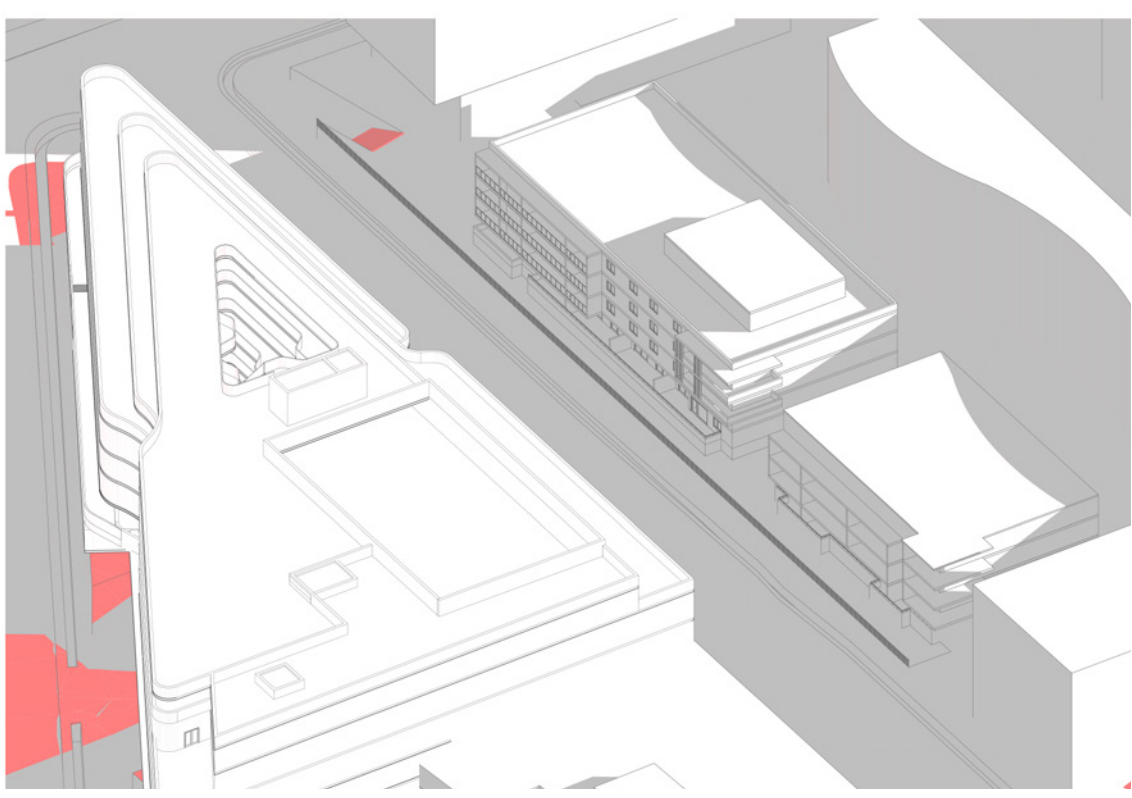
12PM



1PM



2PM



3PM

The existing developments along Hunter Street are residential apartment blocks. The proposed built form does not cause any additional overshadowing to the apartment living rooms during winter solstice from 9am to 3pm. There is minor overshadowing to three balconies, which only occurs at 9am.

- Existing Shadows
- Proposed Shadows

Pedestrian walkway (not P.O.S.)      Balconies and living space      Private open space

