



# Development Plan Carlton Connect

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# 1.0 Introduction

The former Royal Women's Hospital site was acquired by the University of Melbourne in December 2012 and is proposed to be the headquarters for the Carlton Connect initiative.

It is envisaged that the Carlton Connect facility will be home to a vibrant mix of academic, corporate, and government professionals spanning the value chain from basic research to solution implementation.

Purpose-built to promote collaboration and the co-production of knowledge, Carlton Connect will be characterised by extensive use of shared spaces and also equipped with leading-edge ICT infrastructure (including high performance computation and high-bandwidth communications).

Over the past decades The University of Melbourne has taken a step outside of its traditional campus form into the surrounding neighbourhoods of Carlton, Parkville and North Melbourne. Carlton Connect goes beyond those moves in that it is an attempt to provide a "bridge" which will link the University with the Carlton and broader City community. This connection is both physical and programmatic and engages each community on a social, environmental and economic basis playing off and supporting the attributes of each.



Indicative Envelope Image  
Base Source Apple Maps 2014

# 1.1 The University of Melbourne

In today's global economy, innovation is central to any growth strategy, and with the University's rich history of pioneering research and technological development we are ideally placed to take the lead in inspiring a generation of younger people in the fields of science, engineering, medicine, design and the arts; a challenge that is well aligned with the vision for the Carlton Connect Initiative

The University believes partnerships help it achieve more together than it can alone. Such relationships contribute greatly to University life, and also to the social, economic, environmental and cultural life of the wider community.

The University welcomes the opportunity to partner with external organisations to inform, inspire and involve the world in which it operates.

With teaching and research expertise based on over 150 years of pioneering scientific discovery, its researchers are at the forefront of international scholarship in diverse fields including engineering, science and technology, medical and health sciences, business and economics, history, law, politics, design and creative and performing arts. They are ideally placed to empower new and subsequent generations to apply scientific thinking and analysis to issues that impact on the world today and are the challenges of tomorrow.

The University's researchers are tackling some of the world's greatest scientific questions and societal issues and are investigating a diverse range of areas including: the history and structure of the universe, the fundamental nature of matter, environmental sustainability and risk, renewable energy technologies, understanding and treating disease and visual processes in cognition.

The University's international

partnerships cement its place as a world class university underpinned by the maintenance of more than 200 bilateral agreements for academic cooperation and exchange with leading universities (including Trinity College Dublin and King's College London) and it is a member of the Universitas 21 network and the Association of Pacific-Rim Universities.

The University's distinctly international outlook has put it at the forefront of engaging with the Asia-Pacific region in particular, building on its long history of research and teaching engagement in Asia. The University aims to be the outstanding university in Australia for Asia relevant research, tackling the grand challenges posed by the unprecedented scale and pace of modernisation in the region, in this Asian Century.

While looking outward to the region and the world The University is firmly embedded in the local Parkville and Carlton Community with Carlton Connect being a physical and programmatic manifestation of the desire to provide a bridge between academia, research and the surrounding neighbourhood. The University of Melbourne and its Carlton Connect partners will be a vital and contributing partner with the City of Melbourne in providing spaces and places for meaningful interactions between the University and the wider community.

Geographically, the University's Parkville campus benefits from

being located on the doorstep to the Melbourne Central Business District, a city offering stable, prosperous foundation to facilitate exciting new ventures and partnerships. It is at the heart of a powerful academic and cultural precinct which includes the University of Melbourne, RMIT University, Melbourne Museum and the world heritage-listed Royal Exhibition Building.

Melbourne is on the cusp of Asia, offering rich opportunities and markets for new products and services. Melbourne is Australia's knowledge, manufacturing and innovation capital, with an economy bigger than Singapore's. The populace hail from more than 200 countries, speaking more than 230 languages and dialects, fuelling Melbourne's status as a cultural and innovation capital. The city is a perfect blend of economic strength, with a lifestyle that is envied around the world.

The Parkville Precinct in which the University resides is one of the top three concentrations of biomedical research in the world with more than 10,000 life scientists. The strains of engagement, pedagogy and research are truly embedded in the University's DNA and The University believes this is reflected in the symbiosis between the University's vision for Carlton Connect, the Carlton community, City of Melbourne and its industry and government partners.



The University of Melbourne consistently ranks in the top tier of universities nationally and globally

CATEGORY	AUSTRALIA	WORLDWIDE
<b>Times Higher Education World University Rankings 2012-2013</b>	<b>1</b>	<b>28</b>
<b>2012 Performance Ranking of Scientific Papers for World Universities (Taiwan Rankings)</b>	<b>1</b>	<b>35</b>
<b>Academic Ranking of World Universities (ARWU) 2012</b>	<b>1</b>	<b>57</b>
<b>Times Higher Education World University Rankings 2012-2013 by Subject</b>		
Arts and Humanities	<b>3</b>	<b>23</b>
Clinical, Pre-clinical and Health	<b>1</b>	<b>16</b>
Engineering and Technology	<b>1</b>	<b>25</b>
Life Sciences	<b>1</b>	<b>27</b>
Physical Sciences	<b>1</b>	<b>26</b>
Social Sciences	<b>2</b>	<b>23</b>



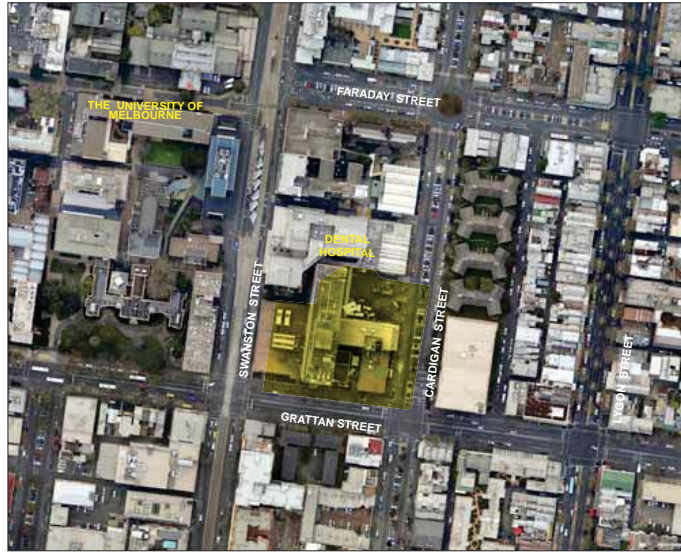
## 2.0 Site & Context Analysis

### 2.1 Site Location

The subject site is located on the former Royal Women's Hospital Site in Carlton. It is bounded to the west by Swanston Street, to the south by Grattan Street, to the east by Cardigan Street and to the north by the Dental Hospital.

It is located directly opposite the University of Melbourne Campus and is with in close proximity of Lygon Street, the CBD of Melbourne and the future Metro Stations.

It is located at the edge of the evolving Parkville Employment Cluster and diagonally opposite the City North Structure Plan area to the southwest which will extend the Capital City Zone north to Grattan Street.



