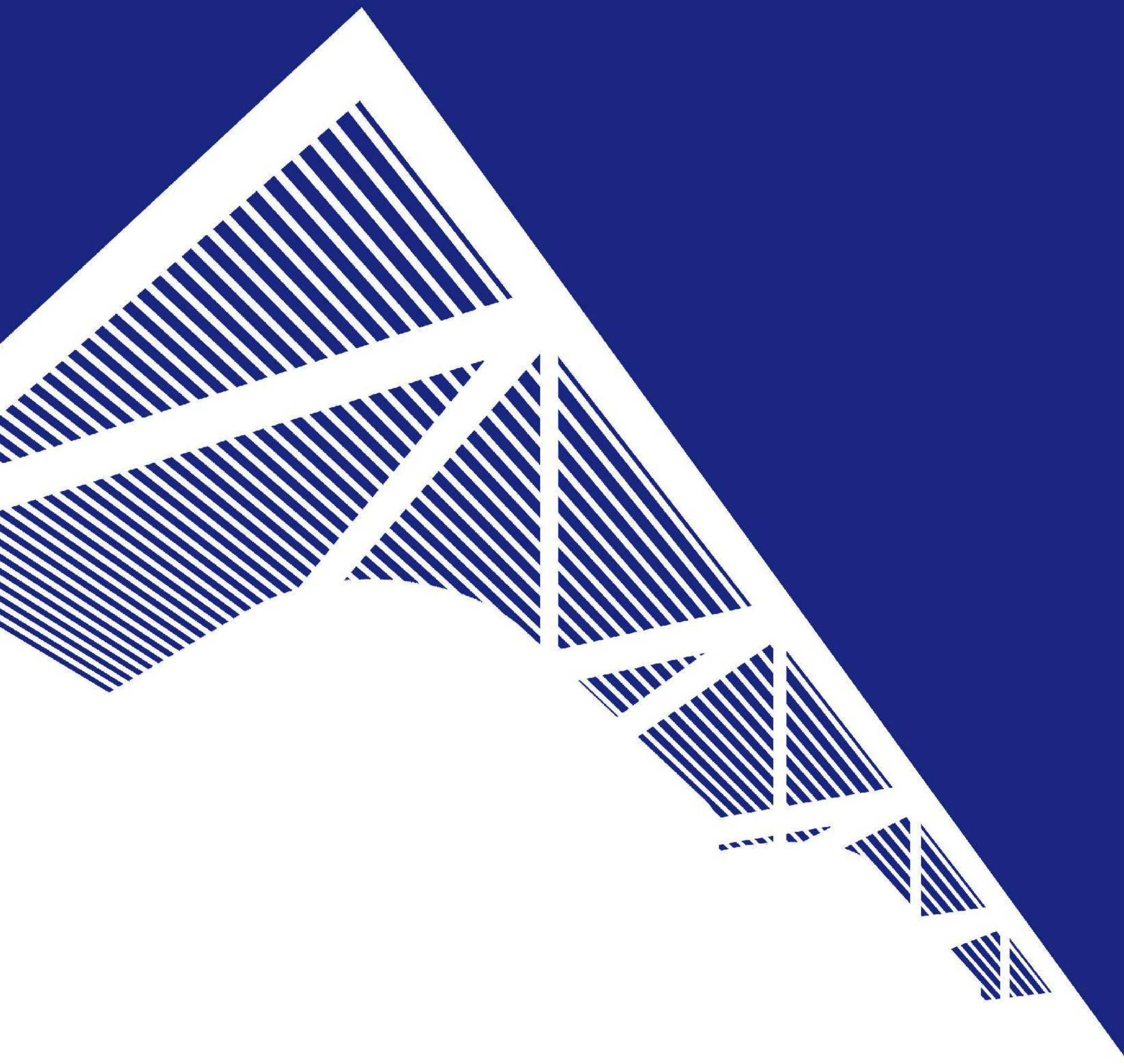




8-12 University Avenue
Macquarie University

SSDA Design Report
November 2018

SISSONS / KANN FINCH / ASPECT

Project Name	8-12 University Avenue		
Project Number	15018		
Document Title	DA Design Report		
Revision	Date	Comment	Approved
6	31.01.18	DA Issue	CC
7	07.02.18	DA Issue	CC
8	14.02.18	DA Issue	CC
9	15.11.18	SSD/DA Issue	NS

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1.0 INTRODUCTION

This document provides a detailed account of the concept design that has been developed for 8-12 University Avenue, Macquarie University.

The site is located in Precinct E, a commercial area of the University, which aims to enrich the University’s historic ties with business and technology. To the North of the site is the new University library and the main central teaching core. To the South is precinct E including the new Cochlear Plaza and to the West is the Australian Hearing Hub building.

The site is well served by public transport with its close proximity to both Macquarie University Train Station and bus stops located along University Avenue.

The proposal is for a new commercial building which provides A-grade office spaces, laboratory and collaboration spaces for use by the University and its business partners. The design focuses on attracting technologically advanced tenants that highly value the unique opportunity and relationship with Macquarie University.

The concept design complies with the approved Concept Plan, Precinct Design Guidelines and Design Excellence Strategy (2010). Overall, the building:

- Is generally 36 metres in height
- The street wall definition along Macquarie Avenue and Macquarie Walk is generally between 20-24 metres
- Addresses Macquarie Walk as the primary point of view by positioning the primary entry point of the building along the

facing edge

- Access to the basement is from the east end of the site, away from the primary face
- A setback of 3 metres minimum is maintained above the street-wall line.
- The Northeast facade celebrates a prominent location facing onto the southern boundary of the University Common while also visually signifies a key pedestrian node at the juncture of Macquarie Walk and the University Common.
- The texture and colour of the solid facade elements reflect the off form concrete aesthetic found throughout the campus as a feature of several buildings designed by Walter Abraham.
- Equally the warm grey tone of these facade elements take inspiration from the silver grey bark of the eucalyptus trees prevalent throughout the campus landscape.

