

# THE SITE

The site encompasses the end of an urban block and is bordered on three sides by existing streets being Grattan Street to the south, Cardigan Street to the east and Swanston Street to the west. As the site is located within an existing urban area, there is established infrastructure within the street and existing built form surrounding the site. It is important that the design on the site respects and responds to this, assisting the way the surrounding street network functions and complementing the existing character of each street interface.

The following plan illustrates the existing conditions surrounding the site in terms of the major streetscape elements, major movement patterns, the location of built form and the built form interfaces at street level. The following can be noted:

- The area is highly pedestrianised
- Pedestrian crossing of streets is generally focused around intersections however there is a crossing point at the tram stop along Swanston Street
- Pedestrian permeability within the University campus is high
- Pedestrian permeability in the urban area external to the University campus is limited with east west movement focused on Grattan Street except for a couple of minor linkages
- Retail activation is limited
- Street trees exist, particularly along Grattan Street

Given the large size of the site and its location with three street edges, there is significant opportunity for the site to provide additional pedestrian linkages.



**There is significant opportunity for the site to provide additional pedestrian linkages.**

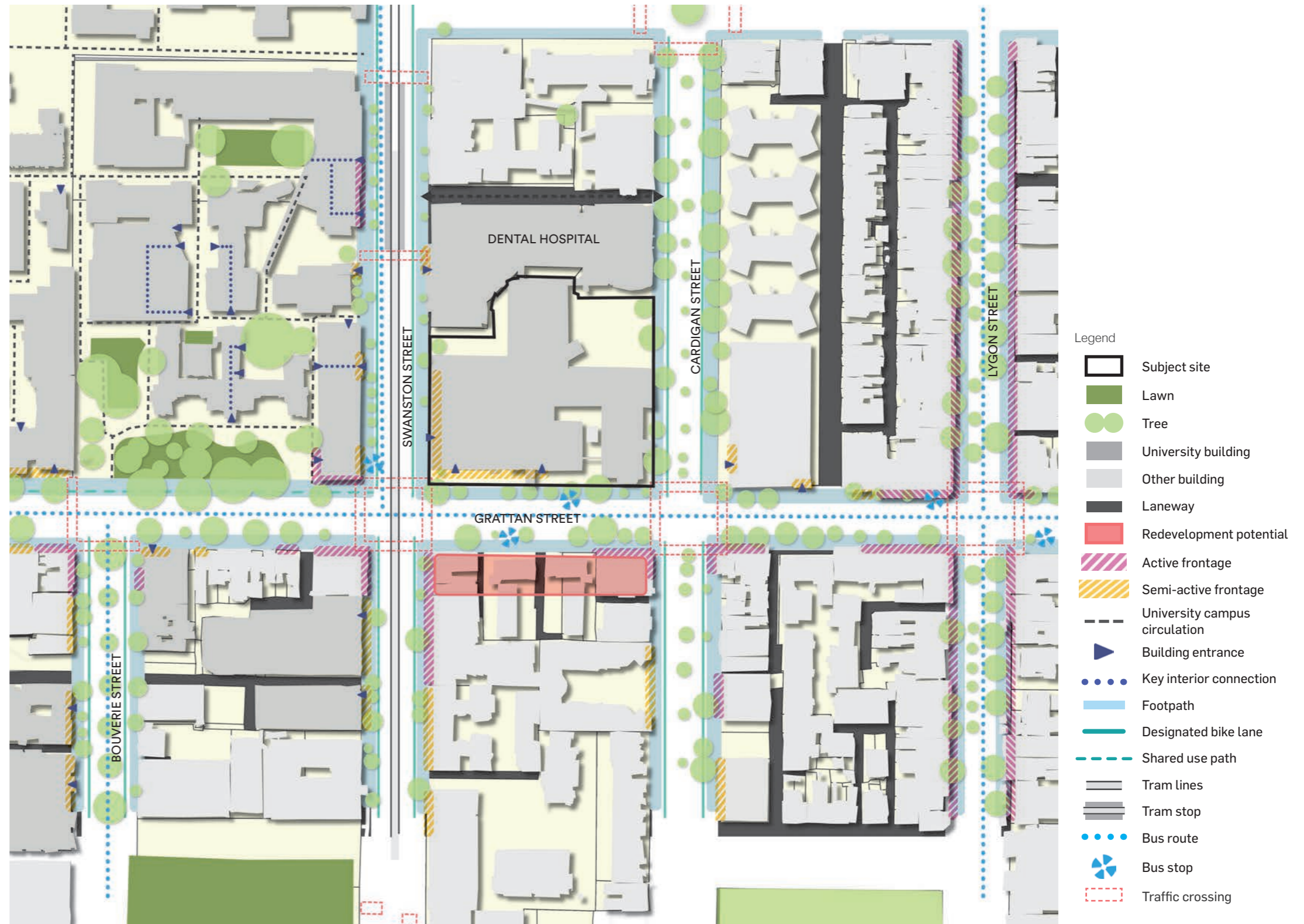


Figure 18 Site context



# STREETSCAPES

## SWANSTON STREET

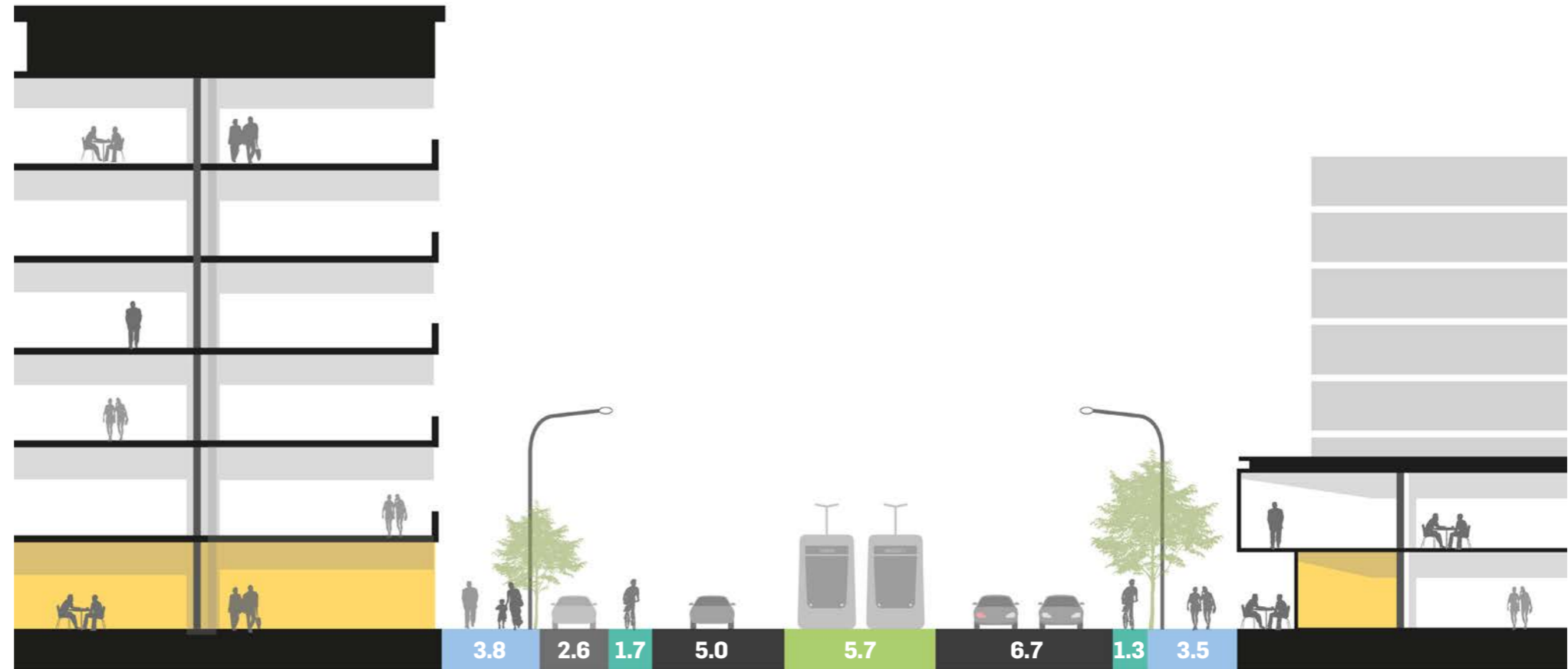
Of the site's three interfaces, Swanston Street is the most publicly active setting defined by a strong presence of institutional buildings with sheer street walls.

Swanston Street is a key north-south tram route and pedestrian spine and provides for on-street cycle movement. Accommodating for tram, vehicles and some on street parking leaves narrower pedestrian footpaths of 3-4m. These factors also contribute to a lack of street trees in comparison to Grattan and Cardigan streets.

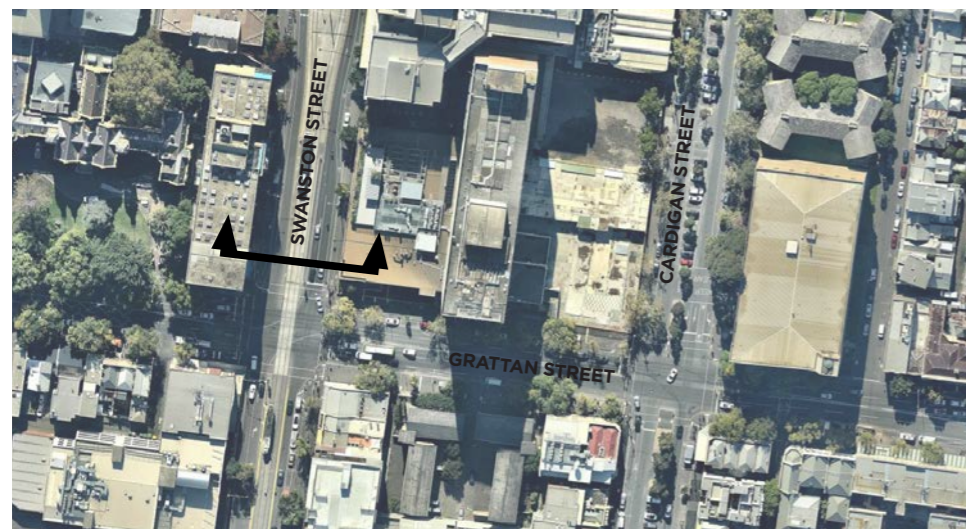
Much of the street is occupied by university buildings, the Dental Hospital and student accommodation. Buildings are commonly 7-8 storeys in heights with no street setbacks, leaving a sheer street wall.

The 757 Swanston Street Building immediately opposite the subject site provides a semi-active interface with interaction into the student co-op store. Food and beverage amenity is found south of Grattan Street and further north beyond the dental hospital.

There is a high pedestrian flow in this streetscape with many university functions present in the area and a super tram stop north of the subject site.



Swanston Street cross section



- Legend**
- Footpath
  - Tram corridor
  - Bicycle Lane
  - Parking
  - Road
  - Active Edge
  - Semi Active Edge
  - Inactive Edge



Swanston Street looking north.



Swanston Street looking south.



## GRATTAN STREET

The functionality of the Grattan Street streetscape links both the Lygon Street retail precinct and Carlton residential environment to the strong institutional presence of Swanston Street and the University.

There is a general lack of activity occurring in this segment of Grattan Street due to the inactive frontages of the Royal Women's Hospital site and generous building setbacks from the street.

The northern side of the street has limited interaction between the streetscape and buildings. The existing building has a Grattan Street entrance, however its generous setback from the street lessens its streetscape activity. The redundant Royal Women's Hospital building occupies the street for the remainder of the block.

The existing street wall is significantly higher on the north side of the street.

Large street trees occupy both sides of the street, some with interlinking canopies creating a distinct green character.

Grattan Street is a key east west corridor with vehicular traffic present, with on-street parking and bus stops on both sides of the street. There is no designated bike line however footpaths have generous 6 metre widths.

There is opportunity for this street to be significantly enhanced with the introduction of the Melbourne Metro Rail Project.



Grattan Street cross section



Cross section key plan.

### Legend

- Footpath
- Tram corridor
- Bicycle Lane
- Parking
- Road
- Active Edge
- Semi Active Edge
- Inactive Edge



Grattan Street looking west.



Grattan Street looking east.