Existing Conditions - Aerial Photograph



Urban Context of Carlton Connect  
Extent of existing and future CCZ shown  
highlighted in blue



Urban Context of Carlton Connect

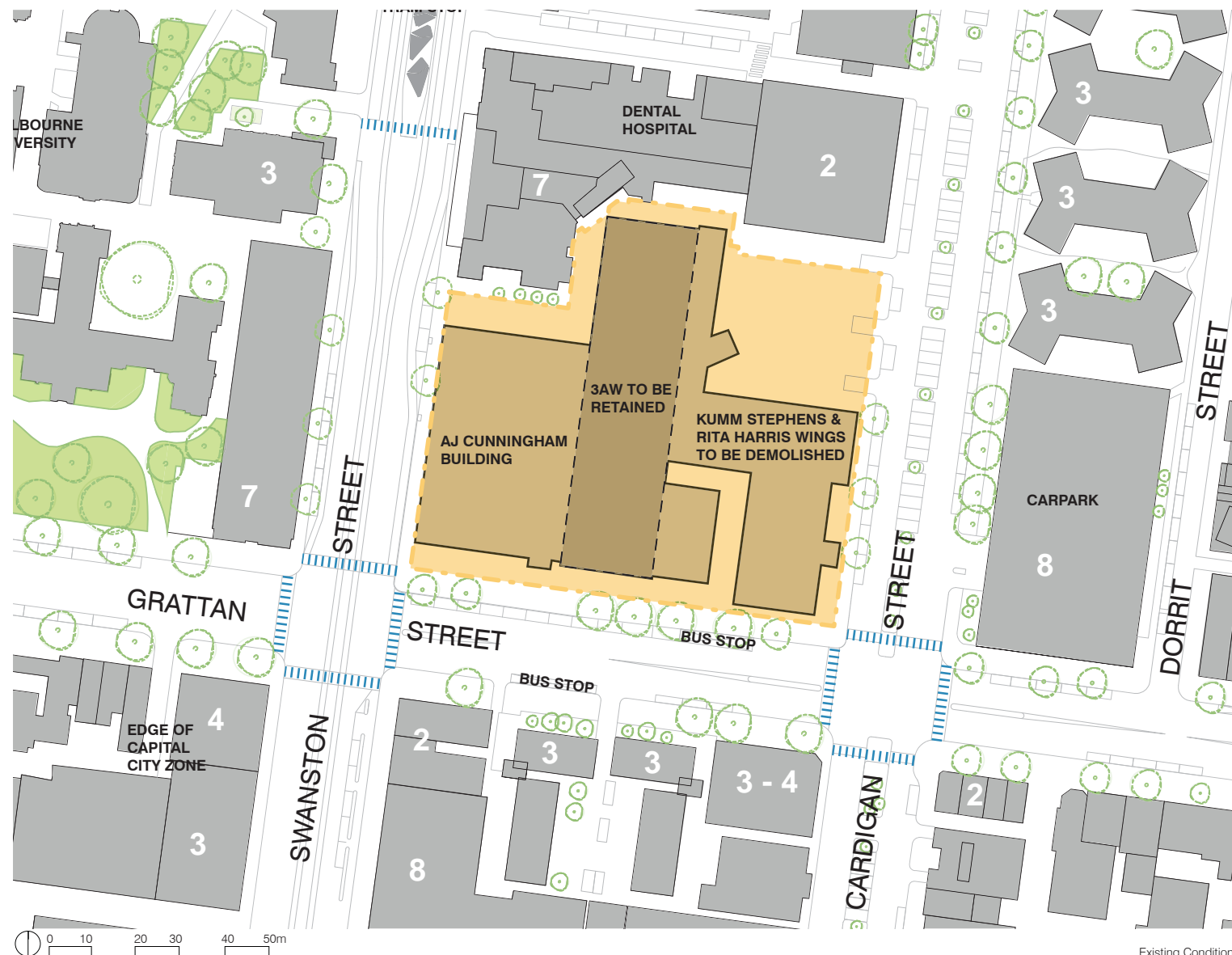
## 2.0 Site & Context Analysis

### 2.2 Existing Conditions

The site is described as 114-152 Grattan Street, Carlton and comprises land bounded by Swanston Street to the west, Grattan Street to the South, Cardigan Street to the east and The Royal Dental Hospital of Melbourne building to the north. The land was formerly occupied by the Royal Women's Hospital.

The area of the site is approximately 8000 square metres.

- There are a number of existing buildings on the site including:
  - 3AW Tower
  - AJ Cunningham Building
  - Kumm Stephens wing
  - Rita Harris Wing
- All buildings and structures on the eastern side of the site fronting Cardigan Street are to be demolished.
- The existing AJ Cunningham Building has been recently refurbished and will be retained in the medium term and the 3AW Tower will be refurbished as an adaptive reuse project.



Existing Conditions



## 2.0 Site & Context Analysis



Swanston Street West side



Swanston Street East Side

### 2.3 Existing Conditions Analysis

This Existing Conditions Analysis has been undertaken to further document the specific conditions of the site itself and that of its three major street interfaces:

- Swanston Street
- Grattan Street
- Cardigan Street and
- The interface to the adjoining buildings to the north – The Dental Hospital

The analysis examines the conditions of the street frontage and neighbouring building in consideration of:

- Footpaths/streetscape ground plane
- Built Form/Setbacks
- Activity/Uses
- General Observations

The following are key observations which have informed the preparation of the Site Analysis Plan and the Design Response.

#### Swanston Street

##### West Side

##### Footpaths/streetscape

- Narrow footpaths west side less than 3 meters in width
- Small garden bed at building base
- Newly Planted street trees
- Bike lane, some parallel parking
- No crossover interruptions to footpaths – limited vehicular access
- Limited formal pedestrian crossings of street

##### Built Form

- 757 Swanston Street Building rises as sheer wall 6 - 7 storeys from footpath (brick, glass metal and concrete construction flat roof – pitched elements).
- Generally inactive frontage for length of building.

##### Activity/Uses

- Pedestrians crossing at Grattan

Street, access to super tram stop

- Crossing from University of Melbourne to Dental Hospital
- Vehicular traffic and bicycle traffic constrained by tram stop

##### East Side

##### Footpaths/streetscape

- Narrow footpaths east side less than 3.5 meters in width.
- Small garden bed at building base.
- Break in built form between AJC and Dental Hospital features raised outdoor dining area.
- Limited newly Planted street trees (2).
- Bike lane, some parallel parking
- No crossover interruptions to footpaths – limited vehicular access.
- Limited formal pedestrian crossings of street, north of Tram stop crossing barrier fence prevents jaywalking.

#### Built Form

AJC Building rises 2 storeys from footpath with recessed garden areas (under refit).

Dental Hospital to north rise 5 – 7 storeys ( glass metal and concrete construction flat roof).

Generally inactive frontage for length of building(AJC) (will change in future refit).

#### Activity/Uses

- Limited activity at present due to current state of RWH – AJC to be refurbished.
- Pedestrians crossing at Grattan Street, access to super tram stop.
- Crossing from Dental Hospital to University of Melbourne.
- Vehicular traffic and bicycle traffic constrained by tram stop poorly defined.

#### General Observations

- In general the footpaths feel narrow and confined for the length of the site.
- Built form is not balanced across street – higher wall on west.
- General lack of activation along this section of Swanston Street
- Feels like a place to pass through – no gathering places.
- The Myer Asia Centre provides a greater sense of forecourt and gathering spaces to north.

- Higher degree of activation north of Lynch Street with cafes and other uses.
- Lack of clarity in Wayfinding material.
- Tram stop dominates streetscape.
- Characterized by 30 meter wide reserve width with major tram terminus as dominant ordering element.

## 2.0 Site & Context Analysis



Grattan Street North side

Grattan Street South Side

### 2.3 Existing Conditions Analysis

#### Grattan Street

##### North Side Footpaths/streetscape

- Wider footpaths greater than 6 meters in width.
- Raised garden bed at building base does not provide useful public gathering area.
- Mature street trees.
- No Bike lane, parallel parking
- No crossover interruptions to footpaths – limited vehicular access.
- Important local bus stop.