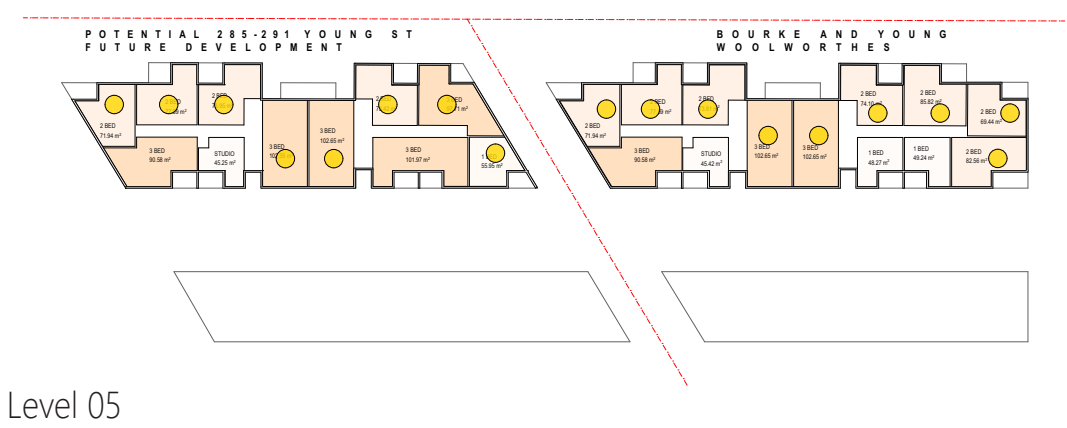
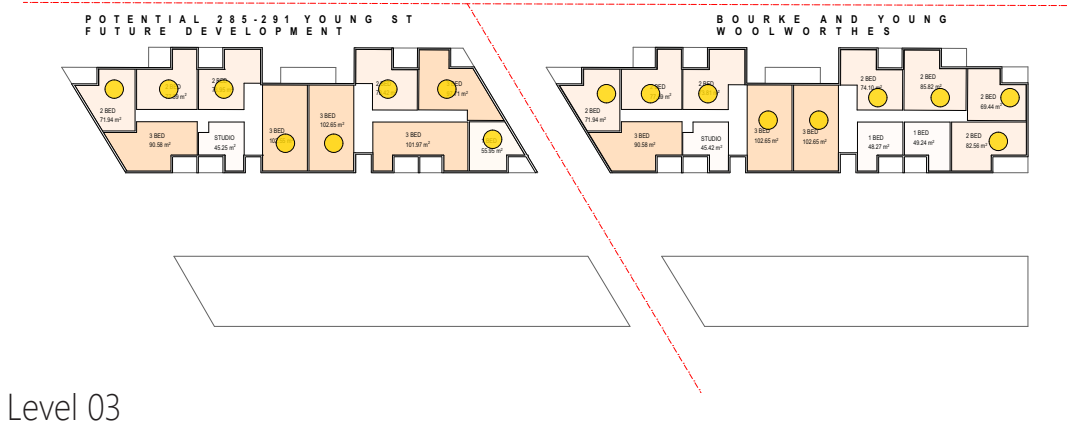
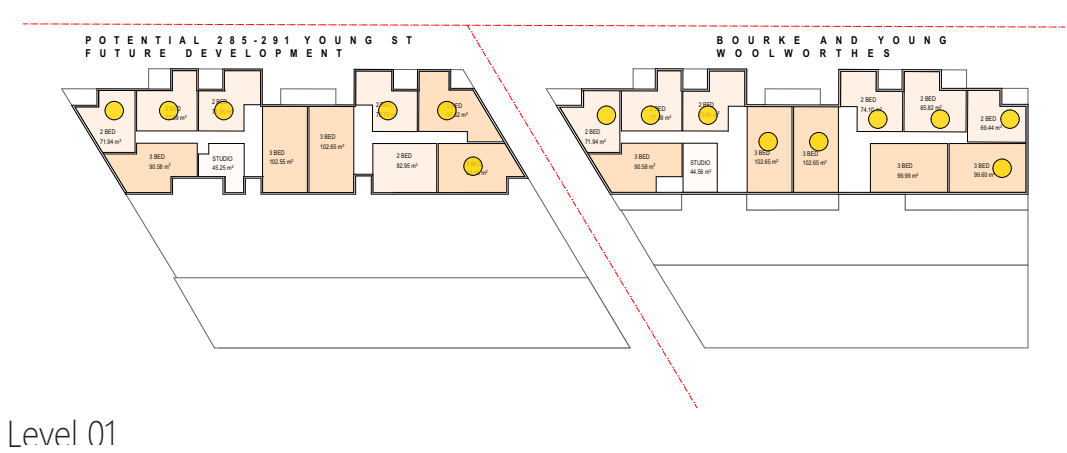
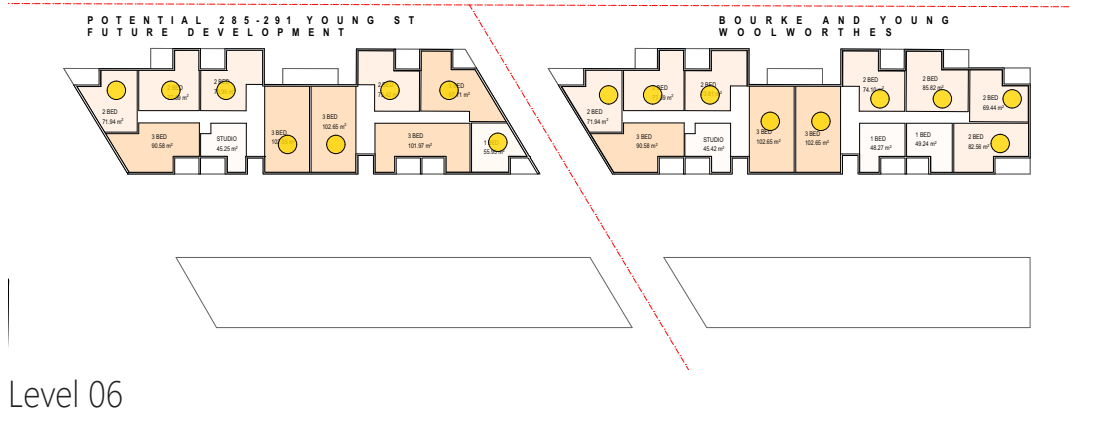