## CARDIGAN STREET

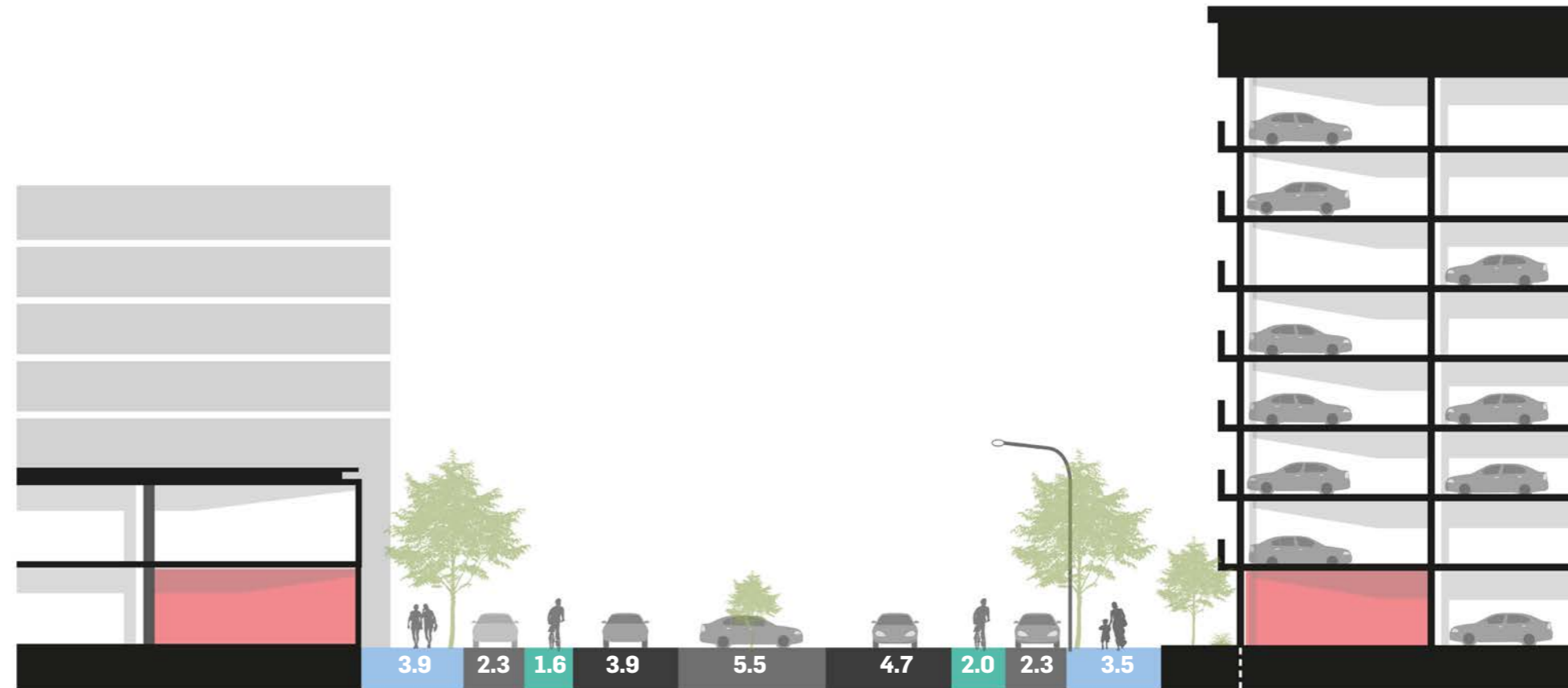
The streetscape of the Cardigan Street interface is one of transition between the lower scale residential pockets of Carlton to the institutional presence of the Parkville National Employment Cluster.

The street consists of generally inactive interfaces due to the current status of the subject site, and the 27m tall car parking structure occupying the eastern corner of the street.

Taller built form elements on the Grattan Street corner of Cardigan Street begin to transition down to 2-3 storey residential buildings on the eastern side of the street. The western side of the street mostly consists of two storey buildings at the street interface with recessed taller elements of the Royal Women's Hospital building and the Dental Hospital.

The 30m wide street consists of road infrastructure with on street parking, median strip parking and the parking structure on the corner. Designated bike lines run both north and south on the road. Footpaths of less than 3m provide local access for pedestrians.

Large mature street trees contribute to a generally green character along the street.



Grattan Street cross section



### Legend

- Footpath
- Tram corridor
- Bicycle Lane
- Parking
- Road
- Active Edge
- Semi Active Edge
- Inactive Edge



Cardigan Street looking south.



Cardigan Street looking north.



## DENTAL HOSPITAL INTERFACE

The Royal Melbourne Dental Hospital sits to the north of the CCI site. The current building on the site has a maximum height of 8 storeys. The building transitions to the Cardigan Street interface to 2 storeys.

The relevant Design and Development Overlay (DDO45) that controls development on the Dental Hospital site encourages building heights to 9 storeys to reinforce the importance of Swanston Street as a major thoroughfare and entrance to the CBD. There is potential for more intense development on the site in accordance with DDO45.



**Interfaces of future development should each respond to the three unique streetscape conditions.**

### KEY DIRECTION:

Provide a streetscape response that is tailored to the unique edge environments that the site presents including by offering a more considered edge to Cardigan Street.

Provide pedestrian permeability on the site, including east west connectivity between Swanston Street and Cardigan Street.

Provide a high level of connectivity to Grattan Street as the major east west connector.



Dental Hospital - Swanston Street interface.



Dental Hospital - Cardigan Street interface.



## SITE HISTORY

The CCI site has a rich colonial history including being established as part of the northern Hoddle subdivision, early life as the Lying-in Hospital and its more recent use as the Royal Women's Hospital.

The site was developed in 1858 for the Lying-in Hospital. In 1884, the hospital became known as the Women's Hospital, gaining the 'Royal' title in 1954. The former Royal Women's Hospital was Australia's first specialist hospital dedicated to women's health.

The hospital was the first Australian hospital to train nurses in the late 1850s and maintained a close relationship with the University of Melbourne medical school established in 1862. The hospital was the first in Melbourne to house a clinical professor and is renowned for its ground-breaking research. Of note, in the early 1970s, the Royal Women's Hospital pioneered the way for IVF with Australia's first IVF pregnancy in 1979.

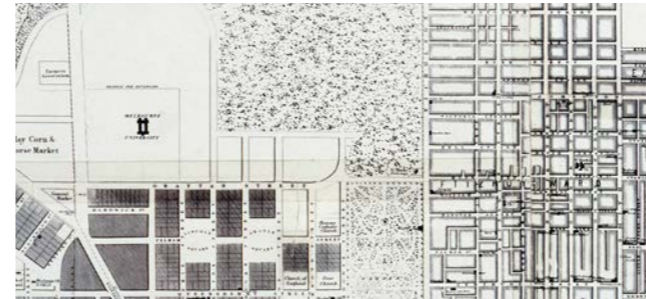
In 2008, the hospital moved to a new purpose-built development in Parkville. Since its move, the eastern portion of the site has been partially demolished, with University activities remaining in the existing buildings to the west of the site.

The following images provide a summary of the post-colonial built development on the site. These images show the change in built form on the site over that time. There is opportunity to tell the story of the site's evolution through interpretive elements in the ultimate design on the site. There are two footprint elements that have been identified from the current and former site form to signify the different phases in the site's history. These are identified in the diagrams adjacent. Further to this, there is opportunity to further reflect the history of the site through the public realm design.

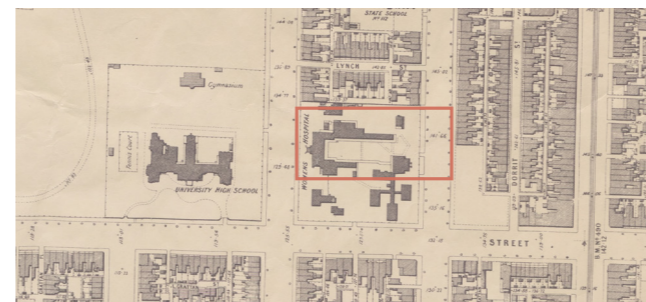
1837



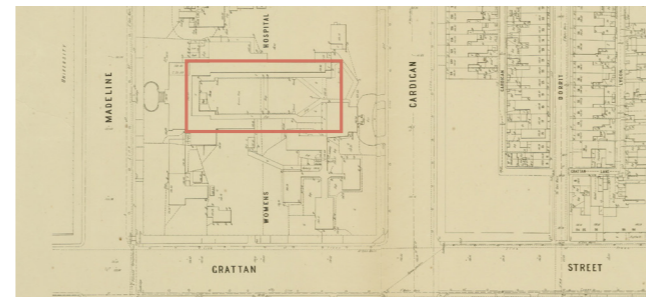
1865



1896



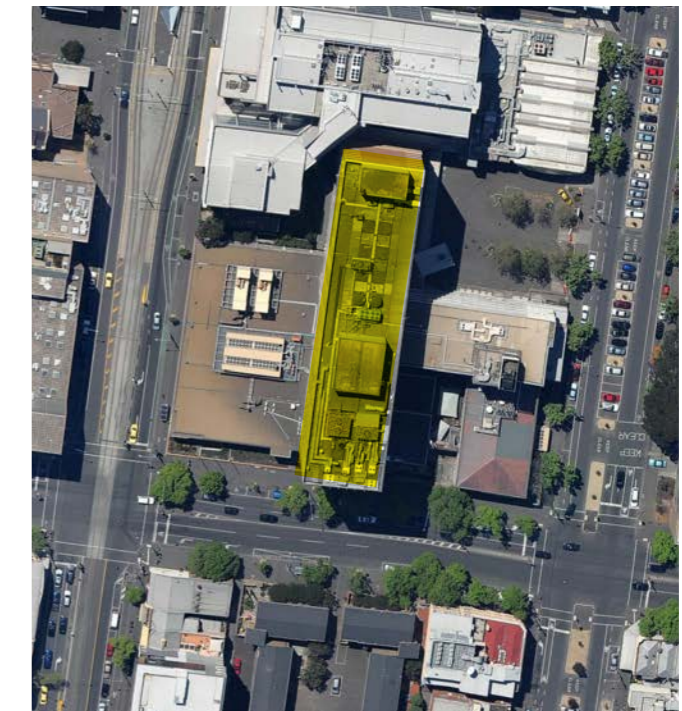
Post colonial built development of the of the site:



## KEY DIRECTION:

Offer interpretive measures to provide a link to the history of the site and its transition over time.

Current





HISTORICAL IMAGERY OF THE SITE









# PART D

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REALISING THE  
PRECINCT VISION



# REALISING THE PRECINCT VISION

Built outcomes and design can support or hinder the success of any urban environment. To understand the design challenges and opportunities for this project and the wider precinct, the precinct and project visions or aspirations must be interrogated.

## THE PARKVILLE NATIONAL EMPLOYMENT AND INNOVATION CLUSTER

The CCI is located within the wider Parkville NEIC which has a role as a major centre for globally significant research and an incubator of ideas, creativity and critical thinking. The success of the precinct relies on the ability to enhance collaborative leadership, attract talented individuals and organisations, and maximise investment and growth of key institutions and businesses.

The design of the precinct will play a key role in supporting these initiatives.

## THE UNIVERSITY OF MELBOURNE PARKVILLE CAMPUS

The CCI will become part of the University of Melbourne's Parkville Campus and it must seamlessly integrate with the existing campus and complement the existing and planned future campus.

Our Campus in the 21st Century (OC21) is the University of Melbourne's strategic plan which enable the University to guide projects, initiatives and partnerships.

Tom Kvan, Pro Vice Chancellor, Campus and Global Developments explains the concept: 'The big opportunity around campus planning is to turn insular buildings into prisms to see our work. A looking glass is a good metaphor. Lewis Carroll's Alice looks through a looking glass and sees the world differently, challenging what she assumed was the only way. We are creating a new prism or lens to change how people see.'

The five major themes of OC21 are:

- Technology and Tradition
- Synergy and Innovation
- Quality Experiences
- A Culture of Inclusion
- Spaces and Places

OC21 has been referenced during all phases of the CCI project to drive the design outcome.



Figure 19 Precinct vision diagram



## CARLTON CONNECT INITIATIVE

The Carlton Connect Initiative (CCI) is driven by the University of Melbourne and lays the foundations for Australia's leading innovation precinct on the former site of the Royal Women's Hospital.