##### Built Form

- AJC Building rises 2 storeys from 6 meter setback to footpath (brick, glass metal and concrete construction).
- 3AW Building rises 12 storeys (brick, glass metal and concrete construction flat roof).
- Kumm-Stephens Wing rises 3 storeys behind a sunken setback area (glass and metal with panel construction with pitched metal roof to 3 storey portion) taller beyond.
- Generally inactive frontage for length of building at present.

##### Activity/Uses

- Limited activity at present due to current state of RWH – AJC to be refurbished.
- Pedestrians accessing trams and buses from the east and west.
- Vehicular traffic.

#### South Side

##### Footpaths/streetscape

- Footpaths south side less than 6 meters in width.
- Small garden bed at building base of residences behind brick and timber fence.
- Mature street trees.
- Crossover for residential blocks.
- No Bike lane, parallel parking.

##### Built Form

- Poyntons building retrofitted 19th Century Hotel rises 3-4 storeys from footpath.

- Active frontage for length of building with cafés and take aways.
- Residential buildings 3 storey with no active frontage.
- Side elevation to 2 storey café fronting Swanston Street.
- 2 storey café on southeast corner
- Activity/Uses.
- Small outdoor dining area on footpath.
- Pedestrians accessing trams and buses from the east and west.
- Vehicular traffic.

##### General Observations

- In general the footpaths feel narrow and confined for the length of the site.
- Built form is not balanced across street – higher wall on north side.
- General lack of activation along this section of Grattan Street
- Characterised by 30 meter wide reserve width with larger street trees and generous setback on subject site.



## 2.0 Site & Context Analysis



Cardigan Street West side



Cardigan Street West side



Cardigan Street East Side



Cardigan Street East Side

### 2.3 Existing Conditions Analysis

#### Cardigan Street

##### West Side

##### Footpaths/streetscape

- Narrow footpaths less than 4 meters in width.
- Sunken area at Kumm-Stephens reduces opportunities for access/engagement.
- Mature street trees.
- Bike lane, parallel parking and centre median parking.
- Three vehicular crossover interruptions to footpaths – provides vehicular access.

##### Built Form

- Kumm-Stephens Wing rises 3 storeys behind a sunken setback area for part of frontage (glass and metal with panel construction with pitched metal roof to 3 storey portion) and built to boundary for a portion of frontage. There is also a 4 storey brick construction to boundary and a further 3 storeys (total) 7 behind setback).
- Open former Royal Womens emergency carpark.

- 2 Storey Dental Health Services building built to boundary north of subject site (brick, glass metal and concrete construction).
- Generally inactive frontage for length of building at present.

##### Activity/Uses

- Limited activity at present due to current state of RWH.
- Pedestrian access to Dental Health Facility – limited glazing along footpath edge.

#### East Side

##### Footpaths/streetscape

- Footpaths east side less than 4 meters in width.
- Small garden bed and lawn at building base of residences and at base of car park structure.
- Mature street trees.
- No crossover for residential buildings, one major crossover for parking structure.
- Bike lane, parallel parking and centre median parking.

##### Built Form

- Block work and brick residential buildings 3 storey with balconies and entries providing some surveillance to frontage.
- Brick and concrete 8 storey equivalent (27m) tall parking structure dominates most of the frontage opposite the site.

##### Activity/Uses

- Pedestrians accessing residences/parked cars.
- Bicycle and Vehicular traffic .

##### General Observations

- In general the footpaths feel narrow and confined for the length of the site.
- Built form is not balanced across street – higher wall on east side.
- General lack of activation along this section of Cardigan Street.
- It is a passage not a destination.
- Characterized by 30 meter wide reserve width with larger street trees and limited setback on subject site with the “wall” of the carpark structure dominating the streetscape on the east.



## 2.0 Site & Context Analysis



Hospital Interface East Side



Hospital Interface West Side

### 2.3 Existing Conditions Analysis

#### Hospital Interface

##### Footpaths/streetscape

- Vehicular crossover interruption to footpaths – provides vehicular access on Cardigan street frontage.
- Pedestrian access is limited by built form – there is no public through back link.

##### Built Form

- Dental Hospital to western end of northern boundary rise 5 –8 storeys ( glass metal and concrete construction flat roof).
- 2 Storey Dental Health Services building built to eastern end

of northern boundary north of subject site (brick, glass metal and concrete construction).

- Generally inactive frontage for length of buildings present.
- 2 Storey Dental Health Services building has windows overlooking the former emergency car park/drop off.

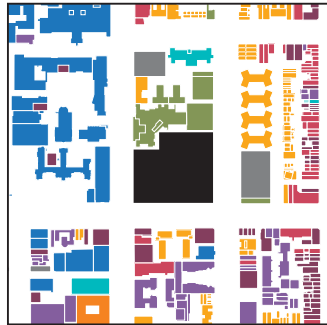
##### Activity/Uses

- Limited activity on subject site at present due to current state of RWH.
- Pedestrian café on Dental Health Facility external courtyard.

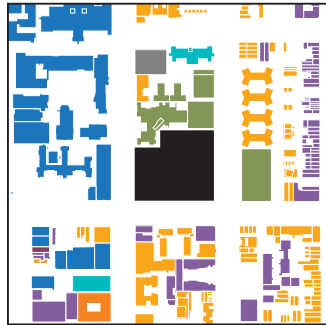
#### General Observations

- In general the footpath to the north is narrow and confined for the length of the adjoining site on both street frontages site.
- Built form is not balanced across the northern boundary – higher wall on west side.
- General lack of activation along this frontage.
- Characterized by narrow easement separating 7 storey building fronting Swanston Street and 2 storey wing fronting Cardigan Street.

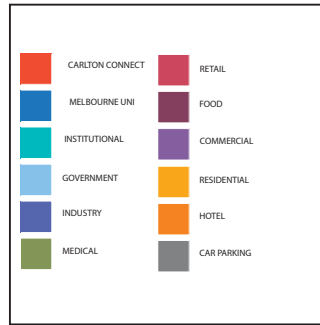
# 3.0 Opportunities and Constraints



Uses at Ground Level



Uses at Upper Level



Legend

## 3.1 Land Use

The Urban Context Report notes "Swanston Street has become a boundary of the marked difference of large variety of use-types within the Carlton fabric compared with the predominantly single-use of the University's campus north of Grattan Street. The Carlton Connect site can be seen to be a bridge between the two patterns."

The existing land use of the sites surrounding The Carlton Connect site vary by street frontage:

- Opposite the site in Swanston Street the University of Melbourne is the sole land use.
- To the immediate north are the larger grain sized medical facilities of the Dental Hospital.
- To the east opposite in Cardigan Street are the larger grain sized Former Royal Womens Hospital Car park structure and residences.
- To the south in Grattan Street is medium to smaller grain sized mix of uses with ground floor food and beverage outlets with residential above, stand-alone residential uses and stand-alone food and beverage outlets.

## 3.2 Movement

- The site is well served by public transport.
- Pedestrian and bicycle routes connect the site to the University campus and from/to the Carlton and CBD areas. Vehicular access is currently restricted on the Grattan Street and Swanston Street frontages.
- Opportunity for an East-West pedestrian link near the northern end of the site.
- Tram routes in Swanston Street serving broader region, with connections to trains at Melbourne Central station.
- Important local bus routes in Grattan Street provide access to North Melbourne station via BioMedical Precinct.
- Substantial carparks located to the west, east and north.

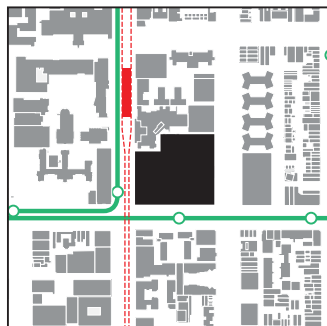
## 3.3 Active Frontages

The closure of the hospital resulted the loss of activation of the key frontages. Redevelopment will likely enhance the street activity and link into established activity patterns.