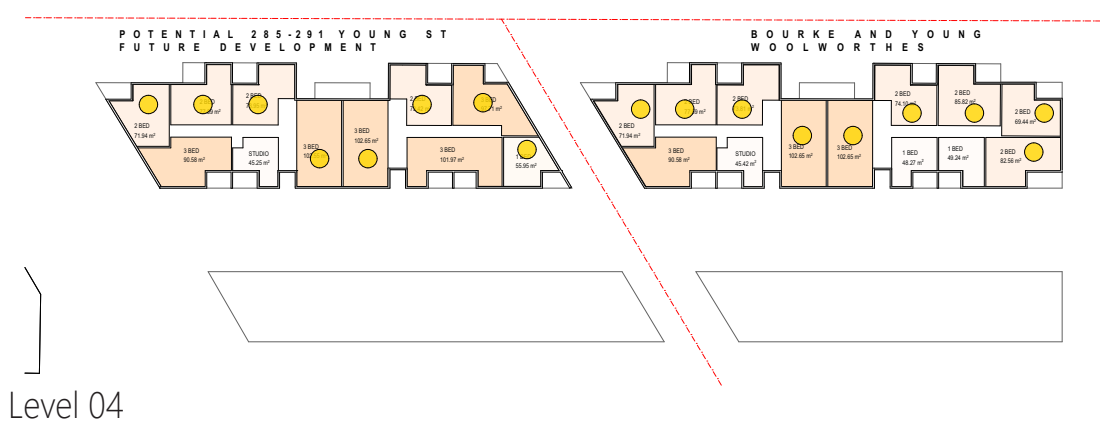
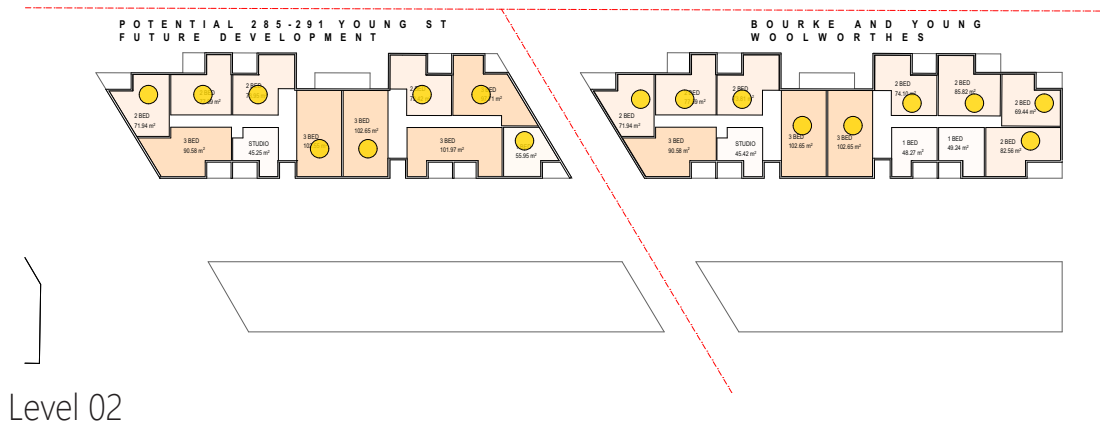
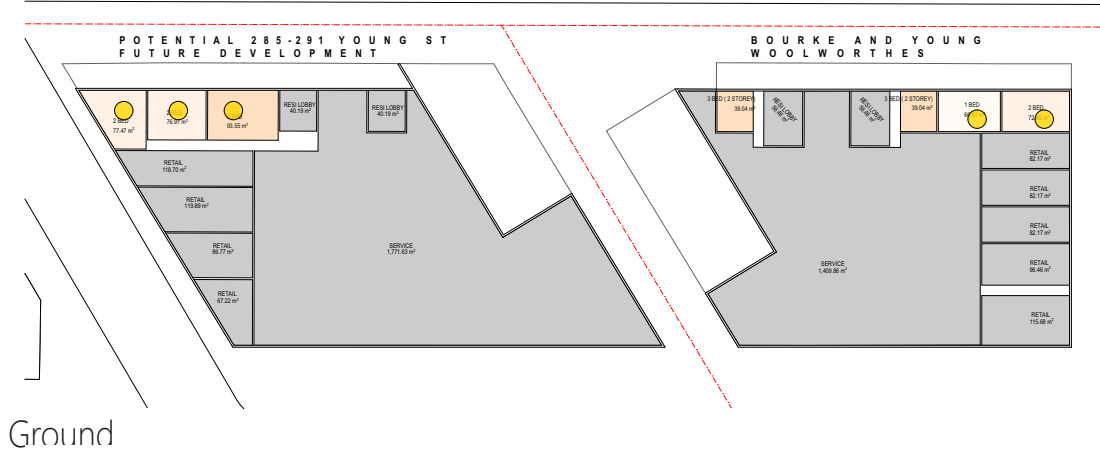