DA PROJECT TEAM

Client	Macquarie University
Architect	KannFinch Sissons
Project Manager	Cadence Australia
Town Planning	Roberts Day
Structure	Enstruct

Services	Umow Lai
Cost Planner	WT Partnership
Facade	Arup
Model maker	Porter Models
Visualisation	David Duloy

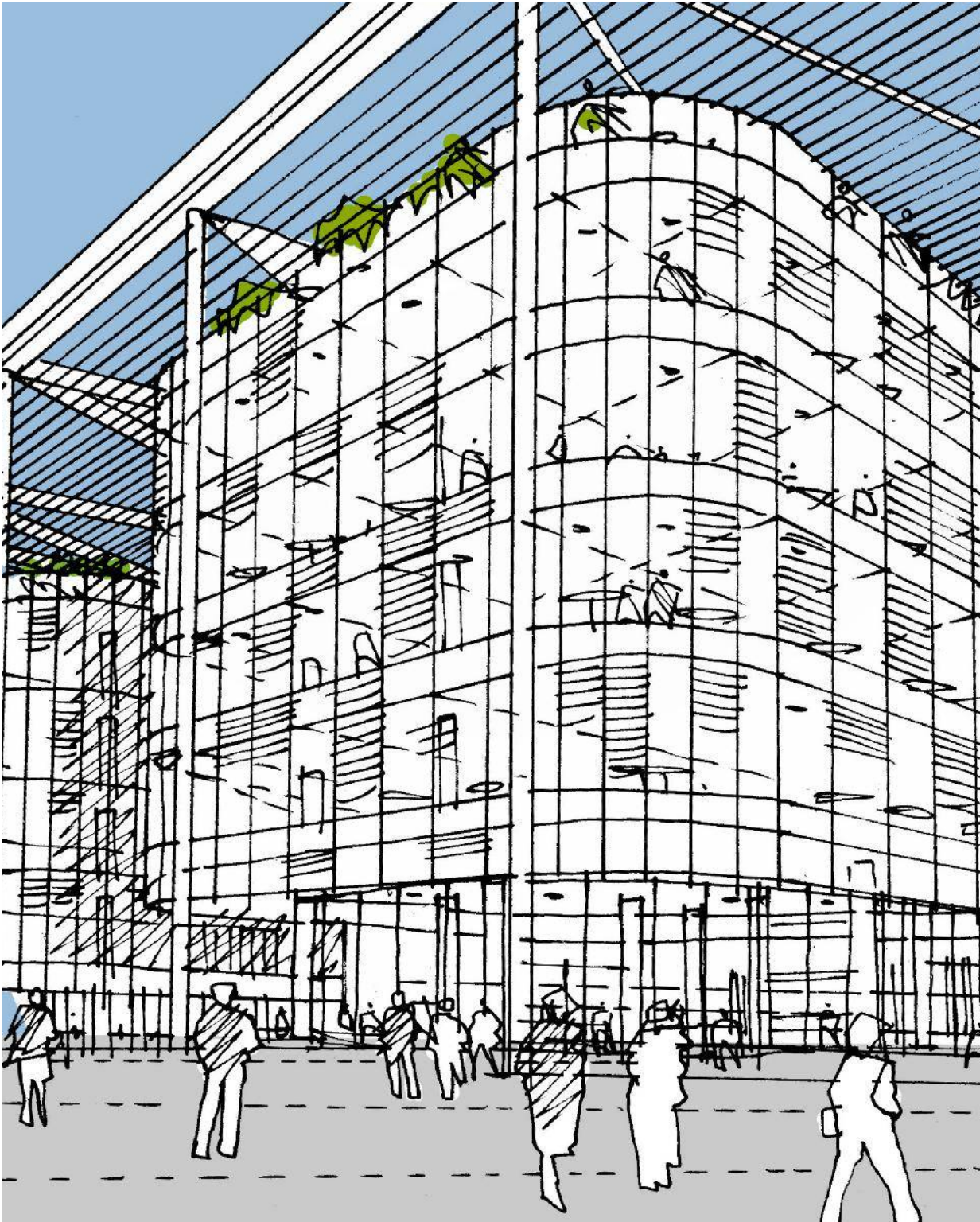


Figure 1.1, Conceptual sketch of Northeastern collaboration drum from Macquarie Walk.
Figure 1.2 (following page) Rendered view of the Northeast elevation from the University Common.



1.2 DESIGN STATEMENT

Macquarie University is working to enhance its position as one of Australia's leading institutions for education, research and innovation. As part of this ambition the University's campus masterplan has sought to engage with commercial enterprises, bringing disciplines together in a spirit of collaboration.

The building at 8-12 University Avenue will be vital in realising this objective. This is achieved by creating a commercial focus within the campus whilst providing office, laboratory and collaboration spaces to facilitate integration. With the site located in a unique position between the educational and commercial precinct of the university, it presents the opportunity to unite the different precincts, bridging their common requirements and goals.

Within the wider campus, the project's location also marks the gateway to the pedestrian focussed academic precinct and will seek to reinforce and enhance the pattern of the existing public transport infrastructure.

The project's design seeks to make a strong contribution to the campus. The building is arranged, and split, around a central galleria and atrium spaces with open plan offices on 6 levels sharing this communal focus. The galleria is conceived as an informal meeting space, populated with seating and cafes, and a hub shared by the wider campus. It is open at ground level and bisected by a view corridor facing the southern Cochlear precinct. This creates a permeable building, with a route directly through, under and amongst the architecture.

The principal floorplates have been designed with a rational commercial rigour. Two central cores and satellite services/stair pods allow for maximum internal flexibility for a wide range of tenant configurations. The intention is to give the University the ability to provide a variety of functions, or to attract a variety of tenants with a resource that can adapt to the changing needs and priorities of the users.