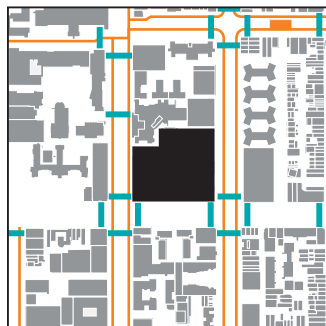
## 3.4 Topography

There is a fall diagonally across the site of nearly 4 metres.

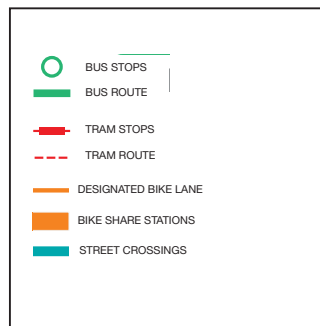
- With retention of existing buildings this will require careful consideration to facilitate cross site pedestrian movement.



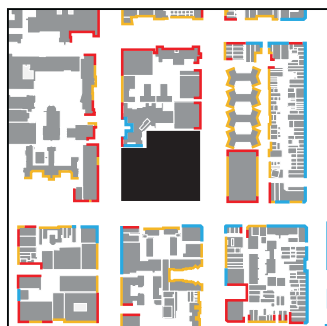
Public Transport



Bikes and Pedestrians



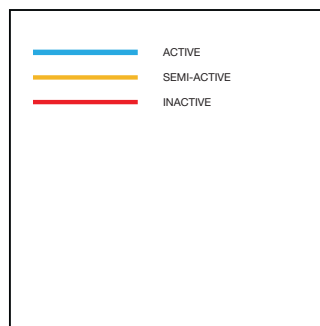
Legend



Active Edges



Topography



Legend

Diagrams from NH Architecture Urban Context Report

## 3.0 Opportunities and Constraints

### 3.5 Site Opportunities & Constraints Summary

The site has a number of key opportunities and some constraints to development which can be summarised as follows:

#### Opportunities

- The site's strategic location with its proximity to the CBD at the juncture between the University of Melbourne and Carlton in the Parkville Employment Precinct which includes the Parkville Biomedical Precinct, The Brain Centre, Doherty Building and the Victorian Comprehensive Cancer Centre.
- The site is well serviced by excellent public transport infrastructure with the Swanston Street tram services linking to all parts of metropolitan Melbourne via train at Melbourne Central and Flinders Street and bus services in Grattan Street and connections to buses in Lonsdale Street.
- The adjacent uses on the eastern side of Cardigan Street, including the multi-storey car park and nurses residences of the former Royal Women's Hospital provide a buffer to the smaller grain streetscapes to the east- mitigating impacts of the site from the Lygon Street streetscape.
- The existing built form on site and adjoining and opposite properties provides cues to future built form, height massing and setbacks.
- The built form of the University of Melbourne opposite the site creates distinct walls of the 757 Swanston Street Building and the Asia Centre with important breaks between them providing distinct paths connecting to the site across Swanston Street and beyond.
- The existing 3AW building which is to be considered for adaptive re-use. Retention of the 3AW tower poses challenges - both opportunities and constraints:
  - it helps retain elements of the site's past in future development
  - supports the sustainability message of Carlton Connect.
- Proximity to quality public open space and parks in the vicinity including the University campus, University Square, Lincoln Square, Argyle Square and the Carlton Gardens.
- The gridded street layout provides strong connectivity and permeability to the area.
- General mixed land use of the surrounding area suggests that development can address a number of different uses and in different forms.
- The scale of the site creates opportunities for district-scale sustainable infrastructure.
- Opportunities to activate areas for future staged development with interim uses (possibly experimental in nature).
- Opportunity to liaise with the Dental Hospital to provide a positive interface between the two sites and maximise efficiency of operation (e.g. shared loading access, precinct scaled services)
- The established "eat street" and shopping facilities of Lygon Street provide local attractors.
- As a former hospital site it has embodied cultural memory - birthplace of generations of Victorians. It is a former place of joy and of sadness.

#### Constraints

- Due to its size, the site will be developed in stages over several years.
- Integration of the existing 3AW building constrains some aspects of site permeability and connectivity.
- The site has three highly varied street conditions and a somewhat harsh interface to its northern boundary with the Dental Hospital.
- The street frontages exhibit mixed uses, activation and built form quality and character.
- There is a general variability of streetscape quality and character with Swanston Street having the highest level of pedestrian amenity in terms of paving and furniture elements.
- The requirement to consider the mixed uses and residences in the lower built form of the south side of Grattan Street and southeast corner of Grattan and Cardigan Streets.
- There is a significant fall of approximately 4 meters across the site from the north-east to south-east corner.
- There is little or no east - west connectivity across the subject site itself, in the block between Faraday Street and Grattan Street and between Swanston Street and Cardigan Street.
- Lynch Street while providing a through link is designated as "private".
- There is also an overall lack of east-west permeability in the neighbourhood between Lygon Street and Swanston Street.
- Specifically, the block between Lygon and Cardigan Street has no east-west permeability due to land use, ownership and existing built form.
- The existing former Royal Women's Car Park structure in Cardigan Street creates a visual barrier from and to the site.
- Site is adjacent to but not typical of the 'Little Carlton' Precinct. However it must respond to the adjacent condition to the south and east.



# 4.0 Objectives & Strategies

The Development Plan has been prepared to show how the use and development of land generally achieves the following objectives and strategies:

## Land use

The Development Plan should seek to achieve:

- an integrated mixed-use development of the site, that includes environmentally sustainable research, design and education to create a leading sustainability hub. Such a mix of uses includes but is not limited to research and development, office, education and employment generating activities, an exhibition and/or function centre, and multi-dwelling housing.
- commercial, retail and community uses along key pedestrian corridors.
- to contribute to active uses at ground and lower levels at all street interfaces.
- proposed uses and development that do not compromise established activities on adjoining and nearby sites.
- a diverse range of safe, well designed and managed affordable accommodation.

## Urban design and the public/private realm

The development of the site should:

- achieve high quality design and exemplary development, particularly at the Swanston and Grattan Street corner, by creating an engaging building interface above street level and a high quality landscape treatment.
- enhance the role of Swanston Street as the civic spine of Melbourne's CBD and a major pedestrian and public transport route.

- create a high level of amenity for future occupants of the site.
- provide design that responds to existing interfaces.
- provide a range and variety of high quality communal and private spaces.
- provide integrated indoor and outdoor developments.
- create a built form character that complements existing development and the City North precinct to the south west, and steps down at the interface to the lower scale surrounding established neighbourhoods.
- create streetscapes defined by a generally consistent plane of building facades that collectively enclose the sides of the streetscapes whilst allowing good levels of daylight and sunlight to penetrate to the streets and to lower storeys of buildings.
- contribute to a streetscape which integrates the site with its surrounding context, helping to create a precinct which is safe, appealing and convenient for users at all times of the day and night.
- provide for experimentation in new ways of using and designing open space (e.g. urban agriculture).
- incorporate open and enclosed spaces which bring the community together and provide social cohesion

## Pedestrian permeability, traffic management and bicycle and car parking

The Development Plan should show and make provision for:

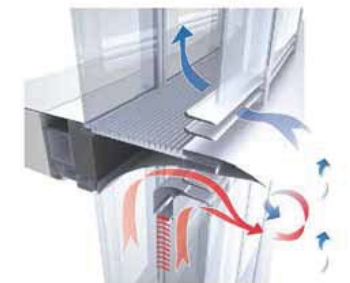
- an appropriate level of bicycle parking and facilities is provided on site.
- any vehicular access and parking

- provided on site, designed to minimise impacts on the public realm and bicycle and pedestrian movement.
- appropriate management of traffic impacts associated with the new development.
- safe access for pedestrians and bicycle users at all times of the day and night.
- enhanced permeability of the site and provision of convenient and the direct pedestrian movements east-west between Swanston and Cardigan Streets together with north-south links.