HUNTER STREET APARTMENTS



APPENDIX

FUTURE YOUNG STREET DEVELOPMENT - SOLAR ACCESS PLANS




City of Sydney has asked that any changes to the building height control for the site must ensure that in the event of redevelopment, the future Bourke and Young Street Development as well as any potential residential development on 285-291 Young Street can achieve at least 70% solar access to the apartments in accordance with the Apartment Design Guide.

This Study analyses any solar impact from the Concept Reference Scheme to those sites. Through this study, both of these sites are able to achieve 71% solar access to their apartments during Winter Solstice.

BOURKE AND YOUNG WOOLWORTH SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	13	9	69%
LEVEL 05	13	9	69%
LEVEL 04	13	9	69%
LEVEL 03	13	9	69%
LEVEL 02	13	9	69%
LEVEL 01	12	9	75%
LEVEL GL	2	2	100%
	79	56	71%

YOUNG ST FUTURE BLDG SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	11	8	73%
LEVEL 05	11	8	73%
LEVEL 04	11	8	73%
LEVEL 03	11	8	73%
LEVEL 02	11	8	73%
LEVEL 01	11	6	55%
LEVEL GL	3	3	100%
	69	49	71%

 Apartment achieving 2 hours solar access during winter solstice

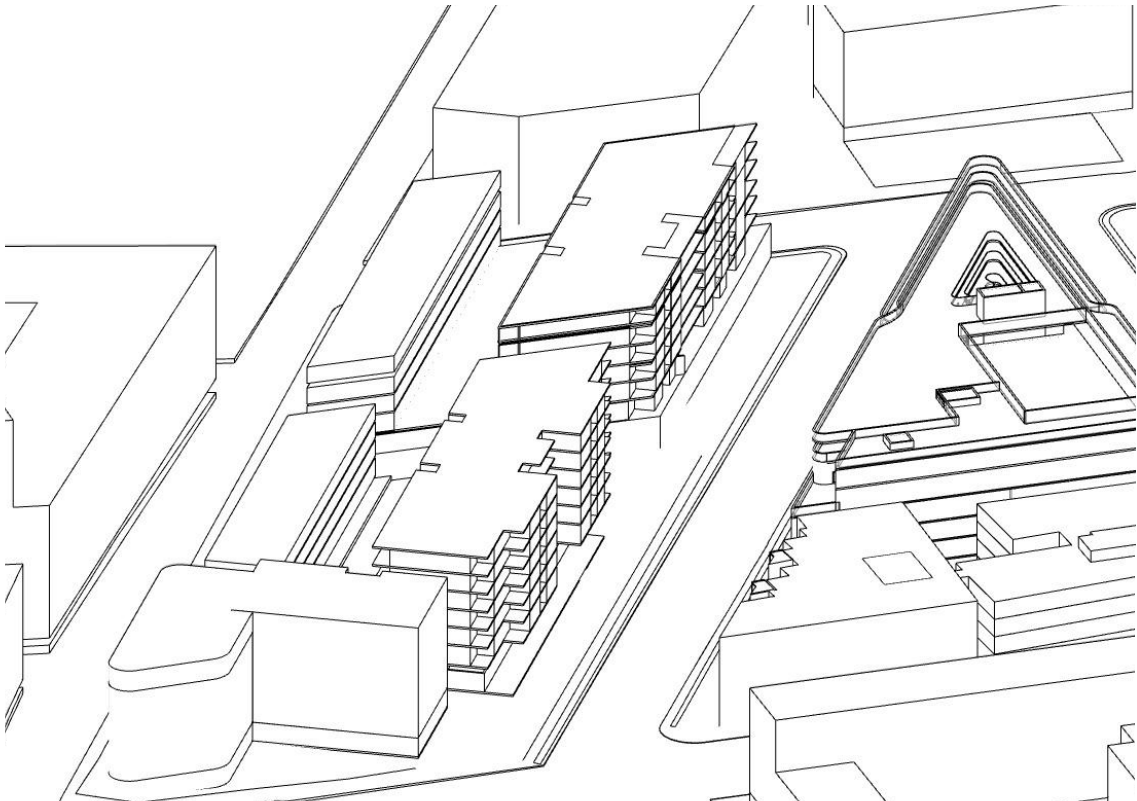




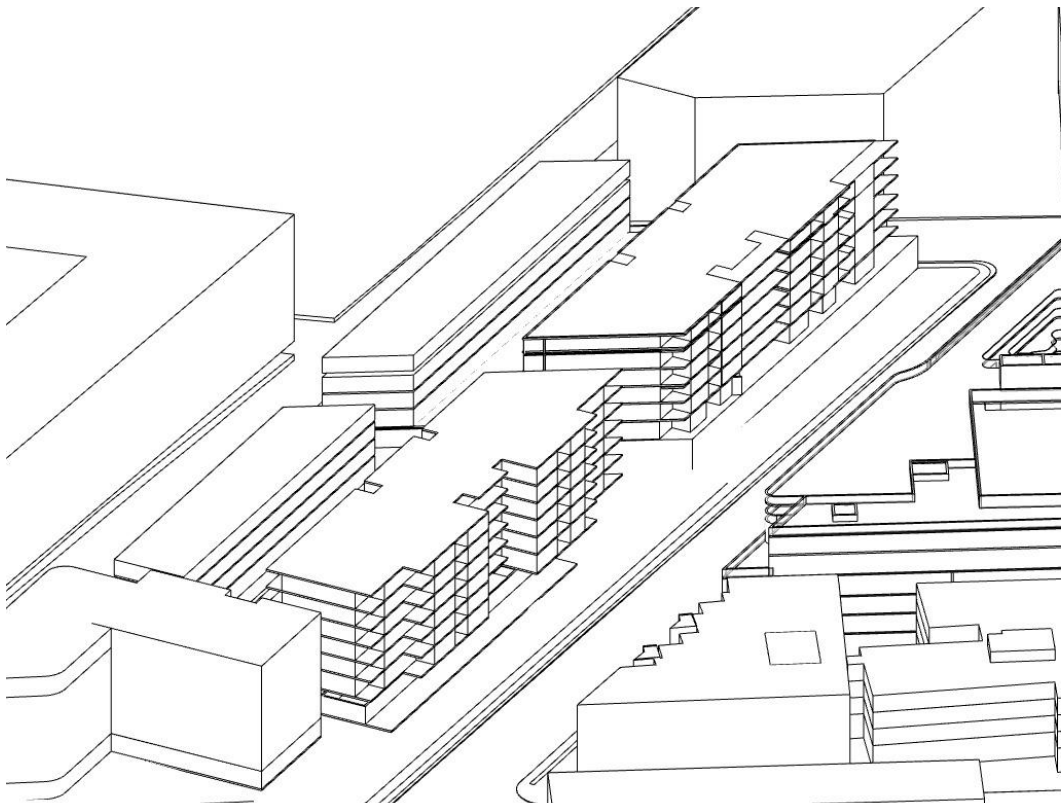
FUTURE YOUNG ST DEVELOPMENT - SUN EYE VIEWS



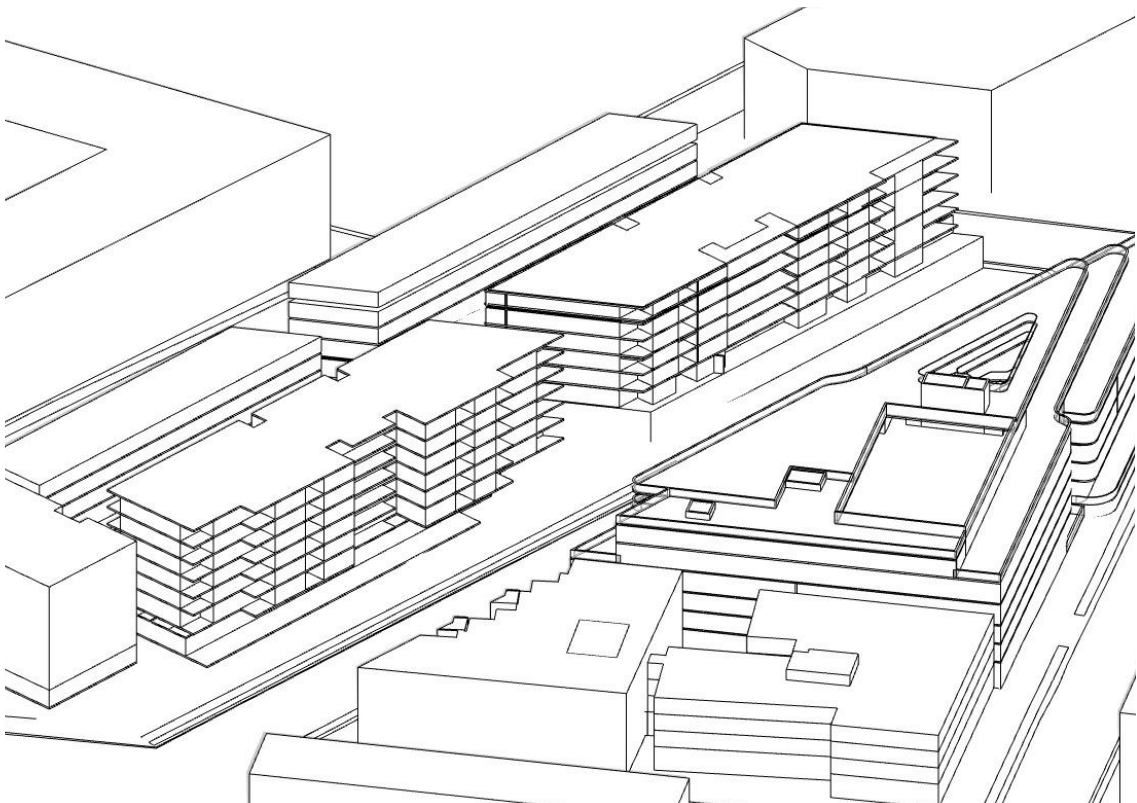
9AM



10AM



11AM



12PM

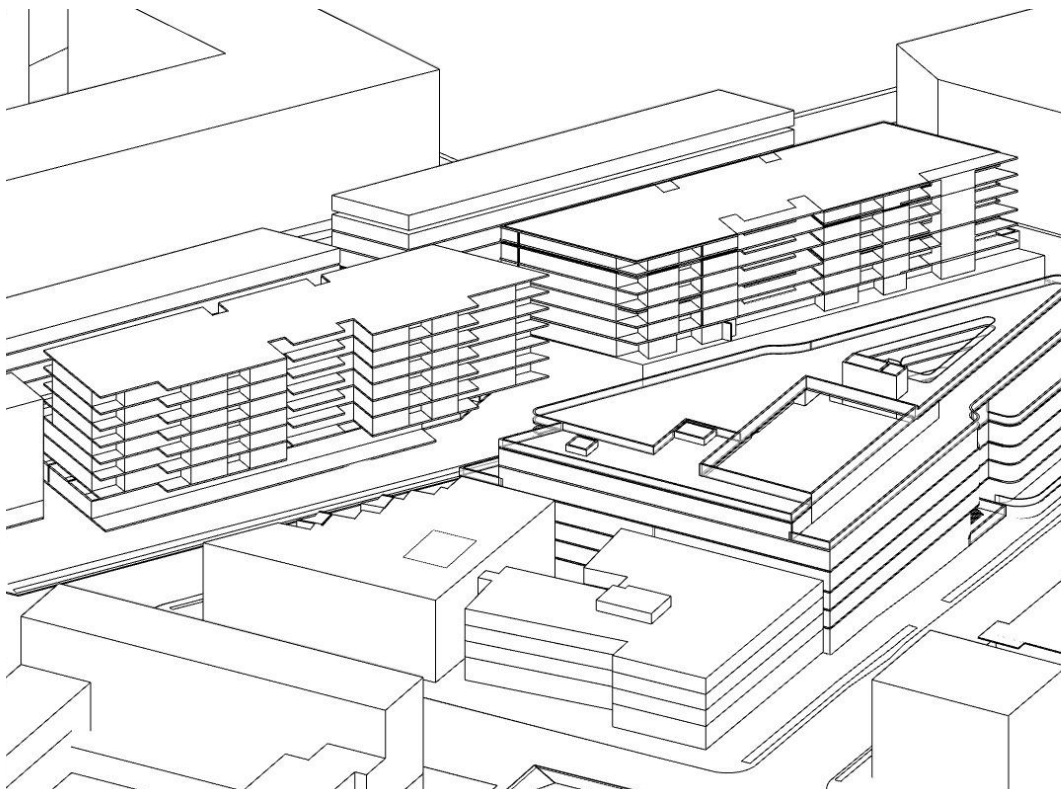
City of Sydney has asked that any changes to the building height control for the site must ensure that in the event of redevelopment, the future Bourke and Young Street Development as well as any potential residential development on 285-291 Young Street can achieve at least 70% solar access to the apartments in accordance with the Apartment Design Guide.

This Study analyses any solar impact from the Concept Reference Scheme to those sites. Through this study, both of these sites are able to achieve 71% solar access to their apartments during Winter Solstice.