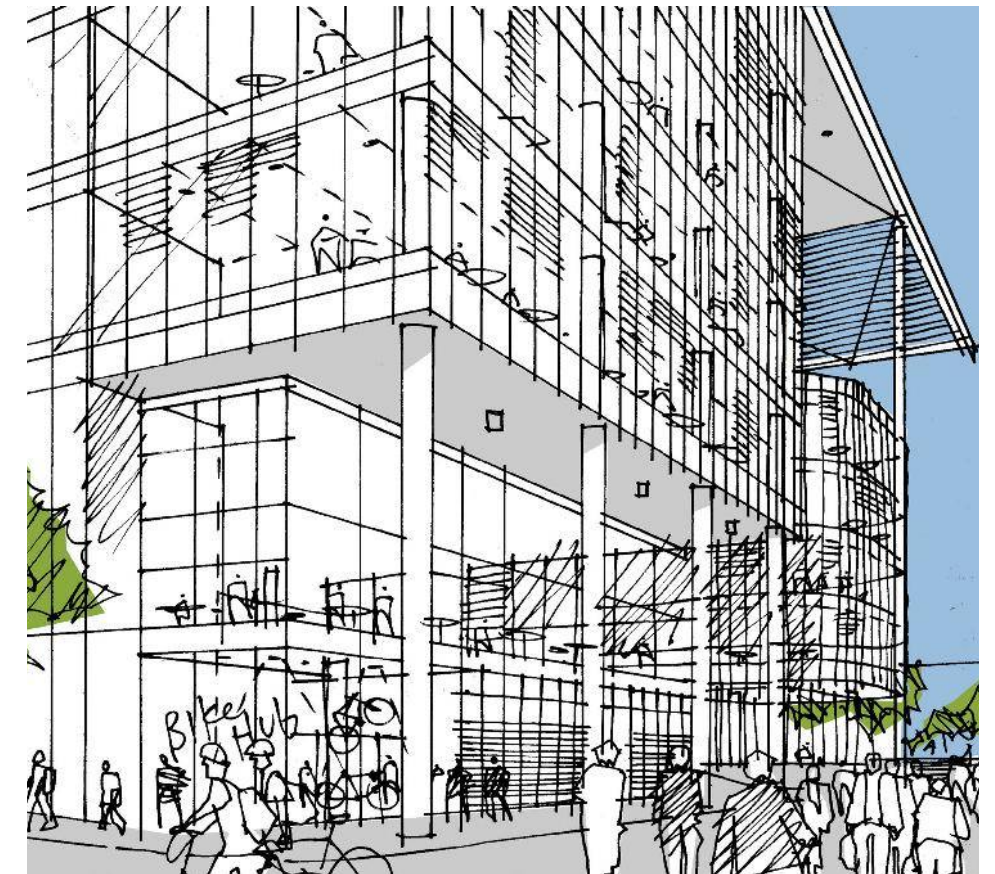
At the north-east corner, facing onto the University Common, a pair of expressive drums are placed as distinctive sculptural elements. Architecturally these forms are a response to the public domain, giving the building a bold identity. Functionally they are the heart of the building – housing the collaboration spaces, they are a physical embodiment of the vision to bring academia and enterprise together. Like the commercial office areas, these spaces will be serviced to enable flexibility and adaptability.

The various elements of the building are tied together with a unifying roof form – a strong compositional element that gives the building a presence within the campus.

The design has been developed to meet environmental sustainability standards. Of particular note are the collaboration drum facades which seek to balance daylighting and thermal gains with views in and out of the space. The commercial spaces will be developed to 5 Green Star design and as built, providing a sustainable and high quality working environment.

The buildings will make a meaningful contribution to Macquarie University; delivering first-class commercial, laboratory and collaboration facilities with floorplates that accommodate flexible and adaptable use. Care has been taken to layout the buildings within the University's campus pattern, enhancing view corridors and routes, and maintaining permeability through the ground plane. In doing so the project is the manifestation of the University's vision to unite academia and enterprise.

The Northeast facade celebrates a prominent location facing onto the southern boundary of the University Common while also visually signifies a key pedestrian node at the juncture of Macquarie Walk and the University Common. The selection of facade materials and colour palette references both the unique bushland setting of Macquarie Park and design cues from existing campus buildings.



Figureure 1.3, Conceptual sketch of Southeastern facades viewed from University Avenue.

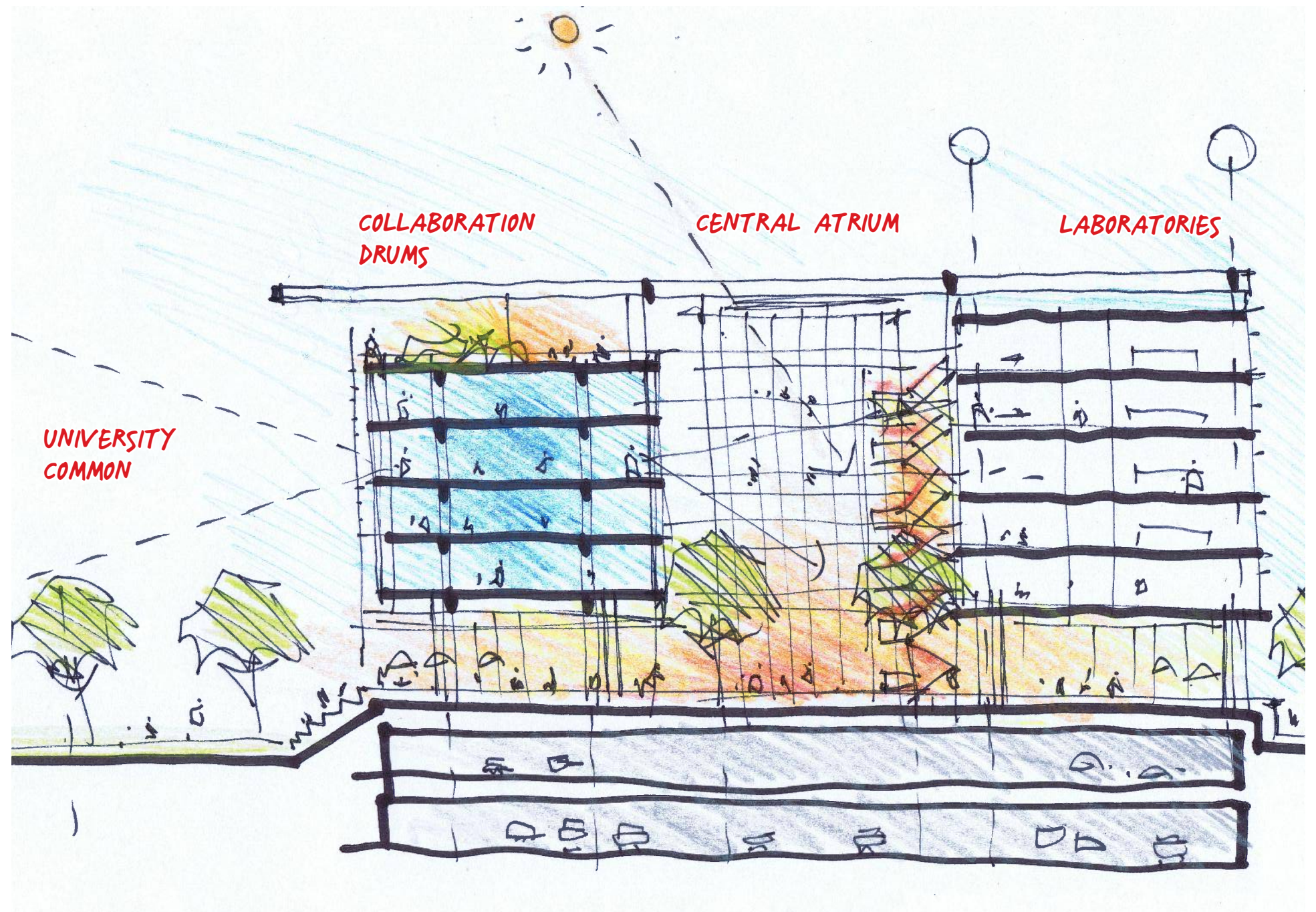


Figureure 1.4, Conceptual visualisation of Notheastern elevations viewed from Macquarie Walk.