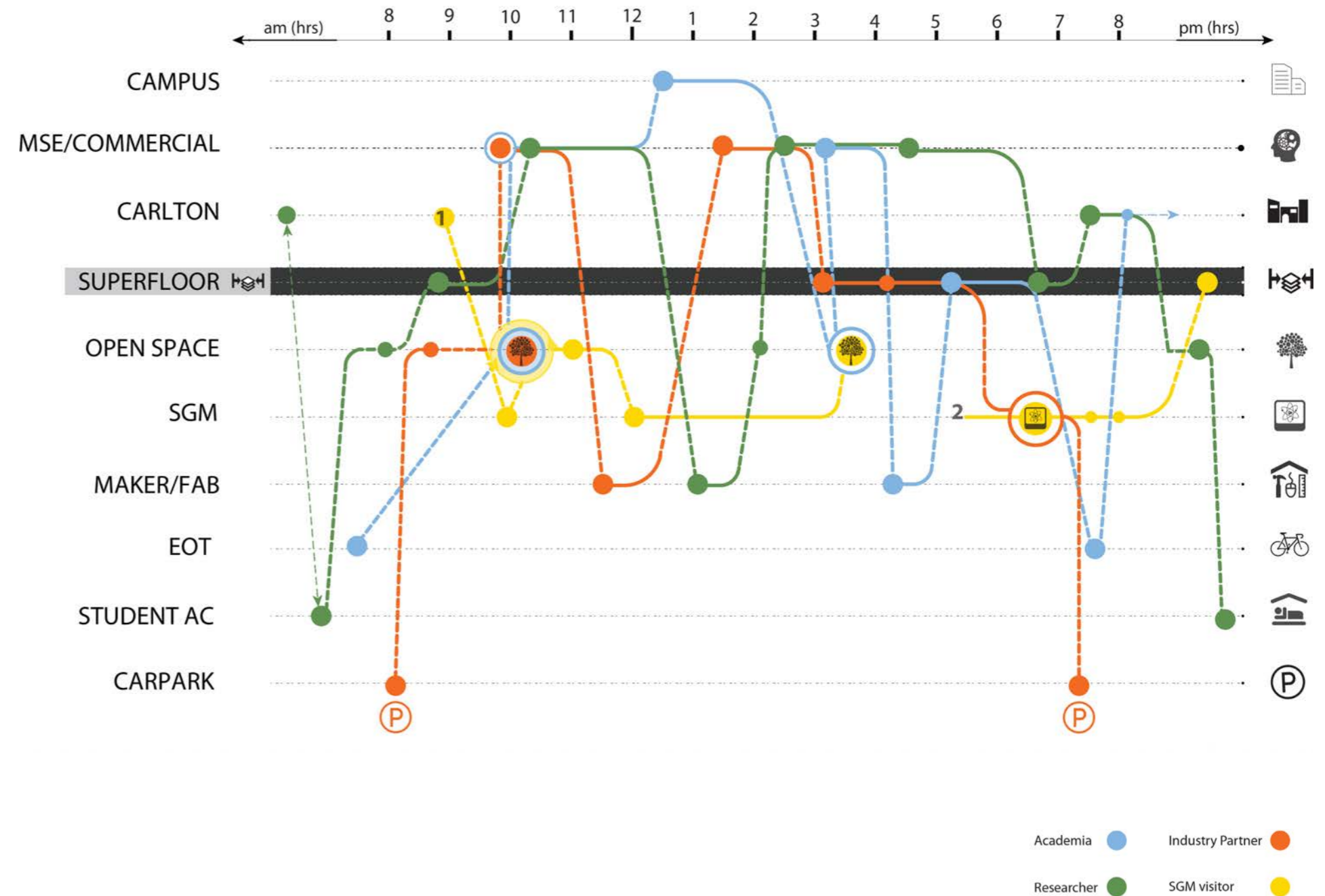
CCI promotes partnerships between various sectors and disciplines, facilitating collaboration between innovation partners and the social and physical sciences to enhance the outcomes of research.

It is envisaged that the precinct will provide facilities where university staff, students, government researchers, established local and international businesses and start-up companies can rub shoulders and collaborate on generating breakthrough new ideas and taking them to market.

To achieve the vision, the University's aims to:

- create a collaborative and innovative community that includes co-location of start-ups, students and community groups as well as researchers, industry and government with spaces that foster support and partnerships that reflect the project's commitment to sustainability and innovation;
- ensure public and private sector organisations with complementary perspectives and disciplinary strengths, are selected as tenants and are committed to achieving the objectives of the Initiative;
- build long-term industry partnerships to help deliver significant economic impact that improves the competitive advantage of Australian businesses in the global knowledge economy;
- facilitate and improve the ways in which the University engages with external partners and the community by creating a vibrant, inclusive and creative network that is flexible and adaptable facilitating the connection of people, ideas, conversation and wider critique within the local and international communities;
- strengthen the translation of University research into outcomes that are useful to society, including contributing to societies' grand challenges of sustainability and resilience, as well as attract further investment;
- enable the pursuit of challenges that cannot be solved in geographic isolation and which may require multidisciplinary perspectives and complementary skills; and
- enrich student learning by supporting the development of entrepreneurial and industry relevant skills and capabilities among students.

The following diagram demonstrates the relationships between the uses on the site over time.



Through CCI, the University of Melbourne seeks to:

- Drive multidisciplinary partnerships between research, industry, government, entrepreneurs and the social sector
- Attract world-class talent
- Encourage a community committed to sharing knowledge and exploring new terrains
- Break down the barriers between disciplines, sectors and geographies
- Program diverse activities designed to drive collaboration

CCI forms a fundamental part of the growing innovation precinct of Parkville, which supports interaction between sectors, disciplines and geographic boundaries to foster an environment where people work together in creative and entrepreneurial ways.

The site will be redeveloped to the highest design and sustainability standards. The development will provide:

- A place for people to work: ranging from students and start-ups to large businesses and research teams
- A place for people to live: comprising accommodation for graduate students and visiting academics
- Open space for people to enjoy: with active laneways leading to a large central outdoor space
- Spaces for events: including hackathons, floortalks, festivals, exhibitions, workshops and ThoughtLABs
- Complementary retail offerings: including shops and cafes

Ultimately, CCI will provide approximately 50,000 square metres of offices, labs, co-working and event spaces, enabling the co-location of more than 2000 leaders from research and education, multinationals and SMEs, government and the creative communities.

## PHYSICAL OUTCOMES THAT SUPPORT THE VISION

The following design objectives support the delivery of the vision for the project, the University and the precinct:

- An exceptional architectural outcome that responds to the innovative nature of the precinct and creates an environment that is of the highest quality
- Intensity of uses – critical mass and activity
- A high-performance ground plane that provides:
  - access to the range of different facilities on the site as well as permeability through the site
  - amenity and publicly accessible spaces to support the range of primary functions
  - servicing and loading
  - a high degree of activation of the public realm
- Vertical integration and permeability, including physical and visual
- Ability to accommodate a number of different elements and uses on the site, all with dedicated access points and entries and arranged to provide overall integration, with adequate separation where required
- Opportunity for some large floor plates to support the university functions
- A high-quality environment with positive outlook and internal green amenity including a central open space as the focal point of the development with a number of other publicly accessible spaces and connections
- Showcased environmentally sustainable initiatives that are embedded in the project to improve environmental performance as an education tool or demonstration
- Visible technologies and leading edge innovations within the public realm and buildings that promote advanced use of technologies within “smart” environments



# PART E

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## DESIGN PRINCIPLES

# KEY DIRECTIONS: RECAP

## BUILT FORM

A tower form building typology that provides a **sheer street wall** and frames the streetscape will be consistent with the typology that is emerging within the Parkville NEIC. This built form outcome is considered appropriate on the CCI site to tie the site in with the rest of the precinct.

The built form should respond to the **'gateway'** nature of the site through architectural expression and form particularly toward the Swanston Street and Grattan Street junction.

Although there is precedent for higher building forms in the area, building height on the CCI site should be limited to ensure protection of the helicopter flight path to the hospital.

## GROUND LEVEL ACTIVATION

The **mix of uses** on the site should complement and contribute to the wider precinct and the Parkville NEIC.

A **high intensity** of uses should be incorporated to make the most of the significant opportunity at the site.

The CCI development should respond to the opportunity within this precinct to support and demonstrate innovation within the built environment which could be represented through the architecture or through ESD initiatives.

The design should promote CCI and University function within the community through the use of the ground plane to **showcase** some of the **key functions** of the project.

Provide a land use mix that supports the integration of the university into the city providing improved connections between the community and the University.

Provide a **flexible** building form that accommodates the knowledge uses and outwardly expresses this.

## CONNECTIVITY

Design on the site should maximise the pedestrian experience and provide a high level of **pedestrian permeability and enjoyment**. Linkages to all areas within the site and through the site should be provided. Pedestrian linkages should be provided to the three street edges and include a connection to the north of the site as a cross block link to contribute to wider pedestrian permeability.

**Sustainable transport** should be promoted to support the innovation themes and vision for the project which includes the provision of cycle end of trip facilities that make use of existing infrastructure surrounding the site. This includes limiting car parking on the site for private vehicles.

## STREETScape

Provide a streetscape response that is tailored to the **unique edge environments** that the site presents including by offering a more considered edge to Cardigan Street.

Provide pedestrian **permeability** on the site, including east west connectivity between Swanston Street and Cardigan Street.

Provide a high level of connectivity to Grattan Street as the major east west connector.

## HISTORY

Offer **interpretive** measures to provide a link to the history of the site and its transition over time.

## PUBLIC REALM

The CCI project should provide a small scale space to support the functionality of the precinct. This space should be **activated** and **well connected** to the surrounding street network.



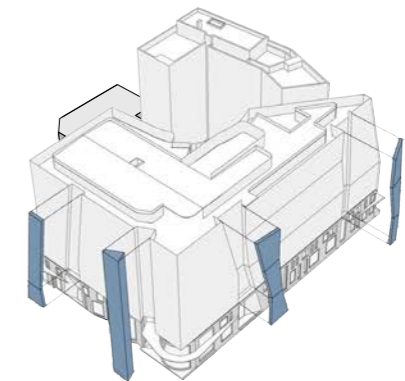
# DESIGN PRINCIPLES

Based on the contextual analysis and design process, the team have developed the following design principles to communicate the design intent for the project.

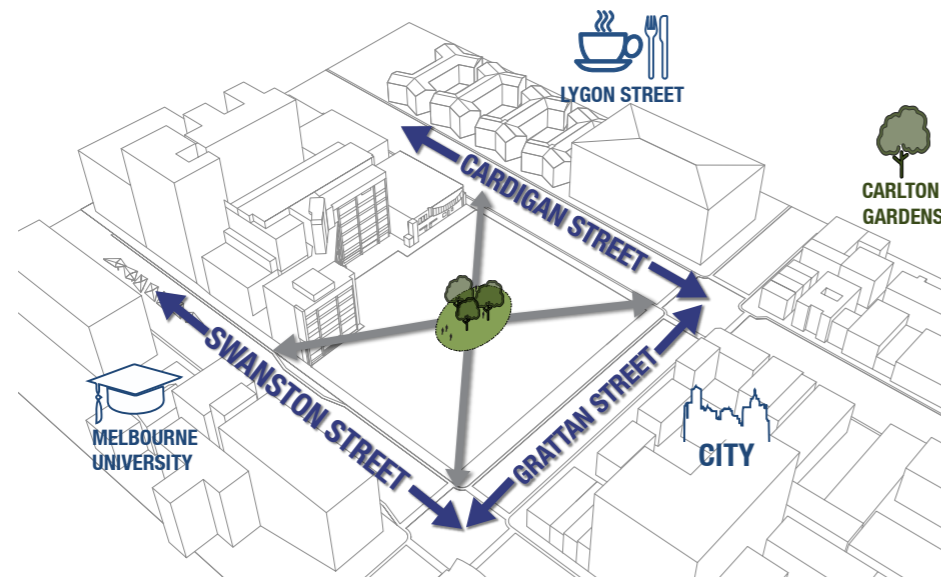
## 01. BUILT FORM THAT REFLECTS THE STRATEGIC IMPORTANCE OF THE PRECINCT



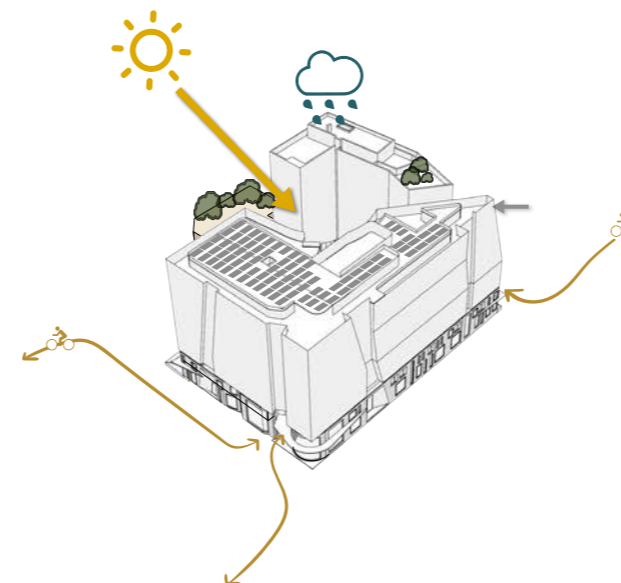
## 02. EXCEPTIONAL BUILT FORM THAT CREATES A STATEMENT



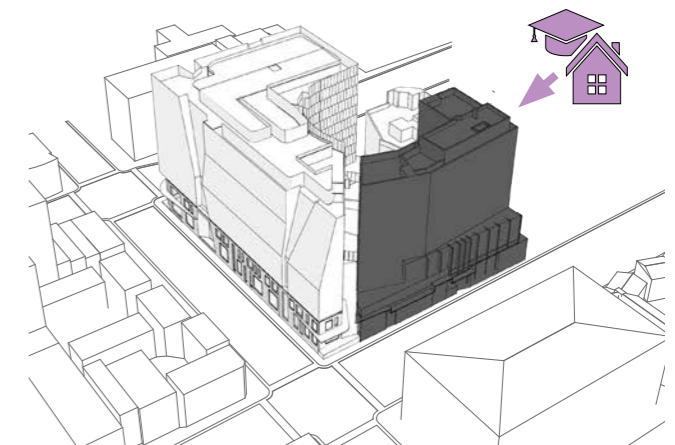
## 03. ENHANCED PUBLIC REALM AND OPEN SPACE