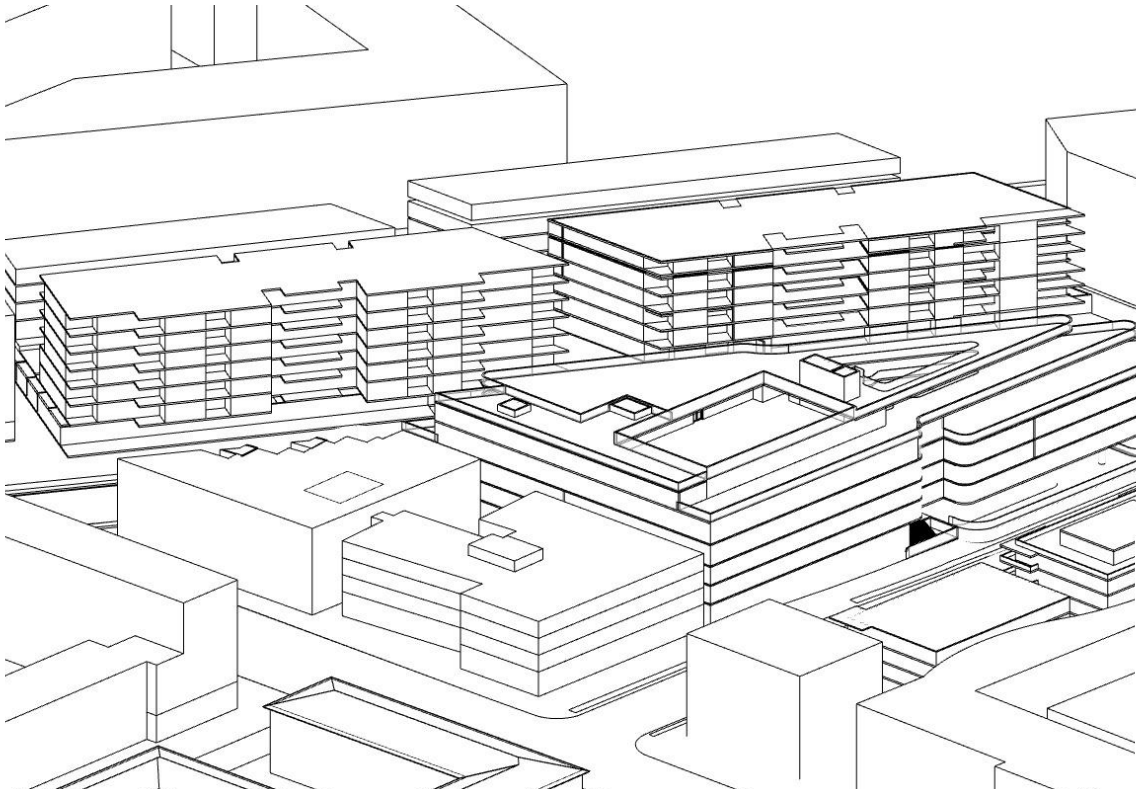
BOURKE AND YOUNG WOOLWORTH SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	13	9	69%
LEVEL 05	13	9	69%
LEVEL 04	13	9	69%
LEVEL 03	13	9	69%
LEVEL 02	13	9	69%
LEVEL 01	12	9	75%
LEVEL GL	2	2	100%
	79	56	71%

YOUNG ST FUTURE BLDG SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	11	8	73%
LEVEL 05	11	8	73%
LEVEL 04	11	8	73%
LEVEL 03	11	8	73%
LEVEL 02	11	8	73%
LEVEL 01	11	6	55%
LEVEL GL	3	3	100%
	69	49	71%

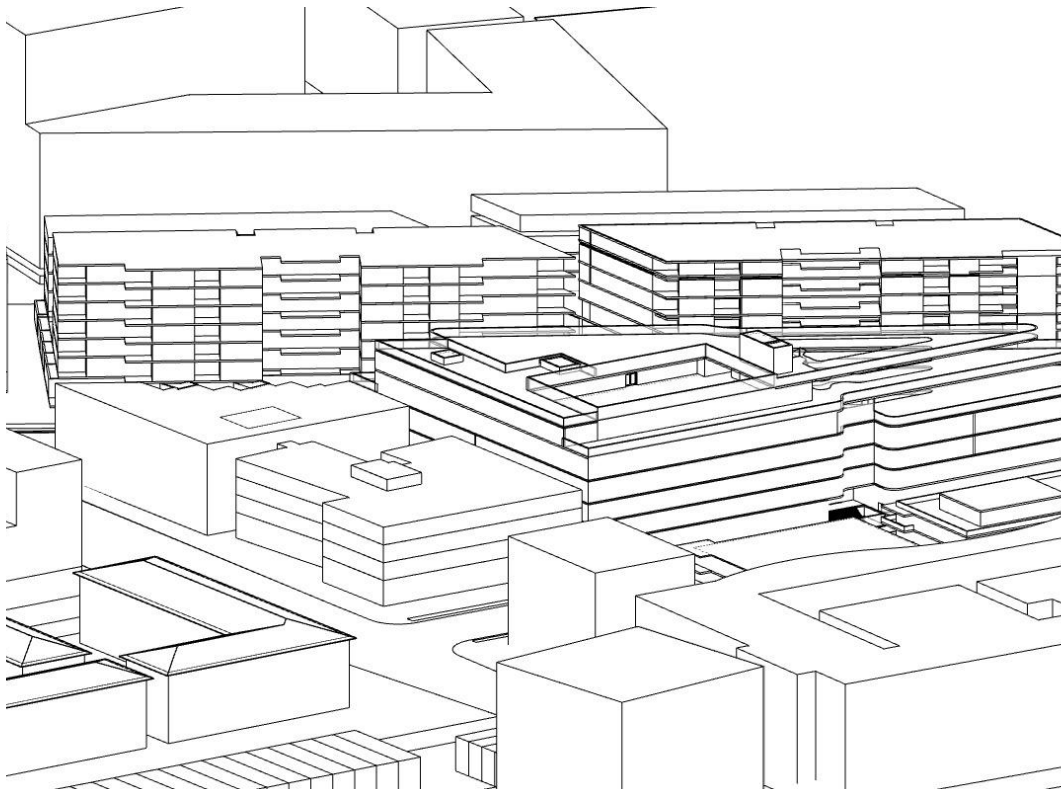




1PM



2PM



3PM

The future Woolworths development on Young Street features residential apartments. The proposed design ensures that there is no impact to that site achieving 2 hours of solar access to 70% of the apartments during winter.