1.3 KEY ARCHITECTURAL DESIGN PRINCIPLES

The key architectural design principles embodied in the proposed development at 8 to 12 University Avenue include the following;

- Capitalising on the opportunity to unite the different precincts, connecting their common requirements and goals.
- Enhancing the commercial focus within the campus whilst providing laboratory and collaboration spaces to facilitate integration.
- Delivering first-class office, laboratory and collaboration facilities with floor plates that accommodate flexible and adaptable use.
- Creating a gateway to the commercial and academic precincts that seeks to reinforce and enhance the pattern of existing pedestrian circulation.
- Providing a series of ground level informal meeting spaces, populated with seating and cafes and collaboration spaces to create a strong communal focus.
- Arranging and splitting the building around a central galleria and atrium spaces to maximise permeability with routes directly through, under and amongst the architecture.
- Positioning the lift cores and satellite services/stair pods to allow for maximum internal flexibility for a wide range of tenant configurations and changing needs.
- Introducing a pair of expressive drums placed as distinctive sculptural elements in response to the public domain, giving the building a bold identity.
- Unifying the various elements and functions of the building with a dramatic roof form that gives the building a strong presence within the campus.
- The selection of facade materials and colour palette references both the unique bushland setting of Macquarie Park and design cues from existing campus buildings.



Figureure 1.5, Early conceptual section through building.

Figureure 1.6 (following page) Rendered view of the Northeast elevation from the Macquaire Walk.



2.0 PLANNING CONTEXT

SITE E2

Max GFA = 31,440 sq m

Pro rata GFA = 16,245 sq m

E2 is located adjacent to the diagonal pedestrian link that connects the Cochlear sites (E6-E8) with the future University Common.

Site design requirements:

- Height limit 36m
- Building to address diagonal link.
- Basement vehicular access is from secondary road located to the West of the site. Following the design review of a combined E2/E3 site, the proposed basement access is to be from the East of site E3.
- 3m minimum setback above street-wall line.
- Primary Address from Macquarie Drive (to become Macquarie Walk). Following design review, the primary building entry point will be from the forecourt on Diagonal Avenue.
- Development to accommodate existing service chamber and easement.

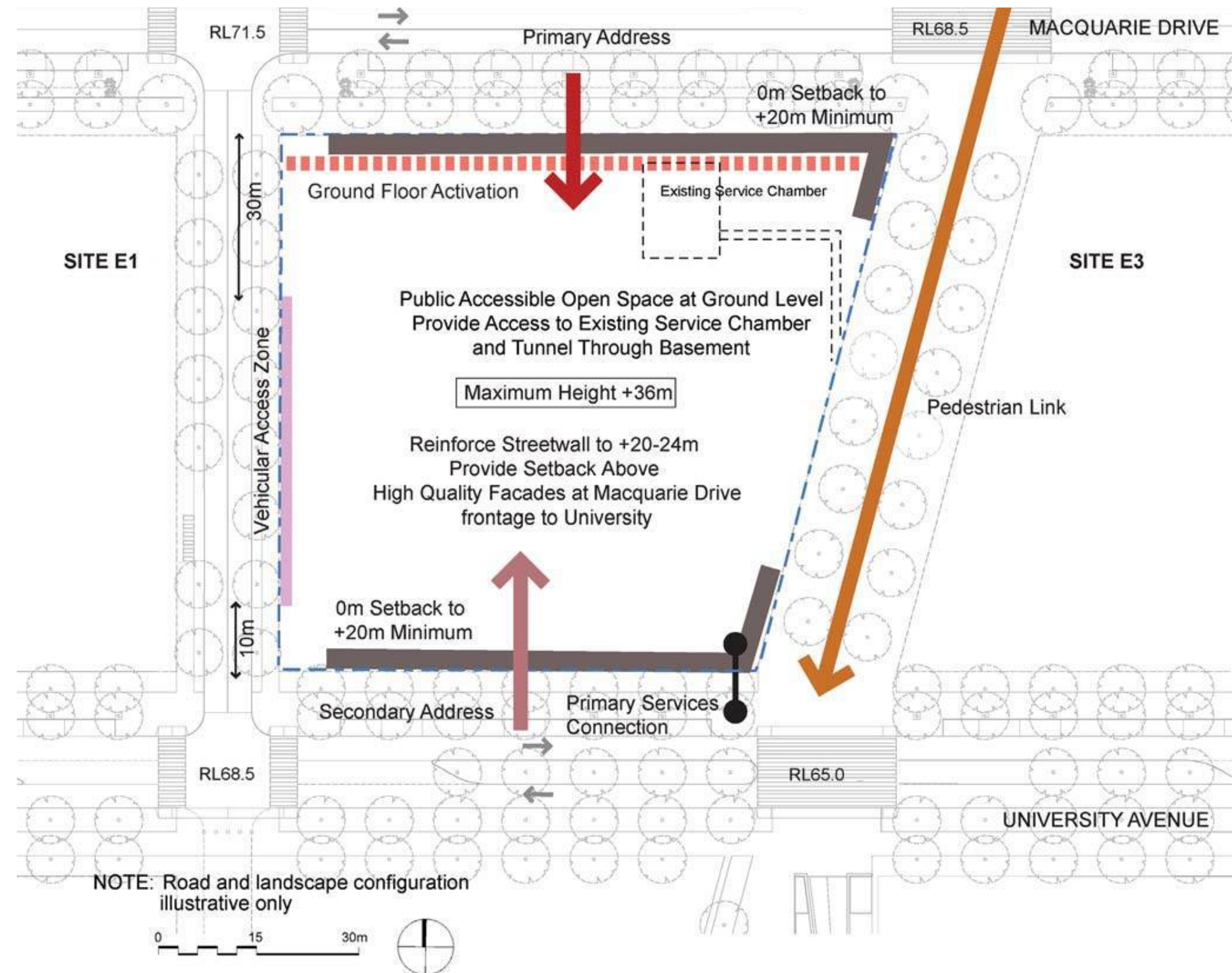


Figure 2.6, Source: Macquarie University Precinct E. (Dated: May 2010)

2.0 PLANNING CONTEXT

SITE E3

Max GFA = 25,680 sq m

Pro rata GFA = 13,269

Located opposite site E2 on the diagonal link, this site also fronts the new University Common.

Design requirements:

- Height limit of 36m.
- Building to address diagonal pedestrian link.
- High quality facade resolution required towards the University.
- Vehicular access is off the secondary road to the east of the site..
- 3m minimum setback above street-wall line.
- Primary Address from Macquarie Drive (to become Macquarie Walk). Following design review, the primary building entry point will be from the forecourt on Diagonal Avenue.
- Screen with high quality materials and detailing any carparking that extends above grade.