## Environmentally Sustainable Design

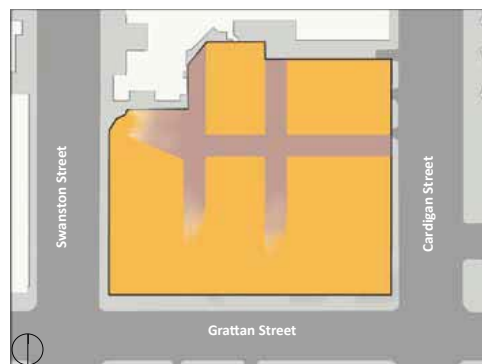
The development on the site should:

- minimise the production of greenhouse gas emissions and maximise energy efficiency.
- minimise mains potable water use and encourage the use of alternative water sources.
- minimise waste going to landfill, maximise the reuse and recycling of materials and provide improved waste collection efficiency.
- make optimum use of available technology to contribute to future flexibility in use of the site including its potential future reconfiguration.
- achieve a high quality sustainable development outcome for the site
- contribute demonstration projects, advancing knowledge and establishing new benchmarks in sustainable development.
- be underpinned by a thorough assessment of opportunities for district-scale sustainable infrastructure.
- address all six categories of the Green Star Communities pilot tool.



Facade detail - natural ventilation

## 5.0 Urban Design Principles



Potential Upper Level Activation



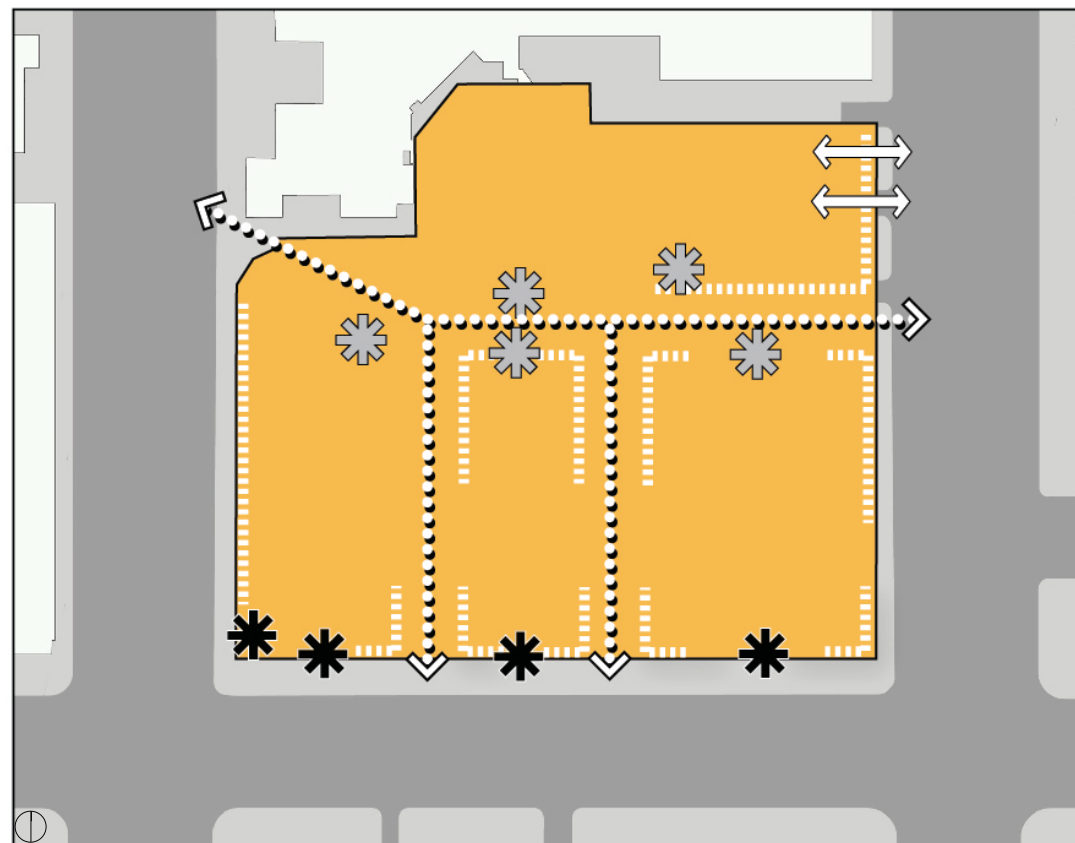
Potential Lower Level Activation

- Active Level  
(level change)
- Potential Built form  
design response

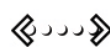


### 5.1 Building Location




Built form massing is to consider the impacts on each of the three major street frontages of Swanston, Grattan and Cardigan Street and the adjoining dental hospital to the north of the site. The retention of the existing 3AW tower must also be considered in determining appropriate building massing in response to its central role on the site. The siting of built form elements on the site must be made in consideration of:

- Separation of tower forms to maximise access to daylight and air circulation.
- Setbacks of habitable room windows.
- Wind impacts.
- ESD requirements.
- Impact on the lower built forms to the southeast and northeast of the site.
- Impact on the internal outdoor open spaces and on the public realm of adjoining streets.
- Key view lines along Swanston, Grattan and Cardigan Streets and from Lygon Street.



Potential Building Activation and Access

-  Potential pedestrian link\*
-  Potential entry point Upper level\*
-  Potential entry point Lower level\*

-  Potential vehicular access including servicing
-  Potential active frontage
-  Potential building envelope

\*Universal access provision



# 5.0 Urban Design Principles

## entry and scale



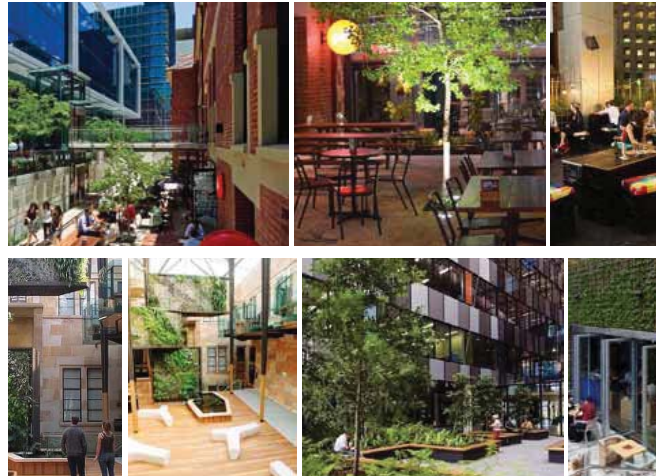
Movement and Access

### 5.2 Movement and Access

Key principles for movement and access for the Carlton Connect Initiative which must be incorporated into the staged development of the site are:

- Provision for waste management access
- Service and deliveries
- Disabled parking
- End of trip bicycle facilities

## public space



Public and community spaces

### 5.3 Open space/public realm

The open space and public realm of Carlton Connect will form the key bridging elements between the University campus and the local Carlton neighbourhood through:

- Protection and enhancement of the existing public realm of adjoining streets.
- Enhancing key view lines along Swanston, Grattan and Cardigan Streets and from Lygon Street.
- Exploring new forms of open space

- Extending and expanding upon the tradition of fine open space treatments as found on the University campus.