Similarly, if the site at 285-291 Young Street is redeveloped as a residential building, it will achieve 2 hours of solar access to 70% of the apartments during winter.

BOURKE AND YOUNG WOOLWORTH SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	13	9	69%
LEVEL 05	13	9	69%
LEVEL 04	13	9	69%
LEVEL 03	13	9	69%
LEVEL 02	13	9	69%
LEVEL 01	12	9	75%
LEVEL GL	2	2	100%
	79	56	71%

YOUNG ST FUTURE BLDG SOLAR COUNT			
STORY	NO. OF APT	2H SOLAR ACCESS	
LEVEL 06	11	8	73%
LEVEL 05	11	8	73%
LEVEL 04	11	8	73%
LEVEL 03	11	8	73%
LEVEL 02	11	8	73%
LEVEL 01	11	6	55%
LEVEL GL	3	3	100%
	69	49	71%



OPTION 01

AS SHOWN IN COUNCIL MEETING 30/11/22



Height	32.5m
Levels	8 storeys
Basement	1 storey
Total GFA	17,159sqm (includ. circulation)
Total FSR	3.8:1 (includ. circulation)
School Open	1,857 sqm
Space	2.3sqm/student

OPTION 02

AS SHOWN IN COUNCIL MEETING 27/06/23

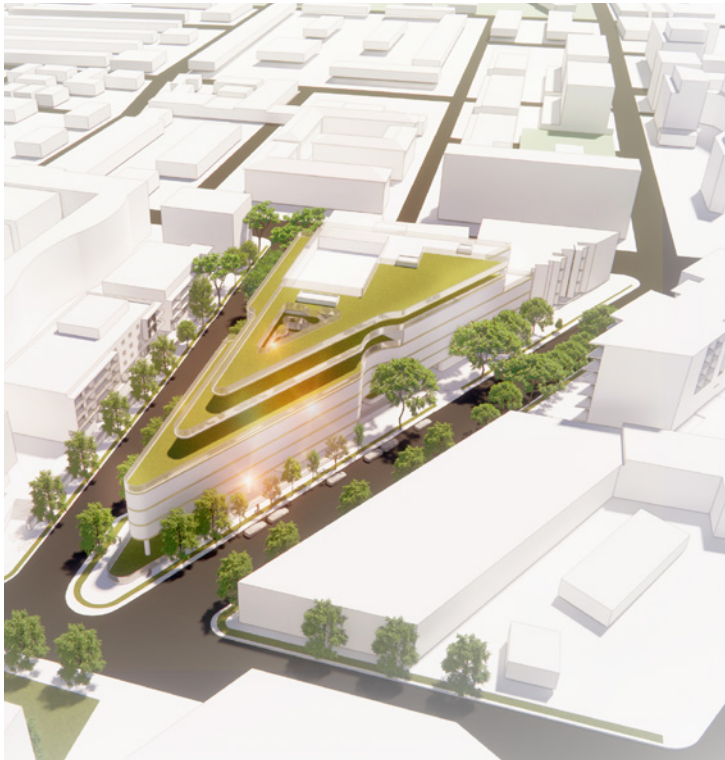


Height	27m
Levels	6 storeys
Basement	1 storey
Total GFA	13,919sqm (includ. circulation)
Total FSR	3.02:1 (includ. circulation)
School Open	3,494sqm
Space	3.16sqm/student

- Key Changes
- floors and height reduced
  - GFA reduced
  - school open space increased
  - commercial program removed

OPTION 03

AS SHOWN IN COUNCIL MEETING 05/12/23

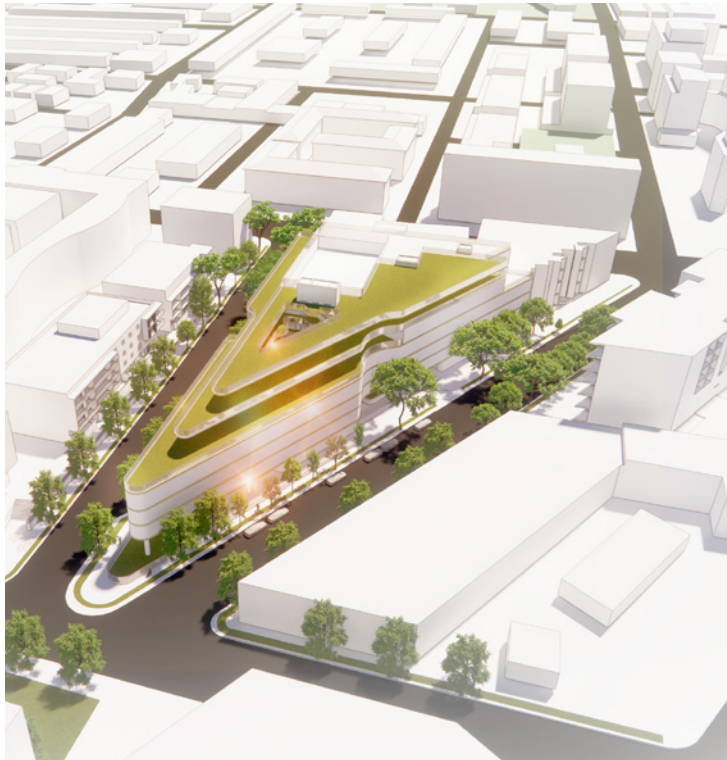


Height	27m
Levels	6 storeys
Basement	1 storey
Total GFA	13,544sqm (includ. circulation)
Total FSR	2.94:1 (includ. circulation)
School Open	4,975sqm
Space	6.2sqm/student

- Key Changes
- GFA reduced to increase school open space
  - film school area reduced, school area increased