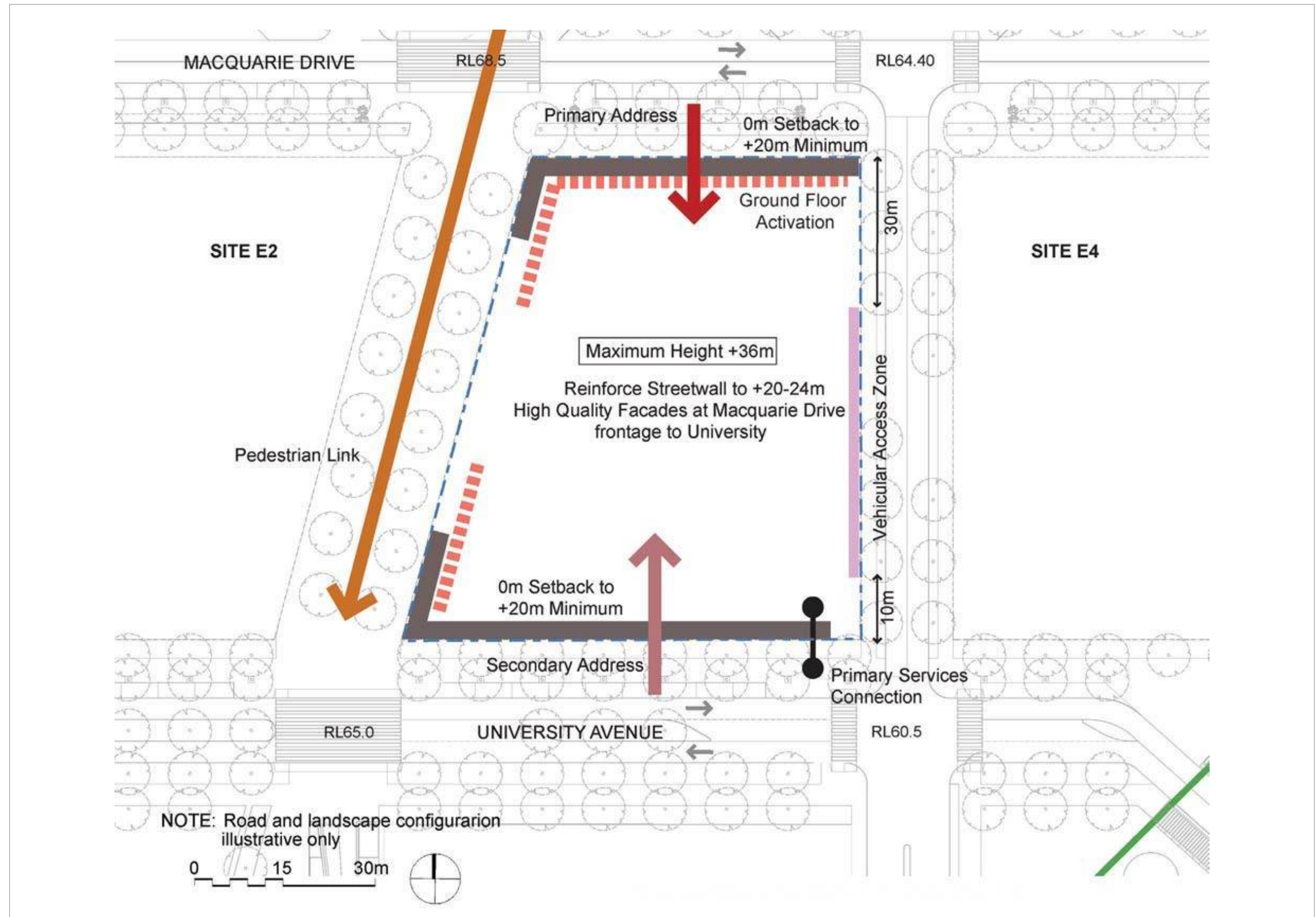


Figure 2.6, Source: Macquarie University Precinct E. (Dated: May 2010)

3.0 SITE ANALYSIS

PRECINCT E

DESIGN GUIDELINES 2010

The precinct E guidelines are an in-depth analysis and strategy for the Southern section of the campus masterplan. This area focuses on the campus' historical ethos to have a direct connection with local industries and businesses. This precinct focuses on pedestrian amenity, landscape treatment and control of the traffic to allow a pedestrianized heart to the campus.

Key elements of this precinct plan are:

- 330,00 sq m of commercial floor area.
- Linking the new university public spaces with major pedestrian routes.
- Create a sense of open space and create visual links to promote way-finding.
- Provide 'entry statements' at the Balaclava and Herring Road entrances to the Campus.
- Protect and enhance the University Creek riparian corridor.
- Provide a 'forecourt' to the two development parcels at the intersection of Waterloo and Herring Road.



Figure 3.4, Precinct Masterplan, Source: Macquarie University Campus Masterplan 2014. (Dated: 12 June 2014)