### 5.4 Community facilities/ Recreation facilities

The land uses of Carlton Connect will include:

- Public/Community facilities which will complement the new Kathleen Syme Centre on Faraday Street

## activation



Environment

### 5.5 Environmentally sustainable design

Carlton Connect buildings should aim to incorporate and achieve environmentally sustainable design and environmental performance.

A precinct wide approach to Environmentally Sustainable Development will lay the groundwork for building-specific measures which will be incorporated to physically express the ESD credentials of the Carlton Connect Initiative. These are summarised in Appendix 2: Environmentally Sustainable Development Statement.

A key tool developed by Green Building Council of Australia is the Greenstar Community PILOT tool, which enables a project precinct to be assessed holistically at the planning stages to ensure that the urban form, layout and relationship of built form work together to achieve sustainability objectives assessed against the following categories:

- Governance
- Design
- Liveability
- Economic Prosperity
- Environment
- Innovation



# 6.0 Building Envelope

## Envelope Summary

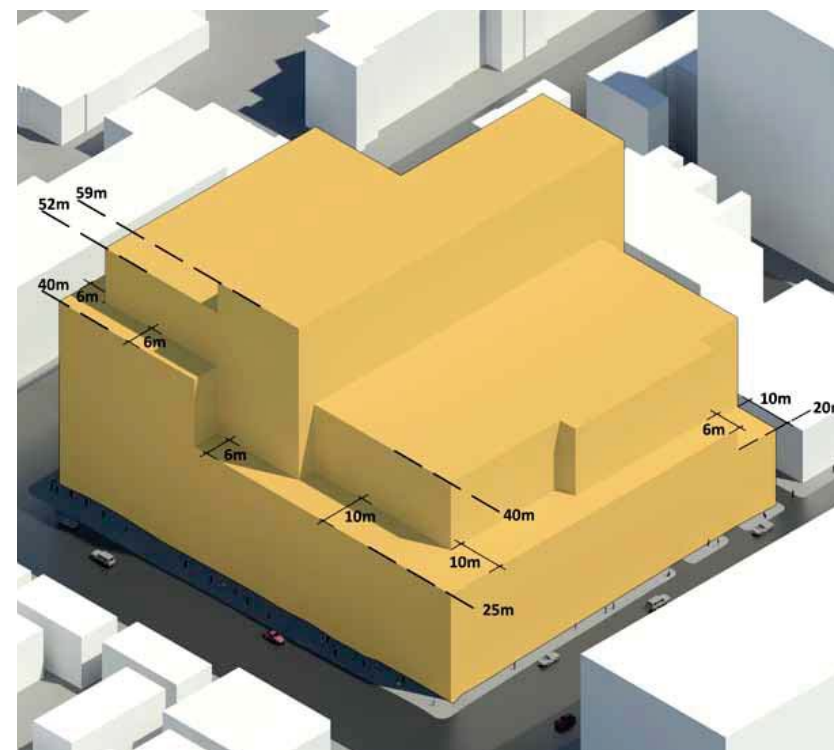
This is the preferred maximum building envelope for buildings to be designed within.

It does not include building separations required by building regulations, fire and privacy and amenity considerations nor those needed for pedestrian links..

The building envelope and heights are subject to further wind assessments which will be assessed during the planning permit/DA stage to ensure that the maximum building envelopes will not cause unreasonable wind impacts.



Indicative Envelope Plan



Indicative Envelope Axo

# 6.0 Building Envelope

## Envelope Development

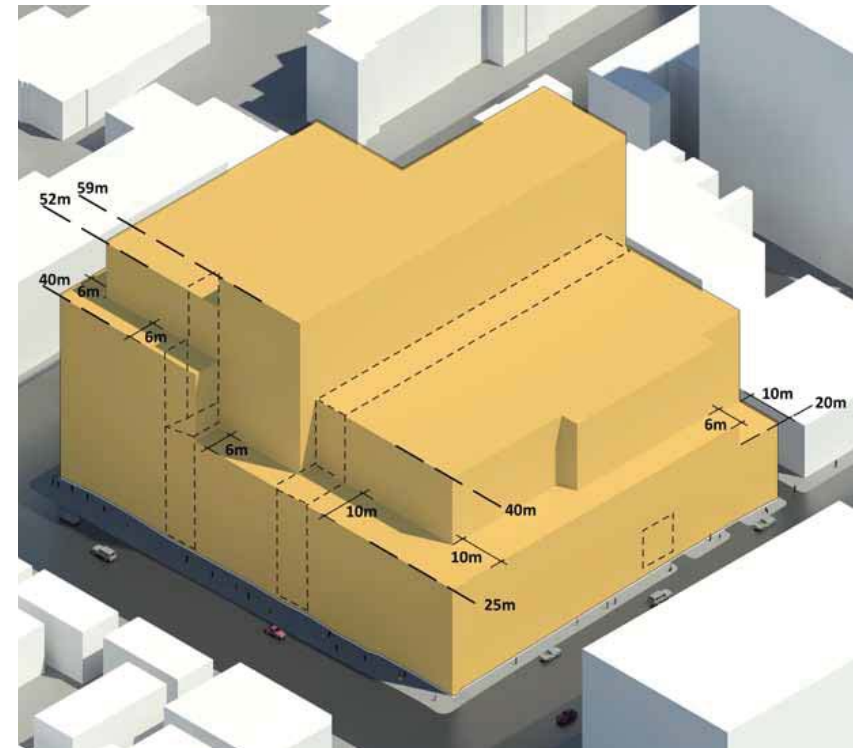
The precinct envelope was further explored to take into consideration built form separation as shown at right. This is the preferred maximum building envelope for buildings to be designed within, rather than what the built form will look like.

It includes building separations but does not include a detailed assessment required for building regulations, fire and privacy and amenity considerations.

The building envelope and heights are subject to further wind assessments which will be assessed during the planning permit/ DA stage to ensure that the maximum building envelopes will not cause unreasonable wind impacts.

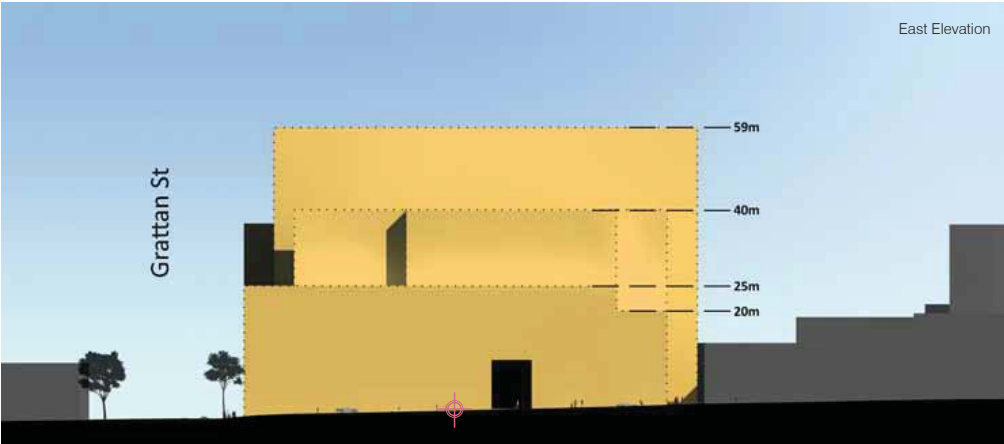


Indicative Envelope Plan  
(Potential building separations shown dashed)