## 04. LEADING INNOVATION AND EMBEDDED ESD

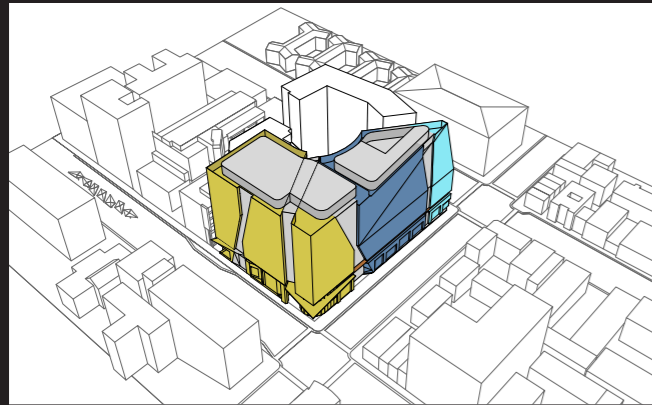


## 05. LIVING AND LEARNING



## PRINCIPLE 1:

### BUILT FORM THAT REFLECTS STRATEGIC IMPORTANCE OF THE PRECINCT



It is important that the form of the building sets up a relationship with the surrounds in terms of massing but also that it accommodates the varied uses that are included in the Carlton Connect Innovation Precinct.

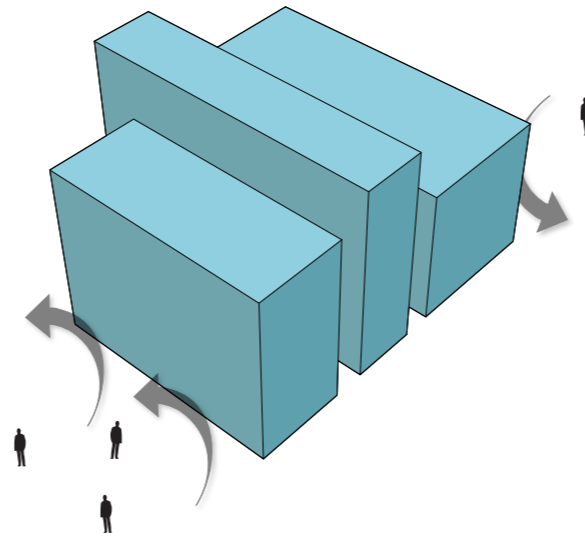
The proposed design maintains an upper height limit that not only respects the helicopter flight path requirements but also ensures the commerciality and future flexibility of the development. The height and massing is reduced at the northern part of the site to allow for improved solar amenity.

The form and envelope achieve:

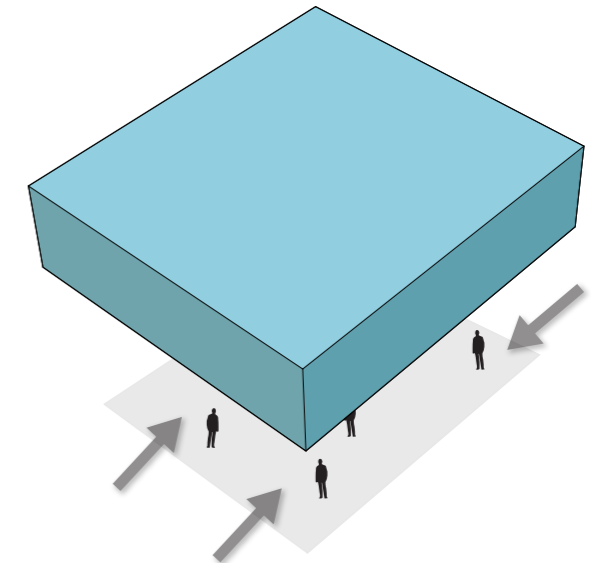
- Connected programmed space vertically and horizontally throughout the site
- Merging of the scales of University campus and the Carlton grain
- Components of varying scales, assembled to create a rich and varied experience throughout the site
- Optimised northern aspect to bring light into the open space
- Laneways maintained through the site to open vistas and paths of pedestrian navigation

## OVERALL APPROACH TO SITE FORM

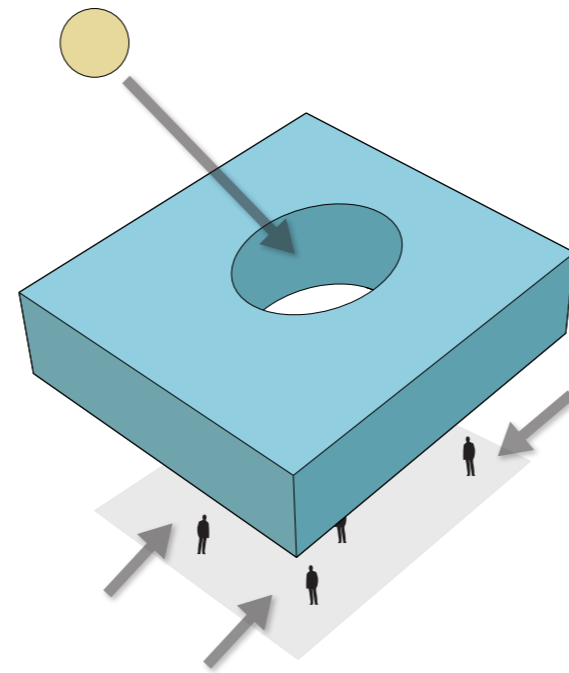
The revised built form approach allows a more innovative and site responsive form.



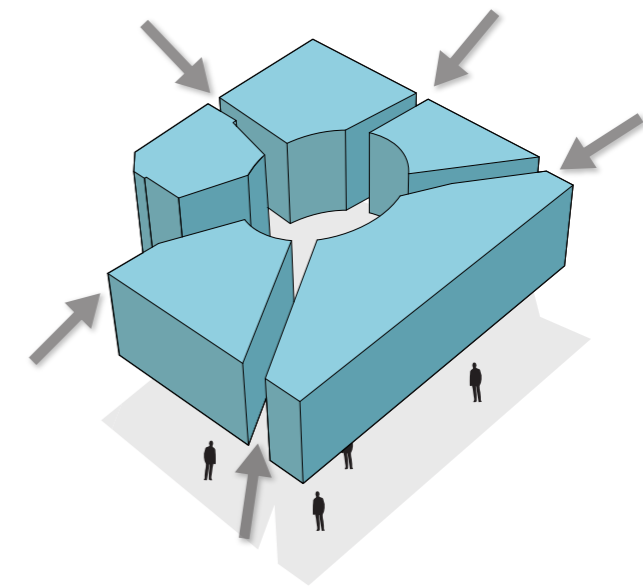
Constrained movement created through DPO10



Opportunity to flip and lift built form to provide permeable ground plane



Creation of central void to allow solar penetration and provide a central focal point

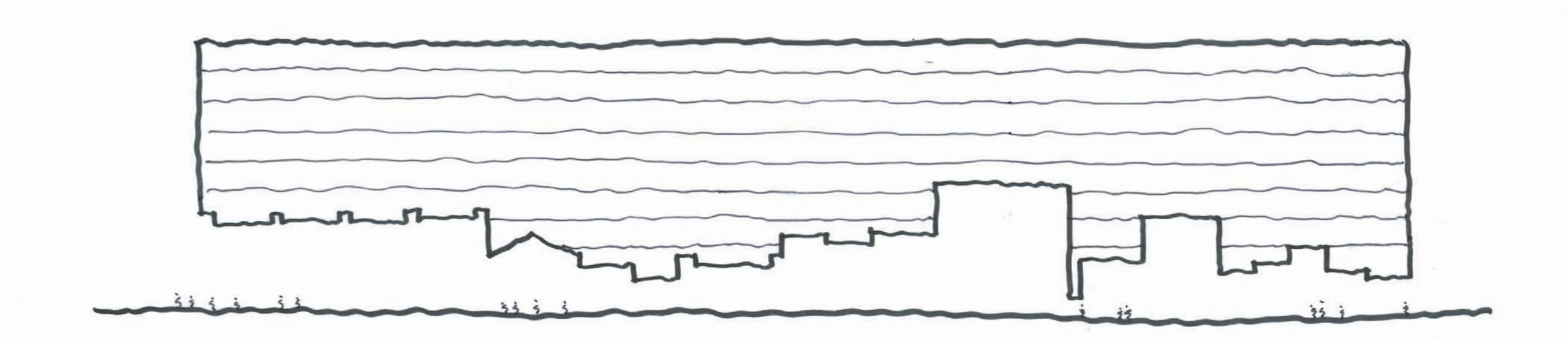
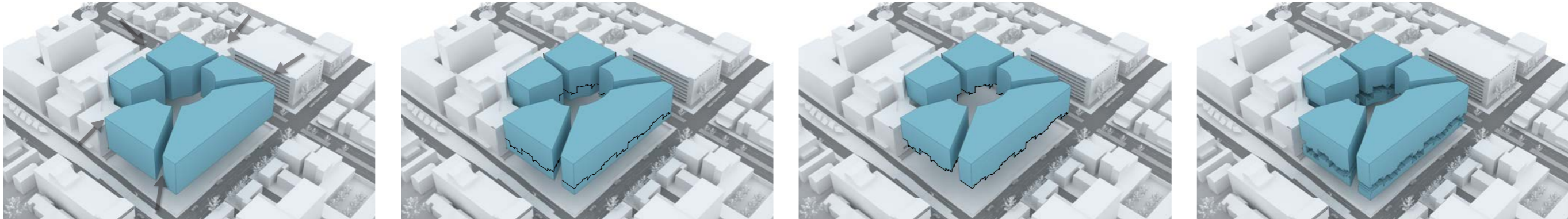


Creation of legible permeable ground plane that draws people in



# CARLTON STREET TYPOGRAPHY

The ground plane responds to the human scale and the finer grain of Carlton.



## CARLTON STREET TYPOLOGY

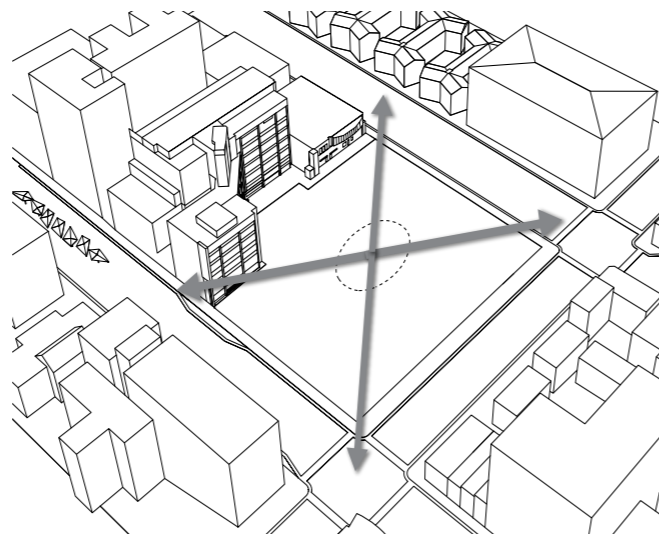
The design responds to the varying streetscape rhythm apparent in the surroundings.