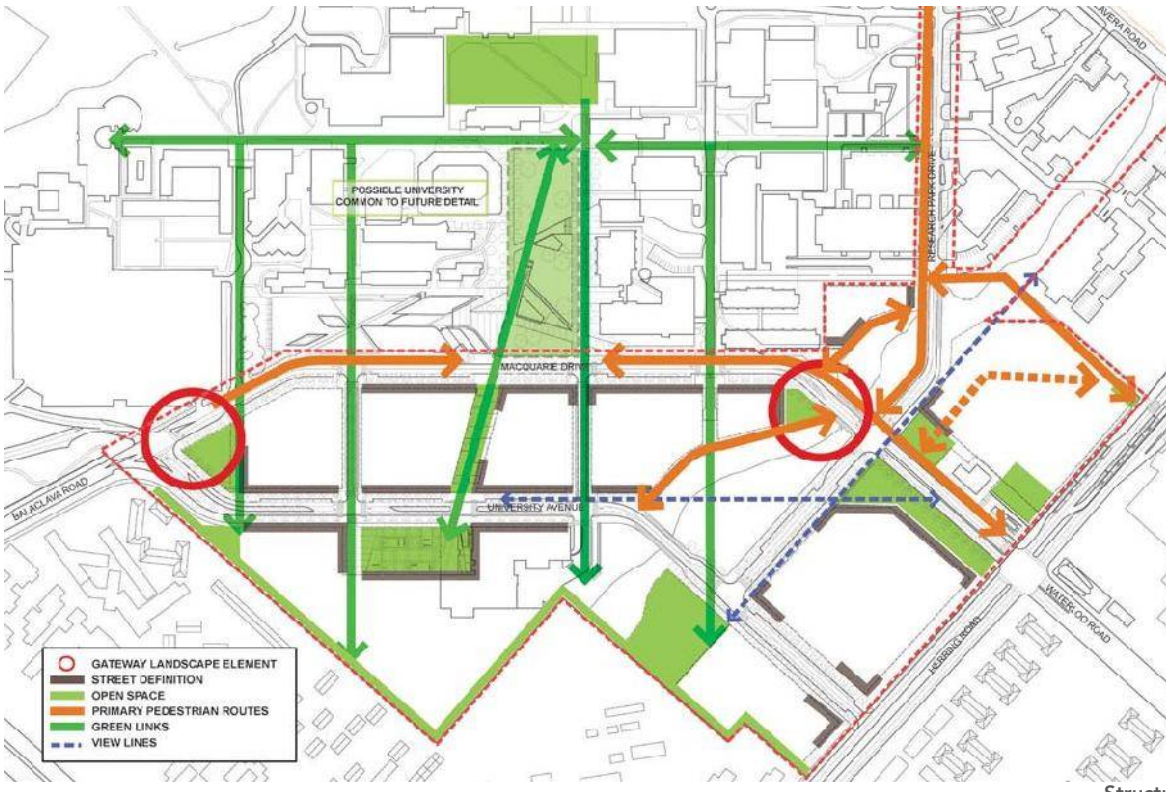


Figure 3.5, Structure plan, Source: Macquarie University Campus Masterplan 2014. (Dated: 12 June 2014)

3.0 SITE ANALYSIS



Figure 3.6, 2013 Aerial photograph of Macquarie Park

PROJECT BRIEF 2015

Macquarie University issued a project brief in June 2015. Since released, the scope of the project has increased to include the design review of the 8-12 University Avenue site. The following text is a summary of the University's original document with inserts to include site E3.

Land Size

Site E2 = 5,500 sq m (approx.)

Site E3 = 5,500 sq m (approx.)

Existing Conditions

Current improvements on the land includes a car park and various small buildings which are intended to be demolished to make way for the development of the site.

The site also contains an existing service chamber and service tunnel which is intended to be retained in part. Any proposed development will need to provide access to this service chamber and tunnel via a new basement.

Planning

Development within the University Campus is governed by the University's Concept Plan, approved by the Minister of Planning in 2009. The Concept Plan gives approval for the development of 330,000sqm of Commercial/Research floorspace across the whole of precinct E (of which this site forms a part).

Lot E2 and E3 are zoned B4 Mixed Use under the Ryde Local Environmental Plan 2014 and have an allowable height of up to 36m in accordance with the Concept Plan.

Precinct Urban Design guidelines have been created for this part of the campus to guide development and ensure design excellence is achieved.

Development Proposal

Lot E2 and E3 occupy an important area within the overall Macquarie University Campus, well connected to public transport, the University's academic core and the remainder of the Macquarie Park Corridor.

The proposal is to create high quality, A-Grade style office buildings (or linked buildings) on both sites.

E2: Gross floor area in the order of 26,000 sq m across 7 levels.

E3: Gross floor area, building layout and height to match E2.

It is envisaged that the development will comprise commercial office and research uses, encouraging both informal and formal connections between industry and the University. The development is intended to advance the University's ability to:

Engage, collaborate and partner with industry and business;

Attract and retain the best researchers, staff and commercial partners; and

Optimise the commercial value and ongoing economic viability of the campus.

Sustainability and Macquarie University

The University is committed to the integration of innovative ESD solutions across the campus. Sustainability principles have been an integral consideration for the Macquarie University campus since the University's conception.

The Sustainability Campus Vision states that "Macquarie University will be a model collaborative community demonstrating global leadership and innovation in the sustainable development of built and natural environments". The University's plan is to position itself as a sustainable development leader into the next decade and beyond.

3.0 SITE ANALYSIS

SITE PHOTOGRAPHS

The existing sites of E2 and E3 house a multi-storey carpark, an on grade carpark, a security building, a substation and an area of open lawn.



Figure 3.7, Macquarie Drive looking South-east.



Figure 3.8, Existing security office on lot E2.



Figure 3.9, Macquarie Drive looking East.



Figure 3.10, Existing multi-deck carpark on lot E3.

3.0 SITE ANALYSIS

SITE PHOTOGRAPHS SURROUNDING CONTEXT



Figure 3.11, Macquarie Drive - Library on left, E02 on right.



Figure 3.12, Cochlear building.

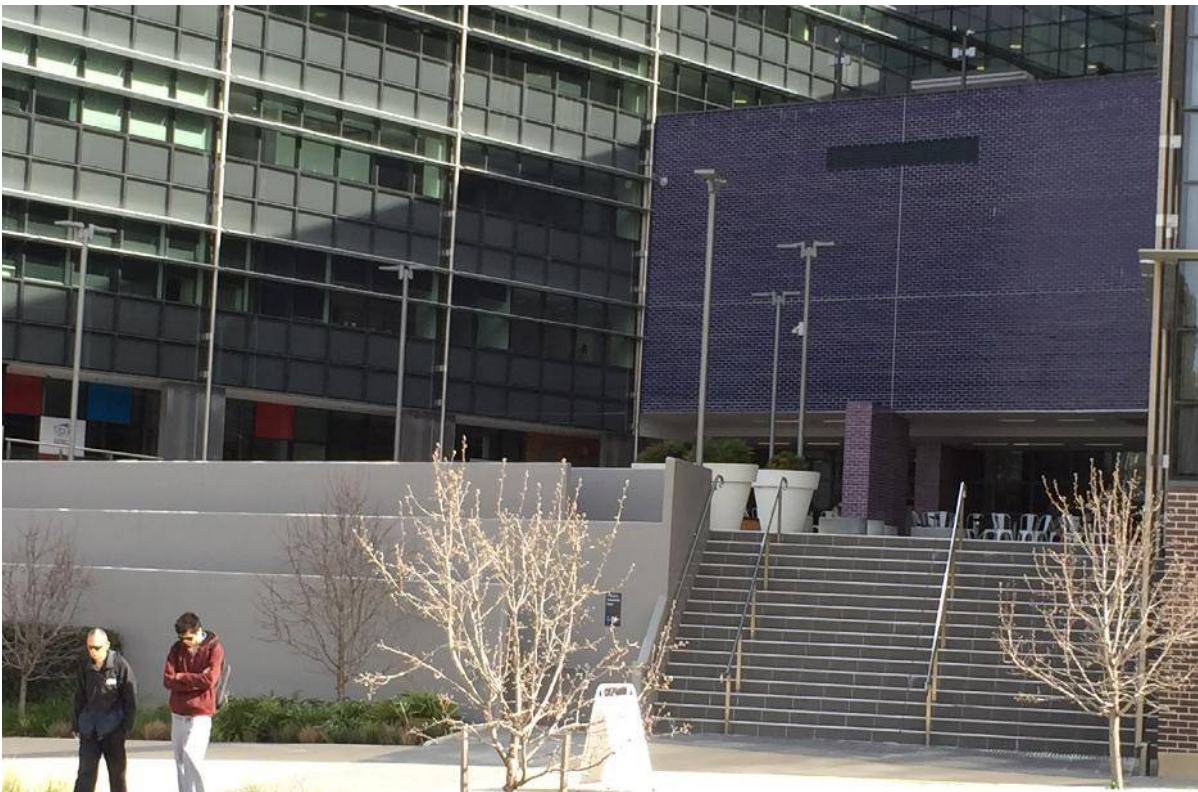


Figure 3.13, Eastern facade of Hearing Hub.