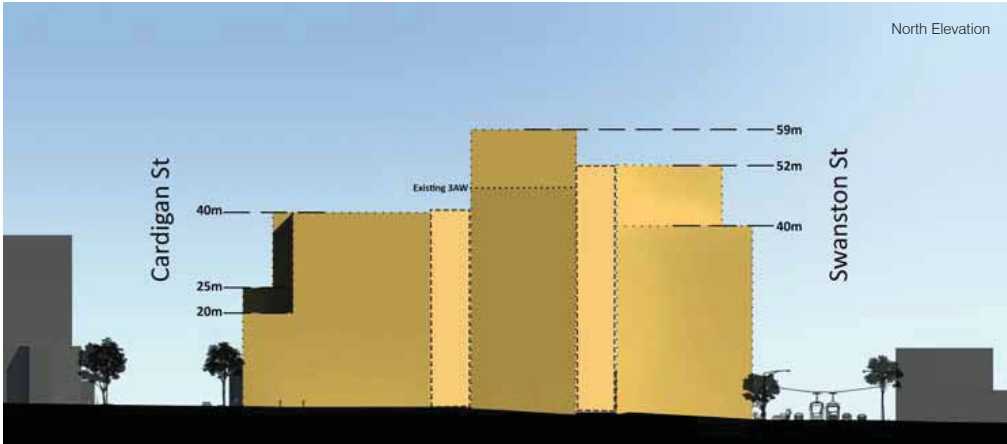


Indicative Envelope Axi  
(Potential building separations shown dashed)

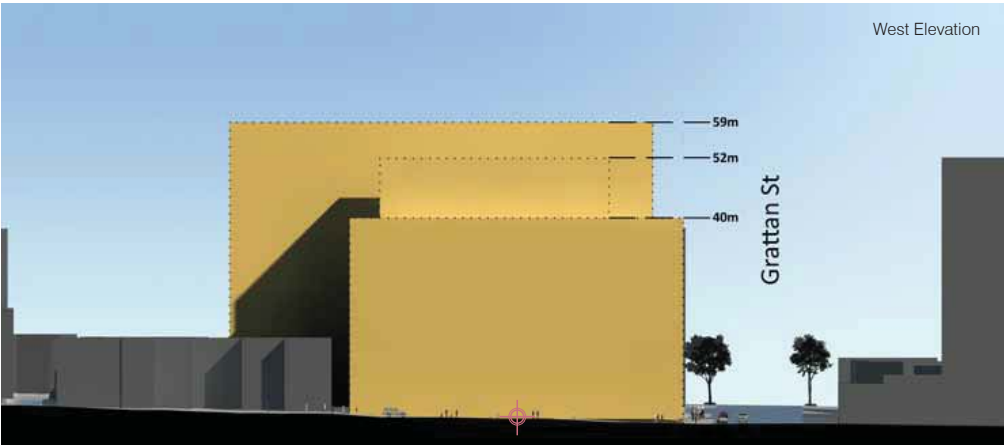
# 6.0 Building Envelope



⊕ Height envelope set out point for Cardigan Street



Height envelope set out from street frontages



⊕ Height envelope set out point for Swanston Street



⊕ Height envelope set out point for 3AW Building

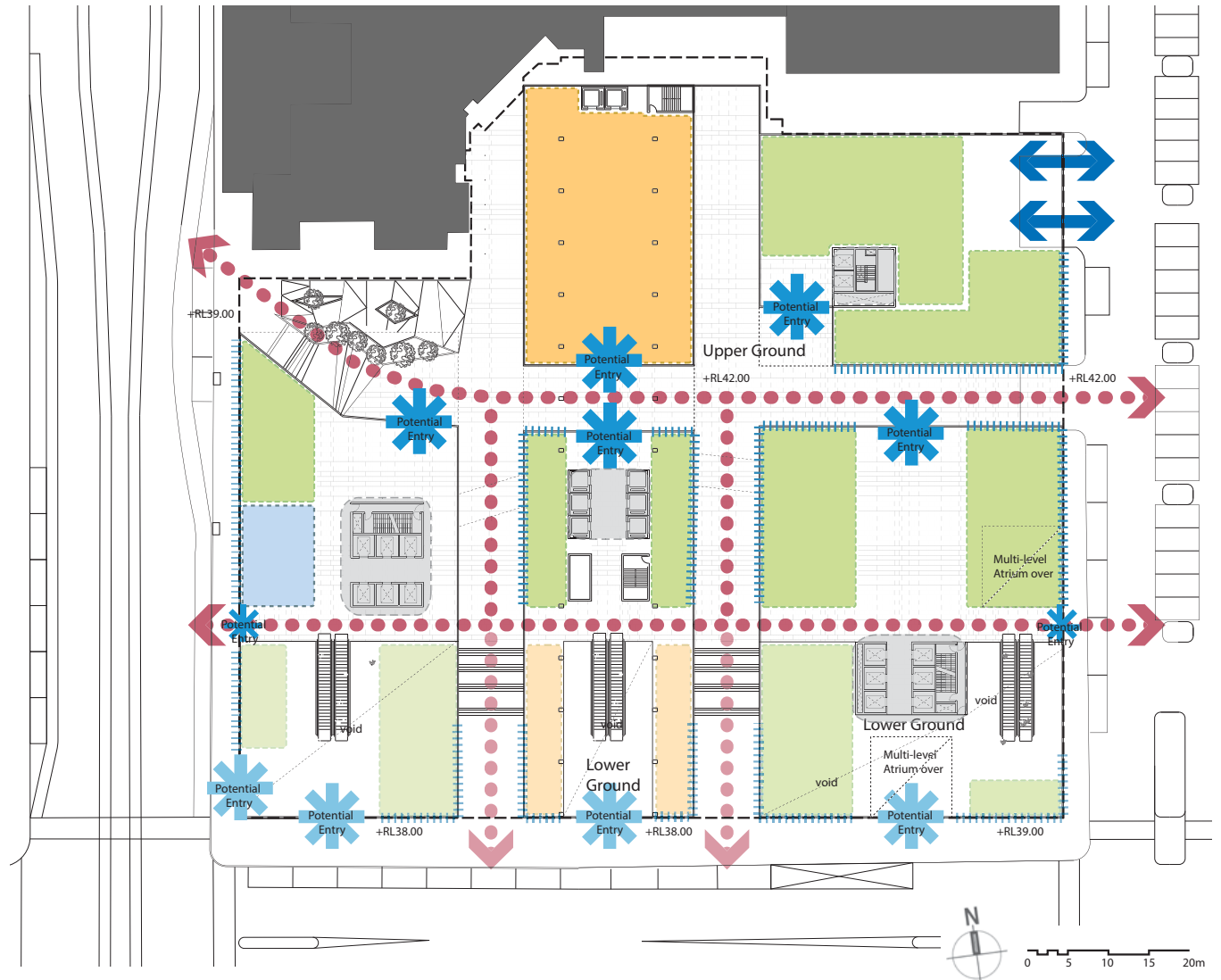
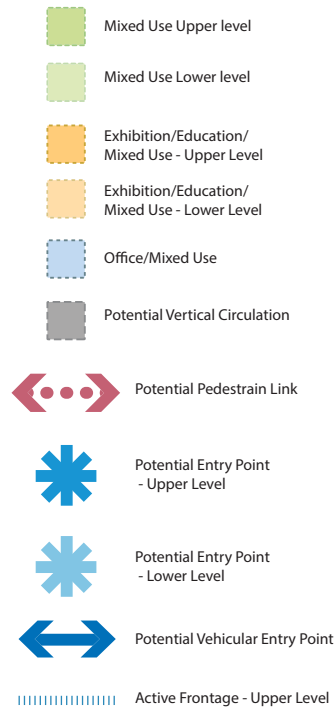
Indicative Envelope Elevations



# 7.0 Indicative Built Form Concept

## Concept site development design principles:

1. Create a high quality, accessible, naturally active, serviceable and integrated set of buildings and public spaces.
2. Achieve a high level of identity and amenity.
3. Future proof the development through flexible space planning that anticipates future change.
4. Articulate the high rise elements to maximise solar access to open and enclosed public space.
5. Engage with, connect and highlight extant heritage values - commemorate the former use of the site as the birthplace of thousands of Melbournians.
6. Connect with and reinforce existing pedestrian networks and links to adjacent city blocks.
7. Respect the scale of the context by conforming to established set back and height constraints.
8. Include the opportunity for public events.
9. Design the site to enhance and foster a serendipitous exchange of ideas.
10. Support innovative engineering and architectural design solutions.
11. Make provision for adequate soil depth for landscaped areas. In layout of basement, consider the need for deep soil areas for landscaping at ground level.
12. Make provision for water sensitive urban design.
13. Integrate the University of Melbourne with its surrounding neighbourhood by adding positive, high quality design outcomes as an addition to the city's urban fabric.