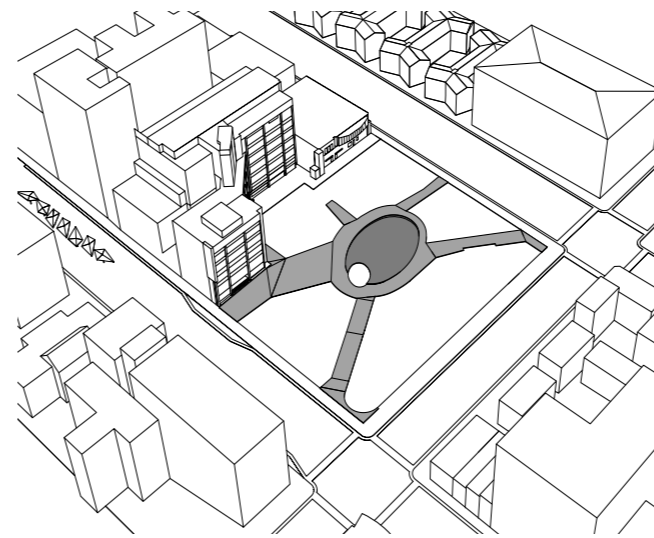


## BUILT FORM ELEMENTS

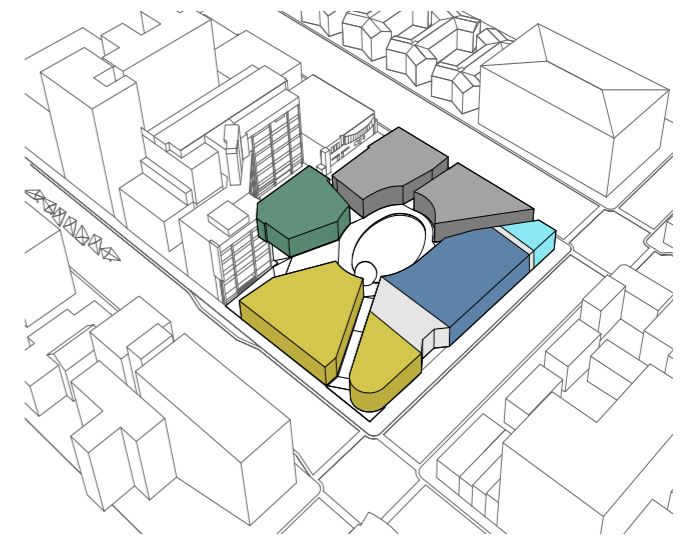
The built form elements work together to ensure the development makes the most of the key opportunity presented by the site.



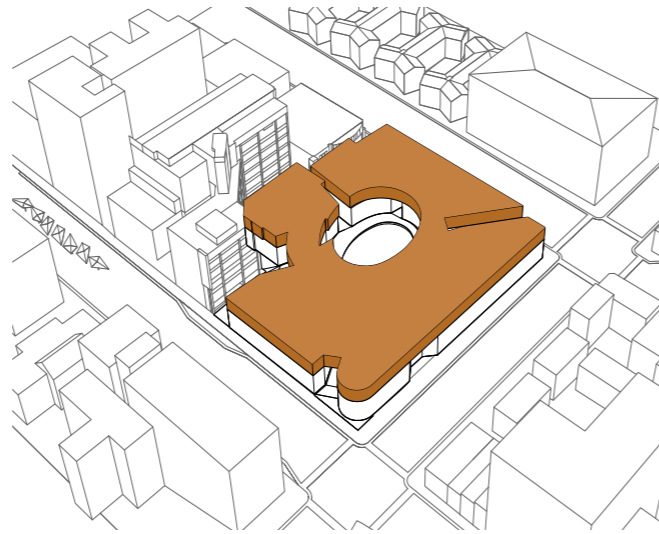
PATHWAY CONNECTIONS



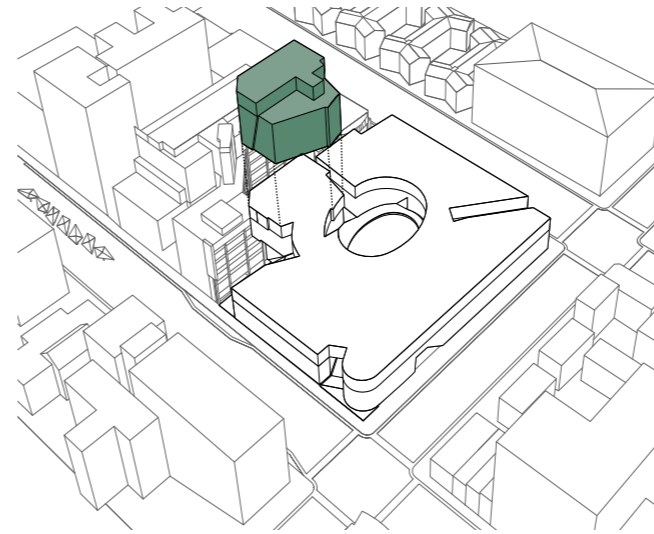
GROUND PLANE INTO OCULUS



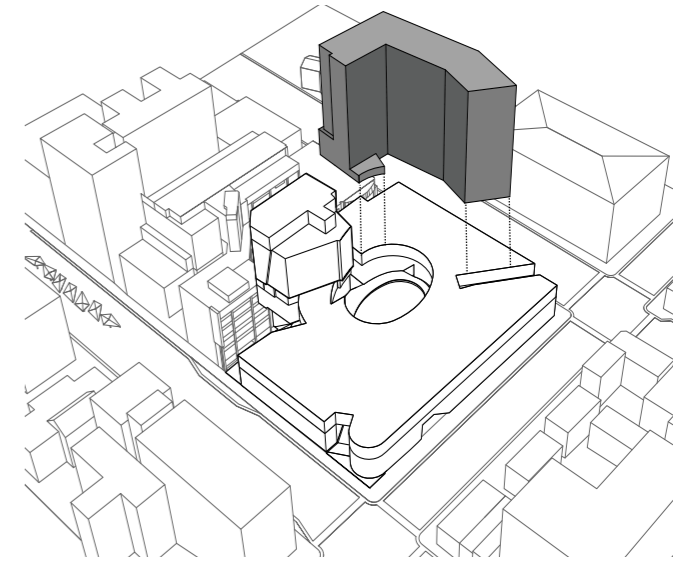
GROUND PLANE MASSING



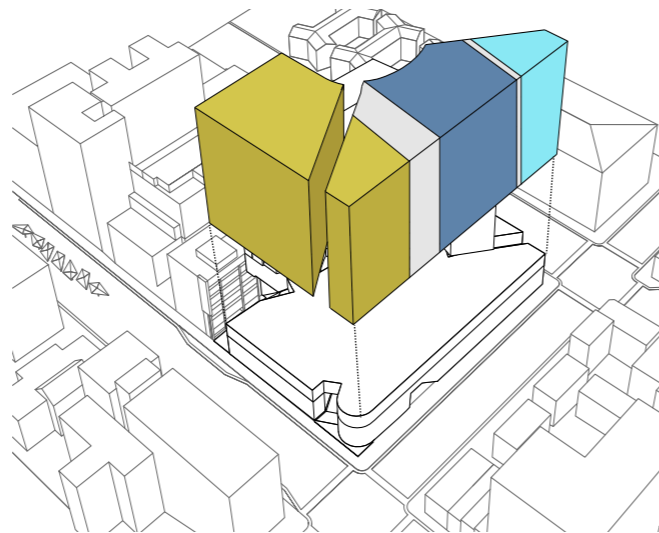
SUPERFLOOR



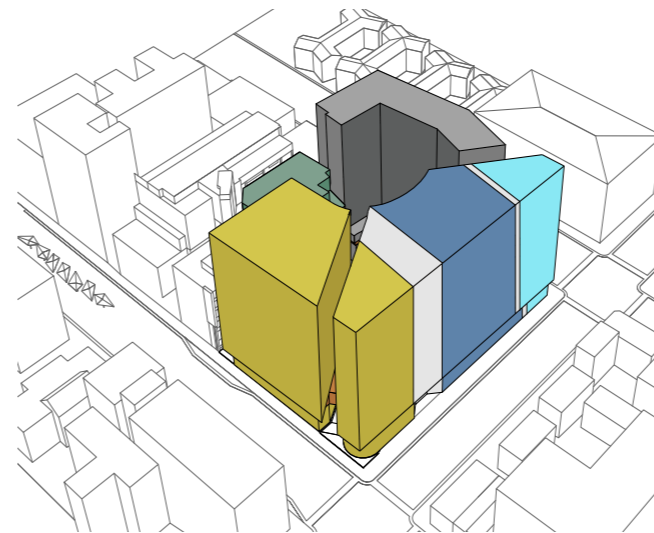
CLT BUILDING



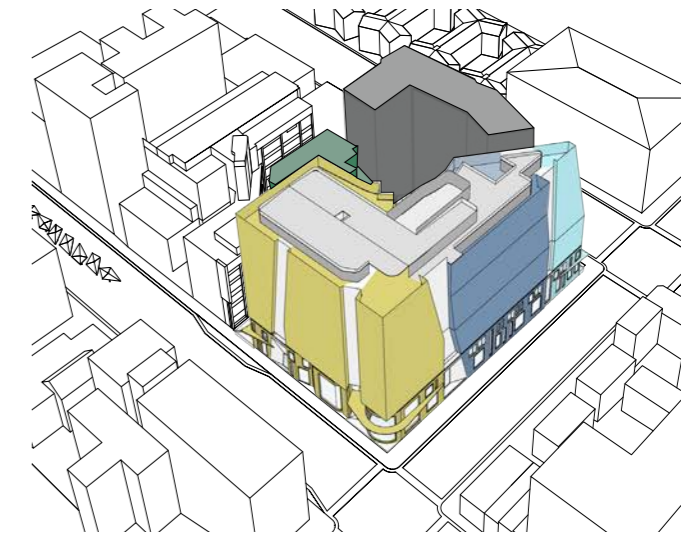
STUDENT ACCOMODATION



MELBOURNE SCHOOL OF ENGINEERING



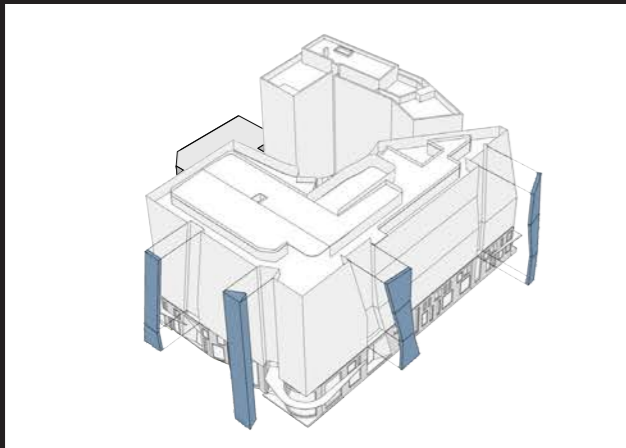
OVERALL MASSING



FINAL ARTICULATION OF MASSING  
(SEE PRINCIPLE 3)

## PRINCIPLE 2:

### EXCEPTIONAL ARCHITECTURE THAT CREATES A STATEMENT



The corner at Grattan and Swanston is proposed to be celebrated as an urban and architectural gateway statement to mark the corner of these two important streets and align with the University of Melbourne's vision to represent their brand through exemplary built form and public realm.

Directly abutting the University of Melbourne's main campus, the architecture marks the transition into a new generation of educational buildings, creating a precinct that is more porous, more open and therefore more engaging to the wider community.

The design team have conceived of these buildings as an invitation to engage with the Carlton Connect Initiative, conveying the status of the University and its industry partners yet remaining accessible and inviting.