OPTION 04

CURRENT REFERENCE SCHEME



Height	27m (w. minor encroachment)
Levels	6 storeys
Basement	1 storey
Total GFA	13,544sqm (includ. circulation)
Total FSR	2.94:1 (includ. circulation)
School Open	4,975sqm
Space	6.2sqm/student

- Key Changes
- Lift access to Level 06 added as per discussions in Council Meeting (05/12/2023)
  - Basement footprint reduced to mitigate TPZ encroachment from indicative batter zones



# APPENDIX SCHEDULE

LEVEL	G.F.A (m2) EXC SCHOOL. CIRCULATION	G.F.A (m2) INCLUD. CIRCULATION	CARS Provided
L6			
L5	1433.89	1490.99	
L4	1562.55	1733.93	
L3	2469.39	2953.70	
L2	2468.95	2976.15	
L1	2118.20	2506.71	
G	1387.91	1739.42	
B1	142.64	142.64	55.00
TOTAL	11440.89	13543.54	55.00

<b>SITE AREA</b>	<b>4611 m<sup>2</sup></b>
<b>FSR ALLOWED (+0.5 BONUS)</b>	<b>2.0 :1</b>
<b>GFA ALLOWABLE</b>	<b>9222 m<sup>2</sup></b>
<b>GFA PROPOSED (EXCL. SCHOOL CIRCULATION)</b>	<b>11440.89 m<sup>2</sup></b>
<b>FSR PROPOSED (EXCL. CIRCULATION)</b>	<b>2.48 :1</b>
<b>GFA PROPOSED (INCL. SCHOOL CIRCULATION)</b>	<b>13543.54 m<sup>2</sup></b>
<b>FSR PROPOSED (INCL. SCHOOL CIRCULATION)</b>	<b>2.94 :1</b>

EDUCATION														
TOTAL SCHOOL G.F.A. (m2) INCLUDING CORRIDOR	GLS/CLASS ROOM	PRIMARY GLS NO.	SECONDARY GLS NO.	SPECIALIST	SPECIALIST NO.	ADMIN/ STAFF	AMENITIES	CANTEEN	AUDITORIUM	BASKETBALL COURT	LIBRARY	CIRCULATION SPACE	SCHOOL OUTDOOR SPACE (ACTIVE)	SCHOOL OUTDOOR SPACE (PASSIVE)
	NLA (m2)	NO.	NO.	NLA (m2)	NO.	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	(m2)	(m2)
1130.73							100.23			757.22		57.10	1280.74	
1287.56	185.76		3.00	665.47	5.00	32.01	59.81					171.38	1258.72	
2323.00	794.24		13.00	525.46	4.00	32.01	59.81				281.87	484.31		153.91
2491.38	925.68		15.00	524.34	4.00	32.01	59.81				281.87	507.20		153.91
1697.87	742.08	12.00				29.94	48.54		108.00		281.87	388.51		153.91
1535.35	121.16	2.00				297.67			512.15			351.51	753.44	
142.64														
10608.53	2768.92	14.00	31.00	1715.27	13.00	423.64	328.20	0.00	620.15	757.22	845.61	1960.01	4513.58	461.73
TARGET GLS                  14                  31                  TARGET SPECIALIST                  13                  870SQM TARGET													TOTAL OUTDOOR	4975.31
													TOTAL OUTDOOR PER STUDENT	6.2
YEAR	GLS	SPECIALIST	NO. STUDENT											

YEAR	GLS	SPECIALIST	NO. STUDENT
K	2	0	40
1	2		40
2	2		40
3	2		40
4	2		40
5	2		40
6	2		40
7	31	13	90
8			90
9			90
10			90
11			80
12			80
<b>TOTAL</b>	<b>45</b>	<b>13</b>	<b>800</b>

FILM SCHOOL									
TOTAL G.F.A. (m2)	AMENITIES	CAFE	FILM SCHOOL CORRIDOR / LOBBY	FILM SCHOOL	FILM SCHOOL OUTDOOR SPACE	BREAKOUT ROOM	REHEARSAL/ KIDS SPACES	COMMERCIAL KITCHEN	STORAGE
	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)	NLA (m2)
360.26	28.65		78.33	230.38					
446.37			219.55	212.26	59.32				
630.70			217.77	387.38					
484.77	28.61		145.69	277.81					
808.84			163.96			72.28	318.83	131.87	66.02
204.07		38.42	165.87						
2935.01	57.26	38.42	991.17	1107.83	59.32	72.28	318.83	131.87	66.02



Suite 602, L6, 150 Karangahape Road  
**AUCKLAND** 1010  
New Zealand

Tel +64 9 281 3800  
auckland@plusarchitecture.com.au

Ground Floor, 102 Adelaide Street  
**BRISBANE** QLD 4000  
Australia

Tel +61 7 3067 3599  
brisbane@plusarchitecture.com.au

Level 1, 60 Cashel Street  
**CHRISTCHURCH** 8013  
New Zealand

Tel +64 3 337 9481  
christchurch@plusarchitecture.com.au

Suite 5, 18 Tedder Avenue  
**MAIN BEACH** QLD 4217  
Australia

Tel +61 7 5610 1913  
goldcoast@plusarchitecture.com.au

5/107 Elizabeth Street  
**MELBOURNE** VIC 3004  
Australia

Tel +61 3 8696 3999  
melbourne@plusarchitecture.com.au

160 Beaufort Street  
**PERTH** WA 6000  
Australia

Tel +61 8 6500 6490  
perth@plusarchitecture.com.au

Level 4, 222 Clarence Street  
**SYDNEY** NSW 2000  
Australia

Tel +61 2 8823 7000  
sydney@plusarchitecture.com.au

**NOMINATED ARCHITECT** (NSW)

Amit Julka 10002  
Rido Pin 11286