## 7.0 Indicative Built Form Concept

The proposal can provide a variety of built forms and spaces with different functions linked to each other in use, program and to a high quality public realm including:

- Utilisation of zero to limited setbacks on the key ground level areas with the potential for public areas, retail and student residential uses to provide a variety of active frontages along the site's major street frontages.
- The final form of the AJ Cunningham Building on Swanston and Grattan Street is placed "hard" on the corner to highlight the key site line along Swanston Street as a gateway to the site.
- The building along Cardigan Street could provide a transition in grain size between the medium grain nature of the streetscape to the north to the finer grain forms of the south and southeast. These buildings could feature a zero setback to the street.
- A potential below-grade basement vehicular car park access from Cardigan Street could draw and locate service vehicles and parking away from the main pedestrian areas and screen it from the street level.
- Publicly accessible plazas, landscaped areas laneway links and other open spaces could enhance the aspect and amenity for residents of a potential Student Residential building.
- Pedestrian interfaces along all street frontages could be improved by new paving, street furniture and street tree planting where appropriate.
- Laneways and courtyard spaces derived from the University of Melbourne's successful landscaped elements of outdoor rooms and pedestrian corridors which have long been an integral part of the development of the historic campus could be strategically placed to increase the permeability of the site with built form breaks forming openings along the built edge on the Cardigan and Grattan Street frontages with high quality landscaping to provide a sense of engagement with the street and invite visitors into and through the site.
- The proposal underpins and supports the extension of the University of Melbourne into the city by continuing to merge with the urban fabric of the city and blurring the boundaries between city and university.
- Importantly the proposal establishes and strengthens public access and pedestrian links from Swanston, Grattan and Cardigan Streets, with the new ground level frontages and integral public spaces offering a high level of accessibility, amenity and direct street connection.
- A second ground plane, defined as a 'super floor' floats above the ground, could potentially offer a tempered second public/university domain for fostering incubation between academy, industry and commerce.
- At the heart of the site development approach is the desire to create a strategy that supports academic, cultural and social life for students, academics, industry partners and the Carlton community, adding to the concept of 'University in the City' through the combined effect of how the new buildings and public spaces are composed and programmed, inviting connectivity, activation and participation as part of the knowledge transfer agenda of the University of Melbourne and its partners in the Carlton Connect Initiative.
- Sustainability is one of the key elements of this Development Plan. It can be approached in an holistic manner from the planning of the precinct through to the operation and management of the facilities as they are developed. This includes:
  - Development of Precinct Linkages - working with current Sustainability Frameworks which may include but are not limited to:
    - Green Star Communities
    - LEED Neighbourhoods
    - BREEAM Communities and
    - One Planet Living

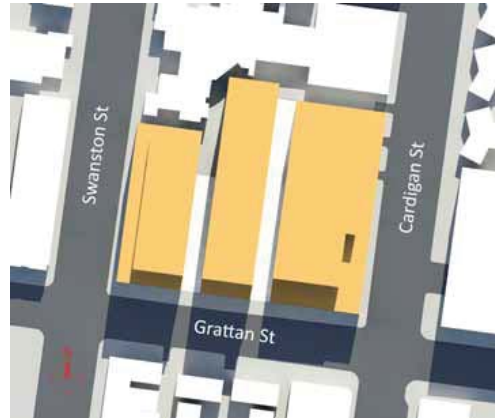
At the Development Plan Level it has been determined to use the **Greenstar Community PILOT tool**.

# 8.0 Shadow Studies

March 22



1100



1200



1300



1400

September 22



1100



1200



1300



1400

## Shadow Studies

Shadow studies were made of the precinct envelope with built form separation as shown at the Spring and Autumn Equinox between the hours of 11:00AM and 2:00PM.

It is important to remember that this is based on the preferred maximum building envelope for buildings to be designed within, rather than what the built form will look like and their ultimate shadow impacts on the public realm and internally.

Each building envelope will be subject to detailed design development to ensure that the maximum building envelopes will not cause unreasonable shadow impacts.

The existing 3AW tower has an existing shadow impact which must be considered. The building envelope and heights are subject to further wind assessments to ensure that the maximum building envelopes will not cause unreasonable wind impacts.



# 9.0 Indicative Landscape/Public Realm Concept

## Public Realm and Landscape Principles

Generally, the spaces within the site should be a reflection of University of Melbourne landscape typologies, while the streetscape interfaces will reinforce the existing avenues within the City of Melbourne.

- Acknowledge importance of Swanston Street as an access for the City of Melbourne.
- Acknowledge strategic importance of Grattan Street as a linking element with a leafy interface consistent with the landscape of the University of Melbourne.
- Provide pedestrian oriented 'finer grain' permeability.
- Landscape treatments to express a connection to the University.
- Avoid 'unadorned' laneway experience. Celebrate the University of Melbourne typology.
- Provide roof gardens and spill-out spaces for student residential and office spaces.

## Landscape Concept

### Streets

- Provide infill tree planting, furniture and paving to conform to City of Melbourne standards.
- Where possible, provide building setbacks to Grattan Street to allow for entries, consistent with the landscape of the University.

### Public Spaces

- Provide people oriented, active and animated spaces e.g. retail/food and beverage to activate area.
- Use landscape to create a central focus. Create a garden quality consistent with the University of Melbourne.
- Celebrate the University of Melbourne typology with landscape and palette of materials.
- Possible covered atrium spaces with subtropical landscapes, green facades and pergolas.

### Access and Entries

- Landscape treatment to express a connection to University of Melbourne e.g., garden quality as opposed to 'unadorned' laneway.
- Green facades and pergolas to soften tight spaces.
- Green walls and green roofs where appropriate.



# 10.0 Development Staging

## 10.1 Staging

The Carlton Connect Initiative will result in a staged delivery which will likely occur over several years.

Stage 1 – Refurbishment of the A.J. Cunningham Wing in Swanston Street has commenced. It will include teaching, research and office and retail spaces.

The subsequent development of stages are likely to proceed as follows:

- Stage 2 - 3AW Refurbishment
- Stage 3 - Student Residential Development (north-east portion of site on Cardigan Street)
- Stage 4 Building on corner of Grattan and Cardigan Streets
- Stage 5 - Demolition and redevelopment of A.J. Cunningham Building Site

Staging of development requires full design feasibility and conceptual design development of each individual site with regard to the requirements of this Development Plan. The integration of existing conditions and anticipation of the requirements of each new stage will be an important consideration for an operating facility with many different user groups and programming requirements to operate without hindrance.