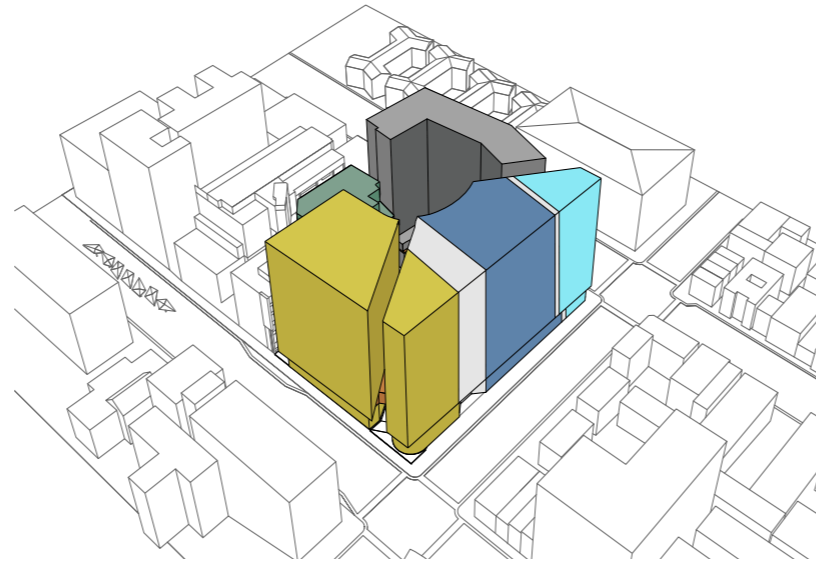
The Melbourne School of Engineering and the Science Gallery Melbourne occupy the two showcase buildings at this gateway junction. The architectural composition of the buildings at the corner creates a direct sense of engagement. It sets the tone for the experience of the precinct, visibly meshing creativity, ingenuity and innovation through exhibitions and events that are visible through the permeable facade.

This statement:

- Invites the public into the space
- Signifies a place of exchange
- Creates prominence of SGM
- Positions MSE as a major player, locally and internationally
- Expresses Innovation and Performance

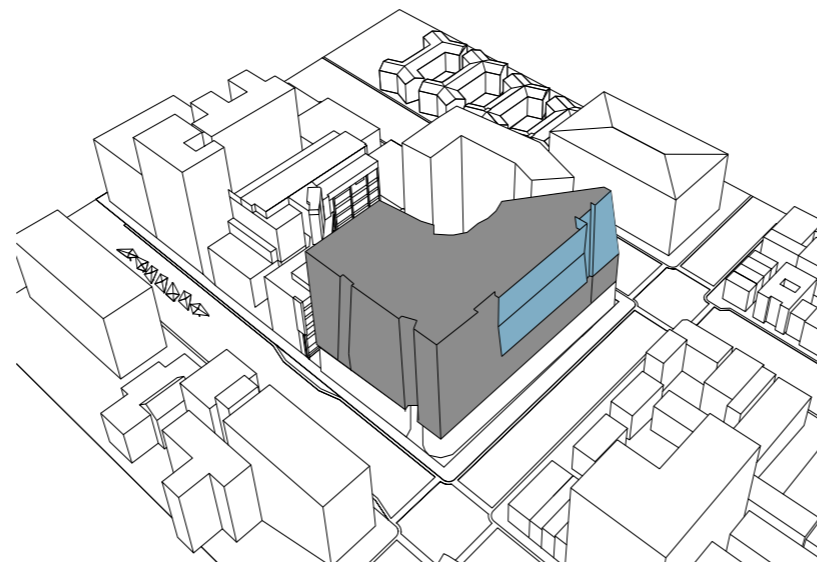
### BUILT FORM SCULPTING

The built form sculpting and facade design provides visual interest, articulation and an architectural statement.



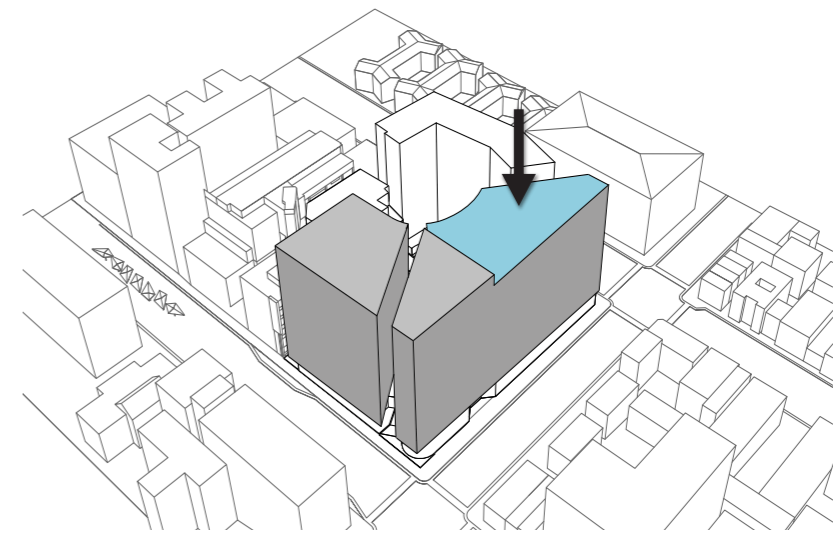
### DEFINING THE ELEMENTS

Differentiating the 4 key elements to create buildings that are visually distinct



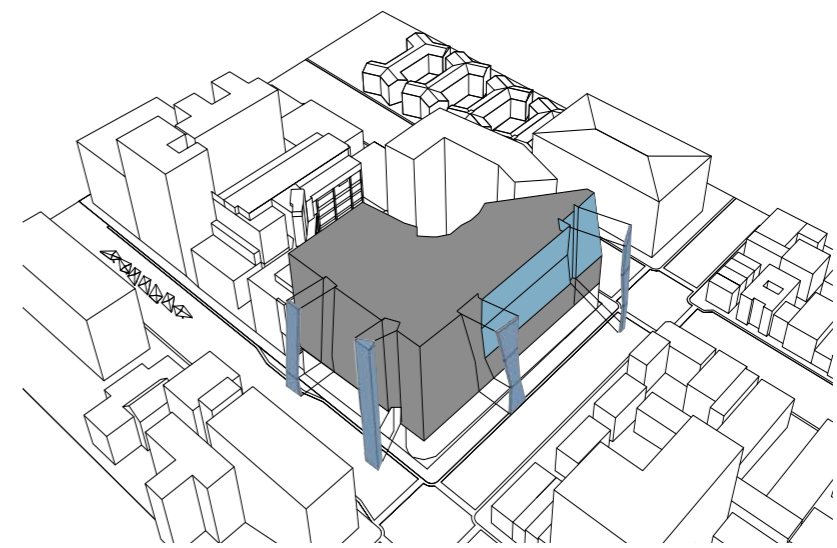
### SET BACK

Setting back the upper levels to provide further transitioning and create reference to a podium typology before providing a greater upper level setback to Cardigan Street.



### STEP DOWN

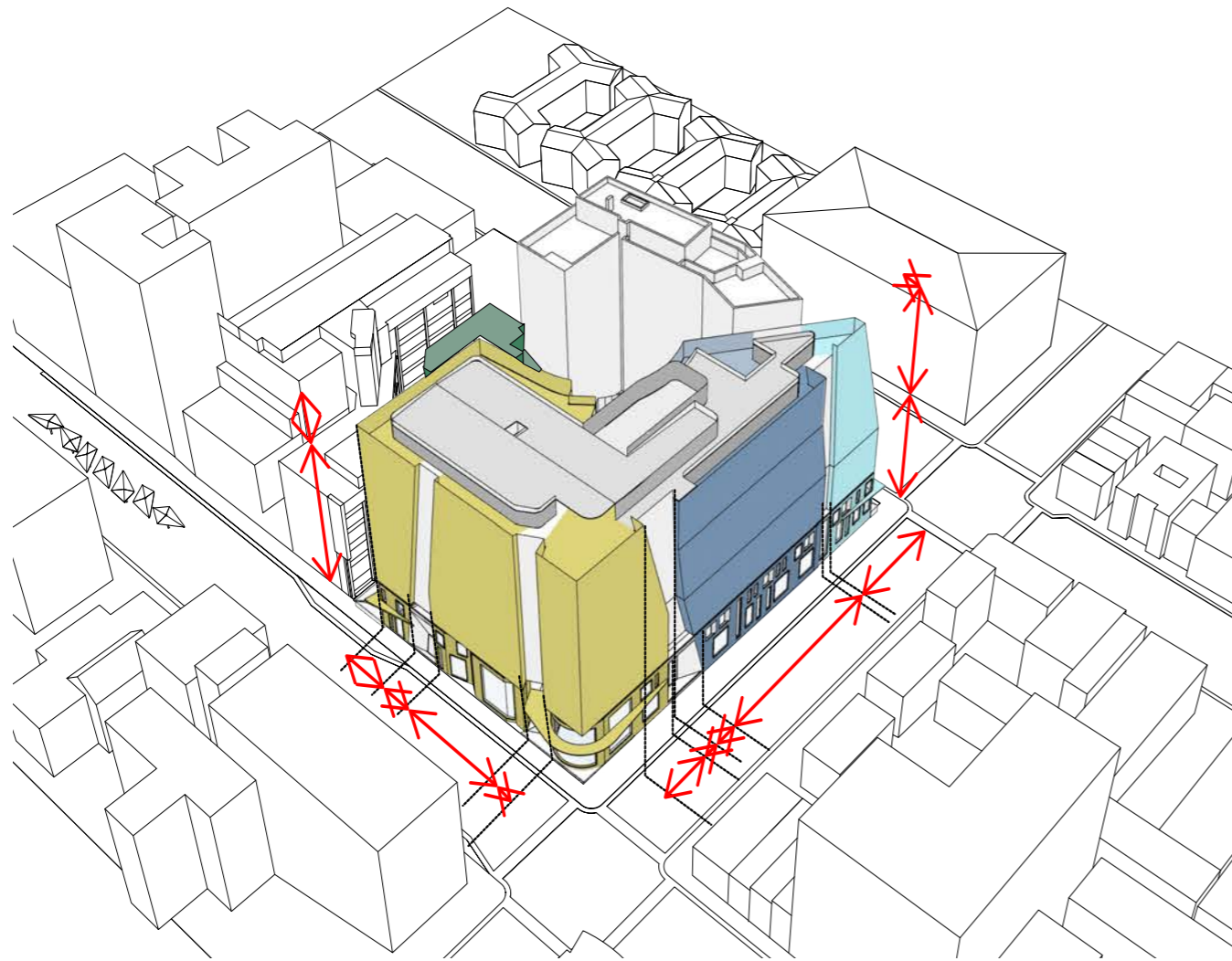
Stepping down the built form to respect the lower built form of Carlton.



### ARTICULATION

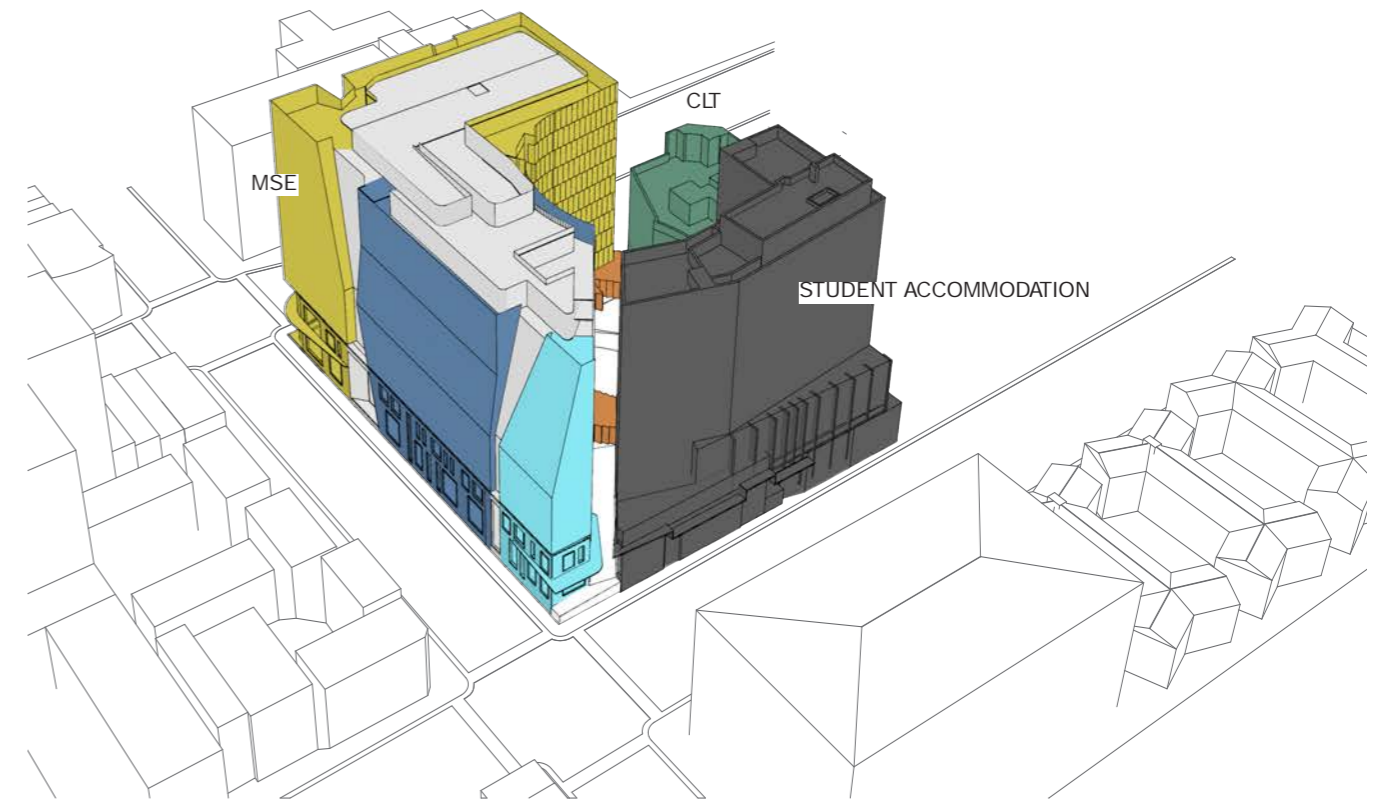
Articulation provided through recesses and definition of the facade.





**STREET RHYTHM AND FINE GRAIN**

Further lessening the bulk and dominance of the site by referencing a finer grain rhythm in the façade and providing human scale at the ground plane.

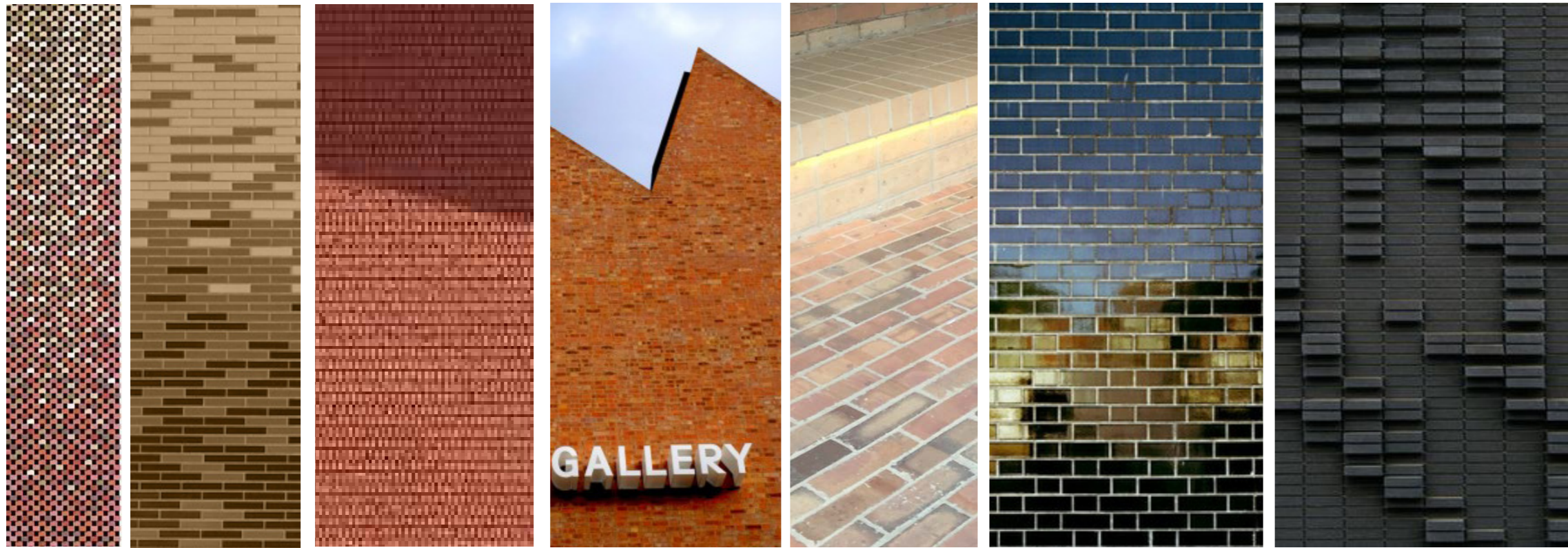


**DISTINCT BUILT FORM**

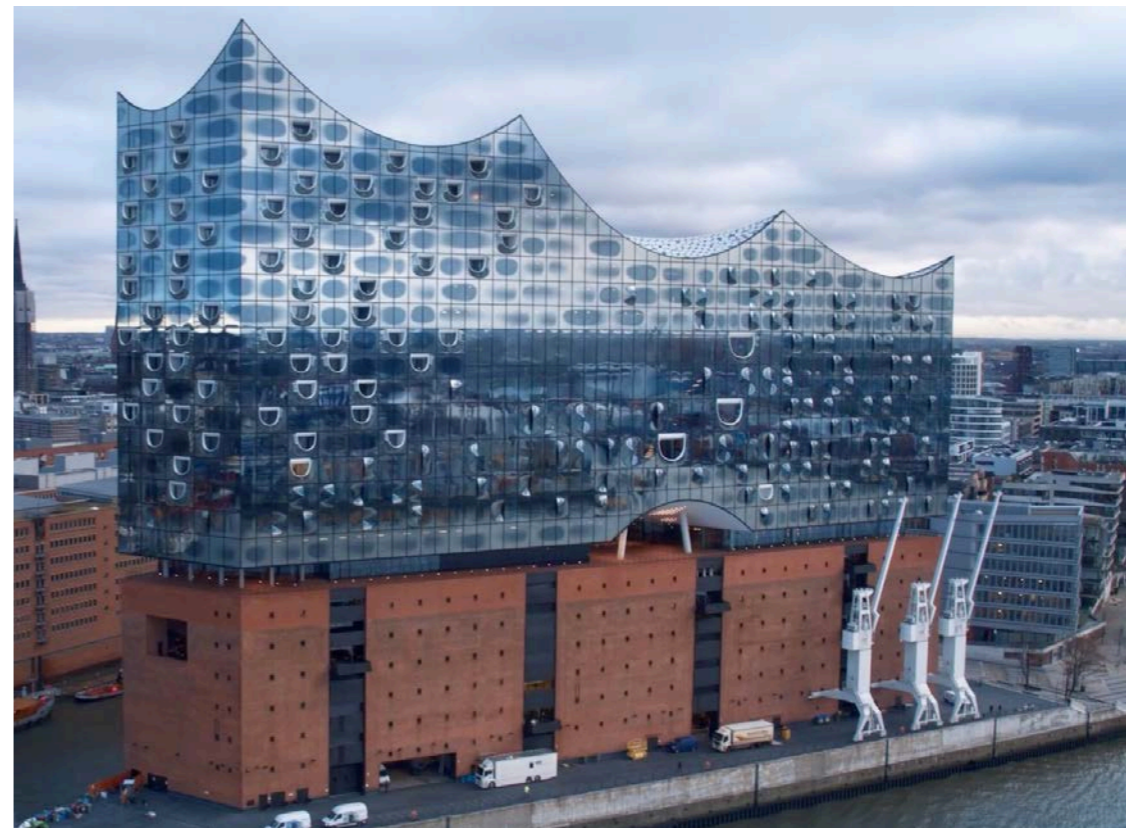
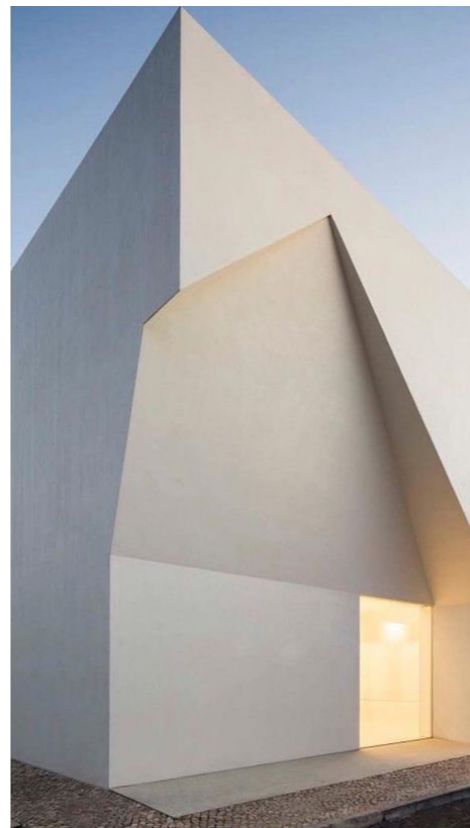
Four visually distinct built form elements respond to each interface.



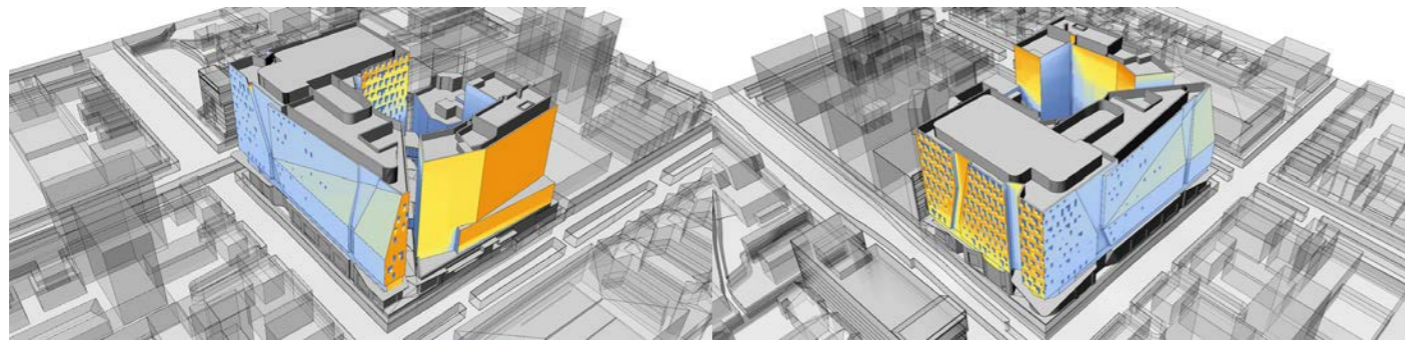
FACADE DESIGN



DESIGN  
ASPIRATION  
PANEL



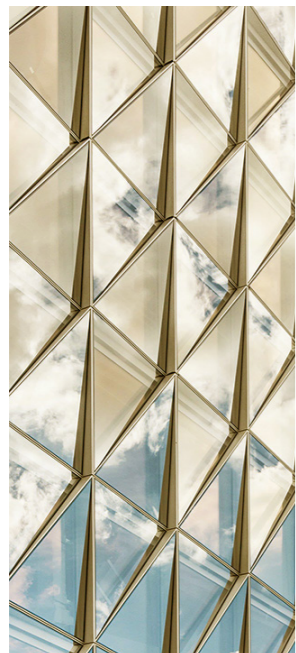
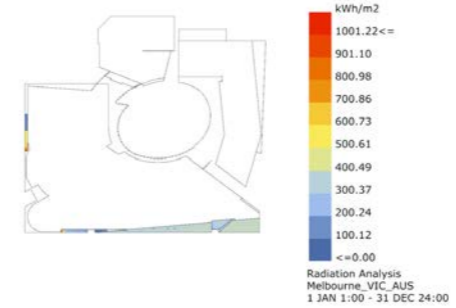
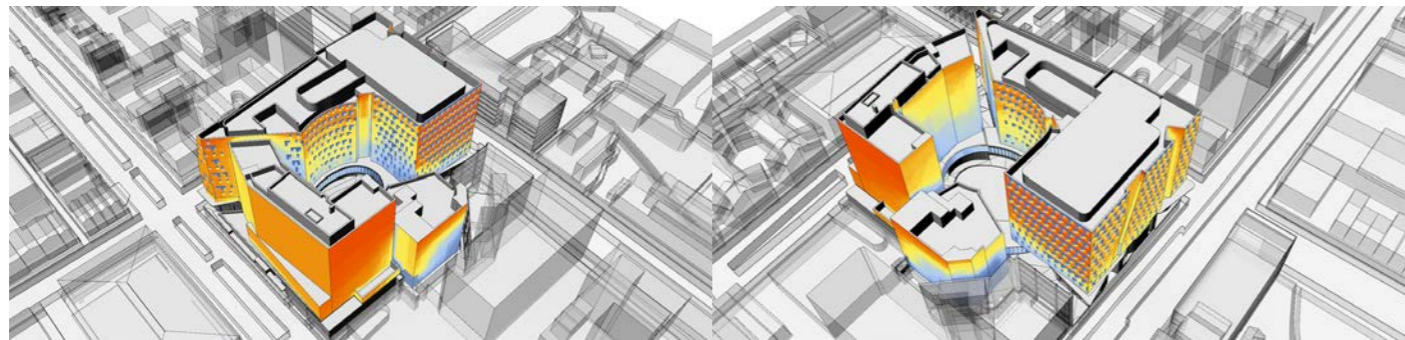




Mapping of the variations in heat loading around each of the MSE facades helps to identify and inform the different intensities of solar protection required.

This approach is further enhanced with an abstracted and variable warm colour palette.

The facade design provides a direct response to the climate



VARIED SURFACES



GLASS FRITTING IN VARIOUS COLOURS



SUN-HOODS



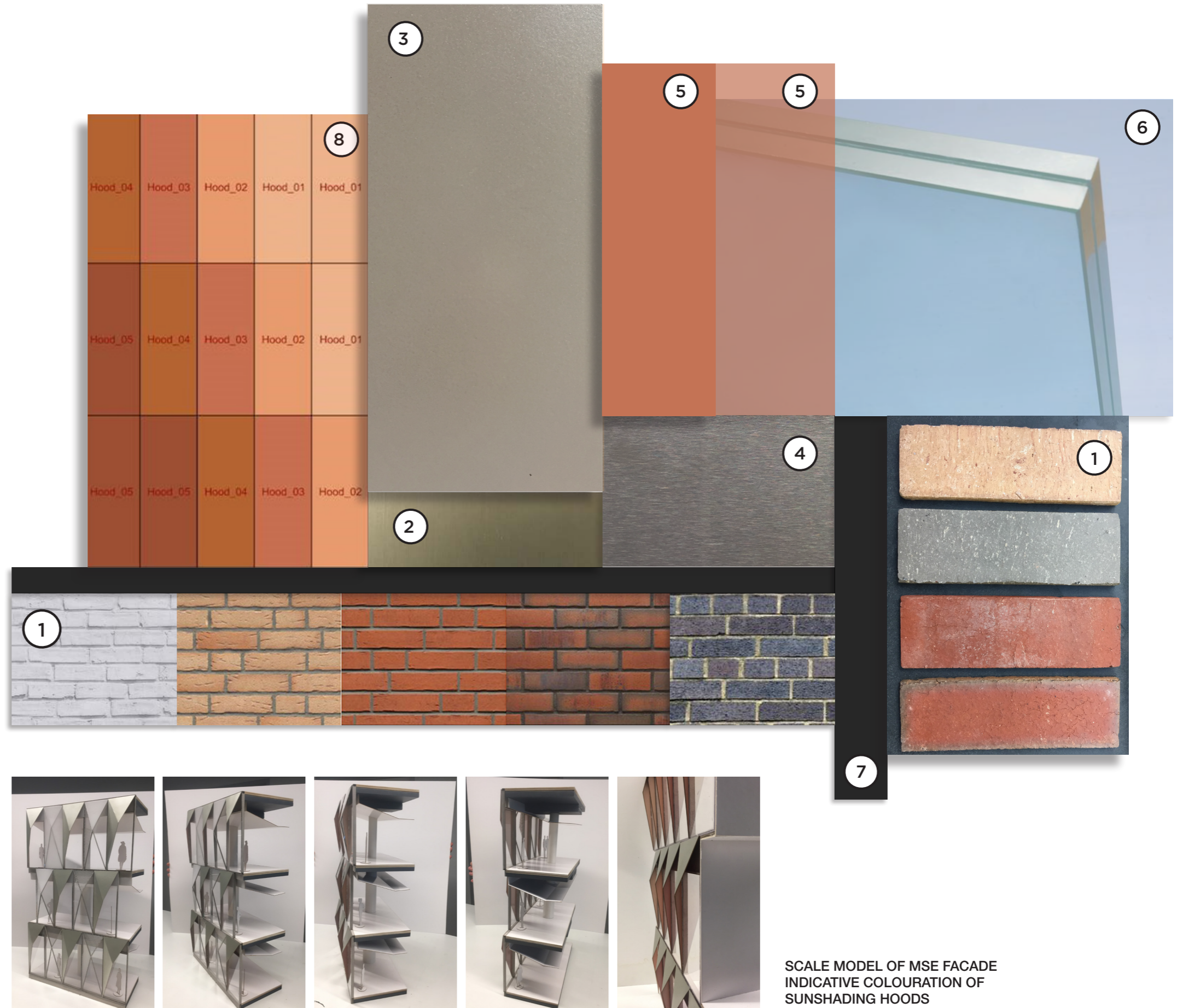
WARM TONES



## SWANSTON & GRATTAN STREET MATERIALS

The Swanston and Grattan Street buildings incorporate a warm, earthy palette to complement surrounding materiality.

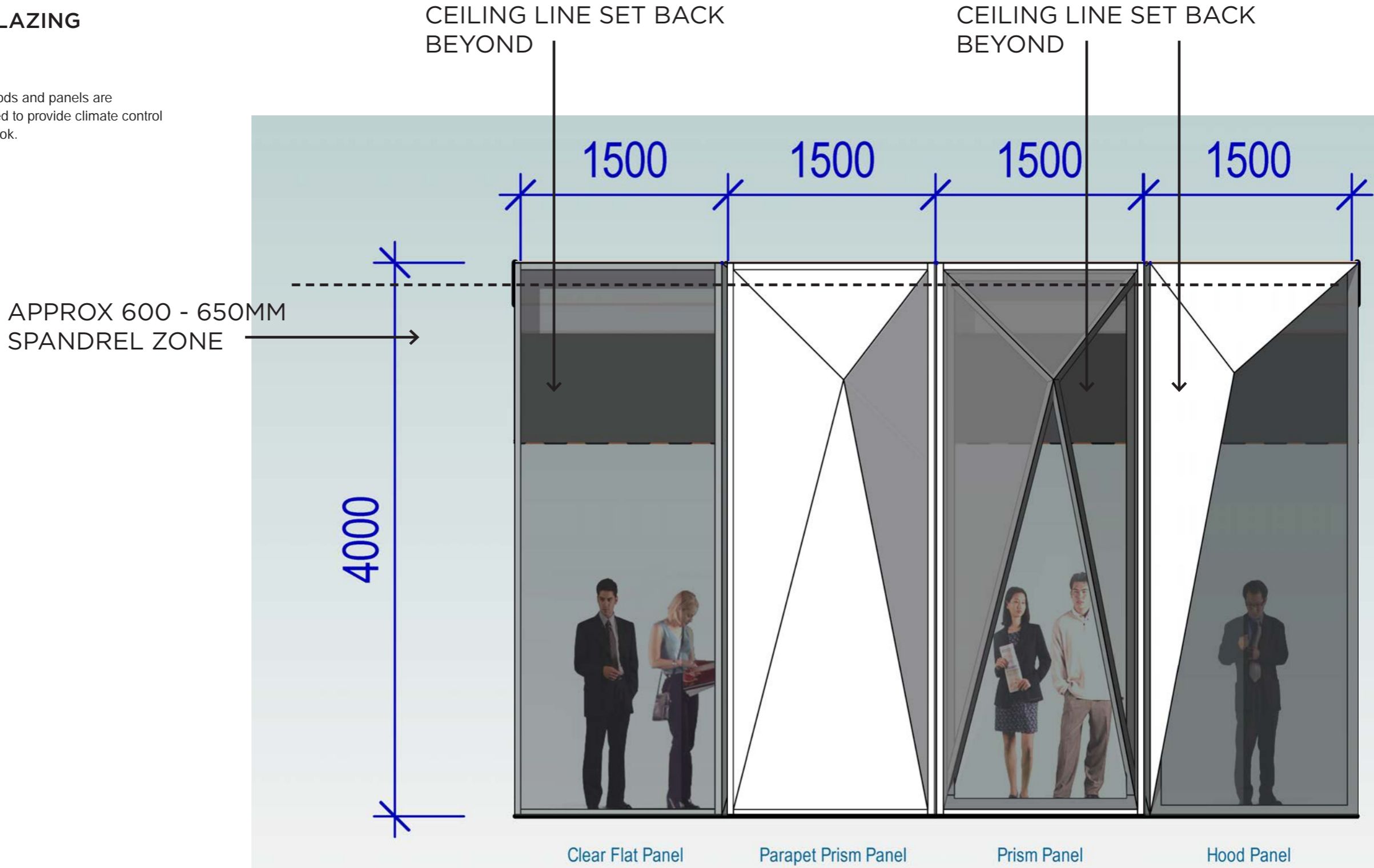
- 1 Grattan & Swanston Streetfronts: Indicative brick patterns, palette and colours - warm palette.
- 2 Internal MSE facades window joinery: Evershield High Grade Anodised Aluminium: Smokey Quartz - warm palette, or similar.
- 3 External MSE façades: Aluminium sunshade hoods - Selected powdercoat: Indicatively warm / bronze colour palette.
- 4 MSE and Superfloor soffits: Black Vortex Stainless Steel (Rimex) mirrored.
- 5 MSE facade glazed Prisms: Indicative glass colouration - warm tones - opaque and semi-opaque
- 6 Laminated DGU curtain wall façades - typical glass (TBC).
- 7 External street-front feature window surrounds. and Superfloor recess detail
- 8 Internal MSE face of Aluminium sunshade hoods - various warm colours - 5 in total



SCALE MODEL OF MSE FACADE  
INDICATIVE COLOURATION OF  
SUNSHADING HOODS

**TOWER GLAZING**

Glazed prisms, hoods and panels are individually selected to provide climate control and orientate outlook.





## CARDIGAN STREET MATERIALS

The Cardigan Street facade is designed to respond to the lower order street.

### 1 RESIDENTIAL SCALE STREET WALL

The street wall is guided by the original DPO objectives to the Cardigan Street condition. Moving between 16m & 17m the wall sits well below the permissible height of 20m to the north east corner and 25m to the remainder of Cardigan Street for a lower and more pedestrian scale interface. The building above sets back off the street edge.

### 2 INTEGRATED SERVICE CUPBOARD DOORS

Brick facing to plant wall at Ground Level and return wall into northern facade. Services doors to be black powder coated aluminum faced with matching black hardware. Statutory signage as per NCC.

### 3 BRICK FENCE COLLAGE

A fine grain masonry screen provides privacy and a visual buffer to the lower lying residential units. Referencing the varied and ad-hoc nature of the archetypal front fence of the single fronted residential terrace, the podium recalls the historic finer grain of the Carlton environs.

### 4 PEDESTRIAN WEATHER PROTECTION

Extended brick balcony beyond title boundary forms canopy at Cardigan Street. Transitions into the retail canopy at Cardigan Lane entry.

### 5 STUDENT ACCOMMODATION ENTRY FLOOR

Clear glazing with silicone butt jointed glazing panels. Steel plate door portal, sill and frame. Refer image right.

Brick plinth at street edges of varying heights. Continues through to Cardigan Lane. Seating opportunities extend from brick plinth to provide an independent character to the lane.





## TOWER MATERIALS AND CHARACTERISTICS

### FINE GRAIN FACADE

An innovative modular kit of parts forms the façade language, addressing complex internal room divisions while facilitating a seemingly random and nuanced composition. This faceted fine grain speaks of the more intimate and private habitation behind.

### FACADE MODULES

Facade modulatisation is required to meet the repetition requirements for each apartment. Modules of 600mm, 900mm, 1200mm and 1500mm offer the best efficiency in both construction and freight. Within this modules vary break ups and horizontal shifts create the design intent for the Student Accommodation facade.

Studio Apartments typically require one operable window

Twin Apartments require two operable windows - for equal amenity to each tenant

Cluster Living areas require ability for cross ventilation or operable windows up to 1200mm apart

A unitised curtain wall system is proposed. Glazing panels, where not required, are replaced with opaque folded aluminium panels.

Reduced areas of vision glazing allow for greater insulated spandrel area. Efficiencies can then be gained in the glazing thermal performance criteria required to meet Section J. Sun shade extensions to vision glazing across the north facade and strategic placement to the east and west provide a passive contribution.

The folded metal panels in combination with two tone, metallic and gloss powdercoat finishes change colour as it catches the light throughout the day. Vision glazing is proposed as a copper hue to blend with the selected panel finish.