Figure 3.14, North-east corner of Hearing Hub.

3.0 SITE ANALYSIS



Figure 3.15, site photographs surrounding context

MASTERPLAN CONTEXT

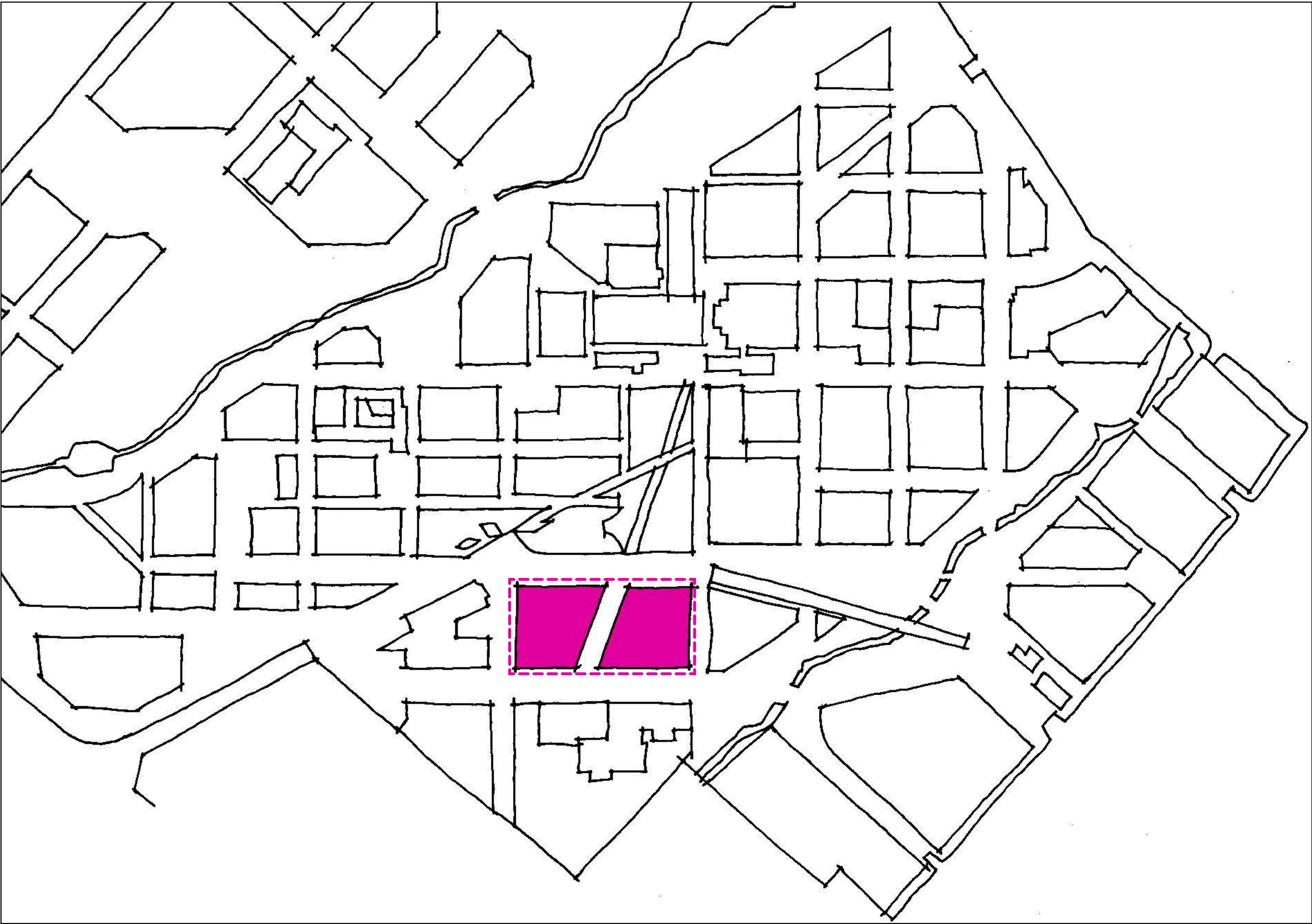
The site is located at 8-12 University Avenue. It comprises two adjacent development parcels, with a total site area of over 11,000sqm.

Its development potetial is approximately:

Site E2:
Max GFA = 31,400 sq m

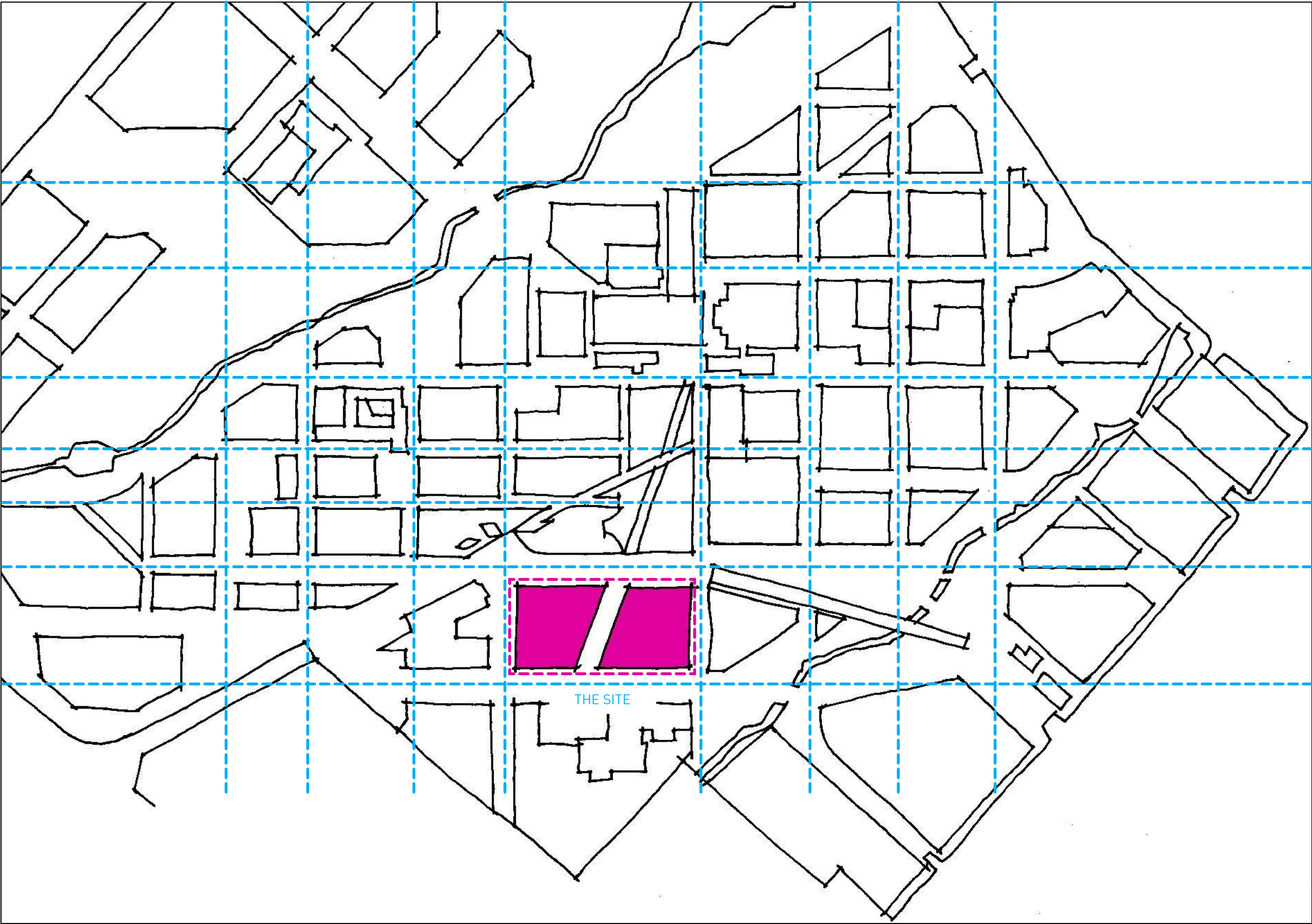
Site E3:
Max GFA = 25,600 sq m

Total GFA: 57,000sqm



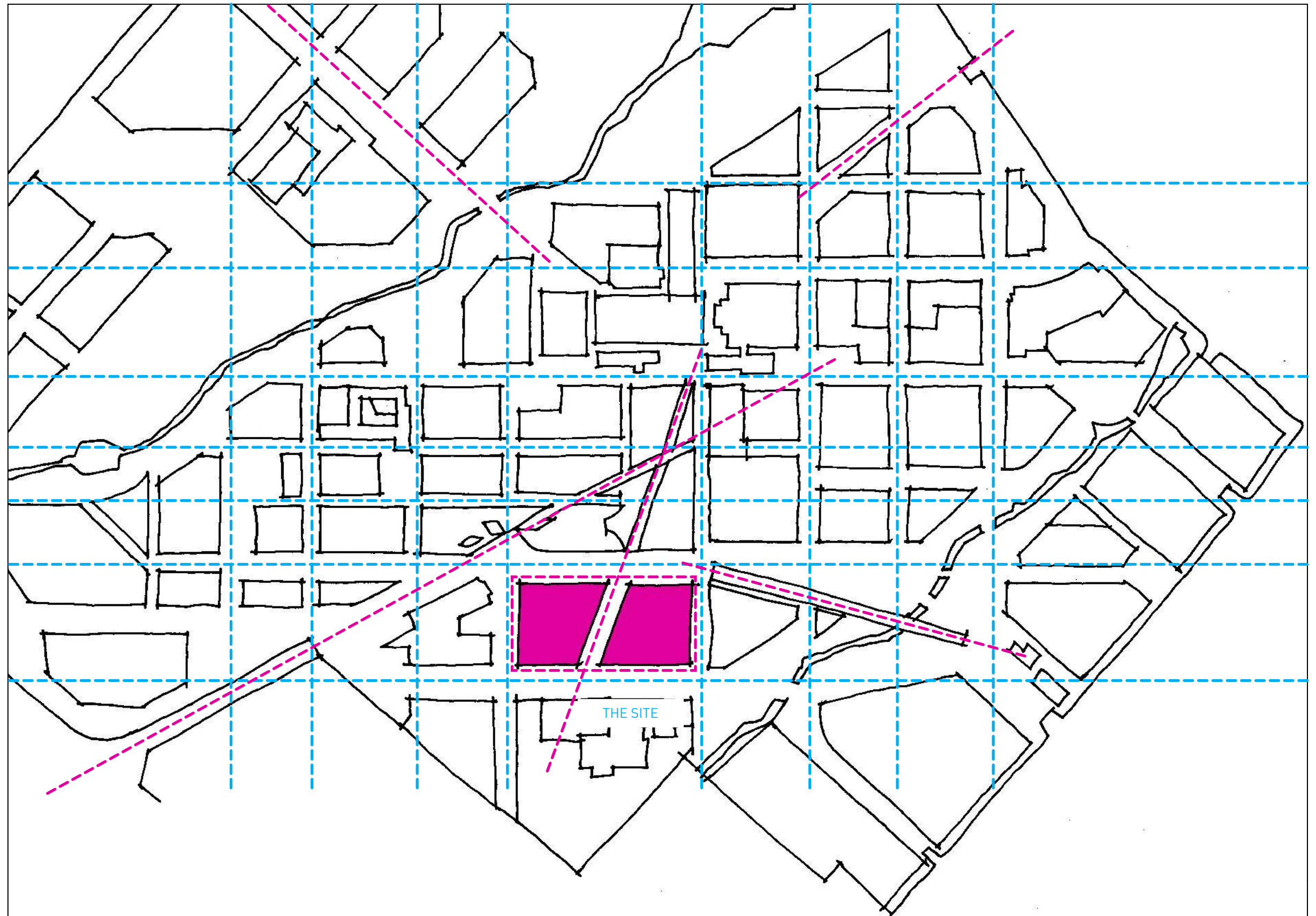
CAMPUS GRID

The 1964 plan aligned the university on an east- west orientation, setting up the whole site for effective solar orientation. There is a gridiron network of streets and spaces.



DIAGONALS

There are occasional diagonals that pierce the site in response to the existing surrounding context. The new Crossing connects the university campus with the railway station in a similar fashion.

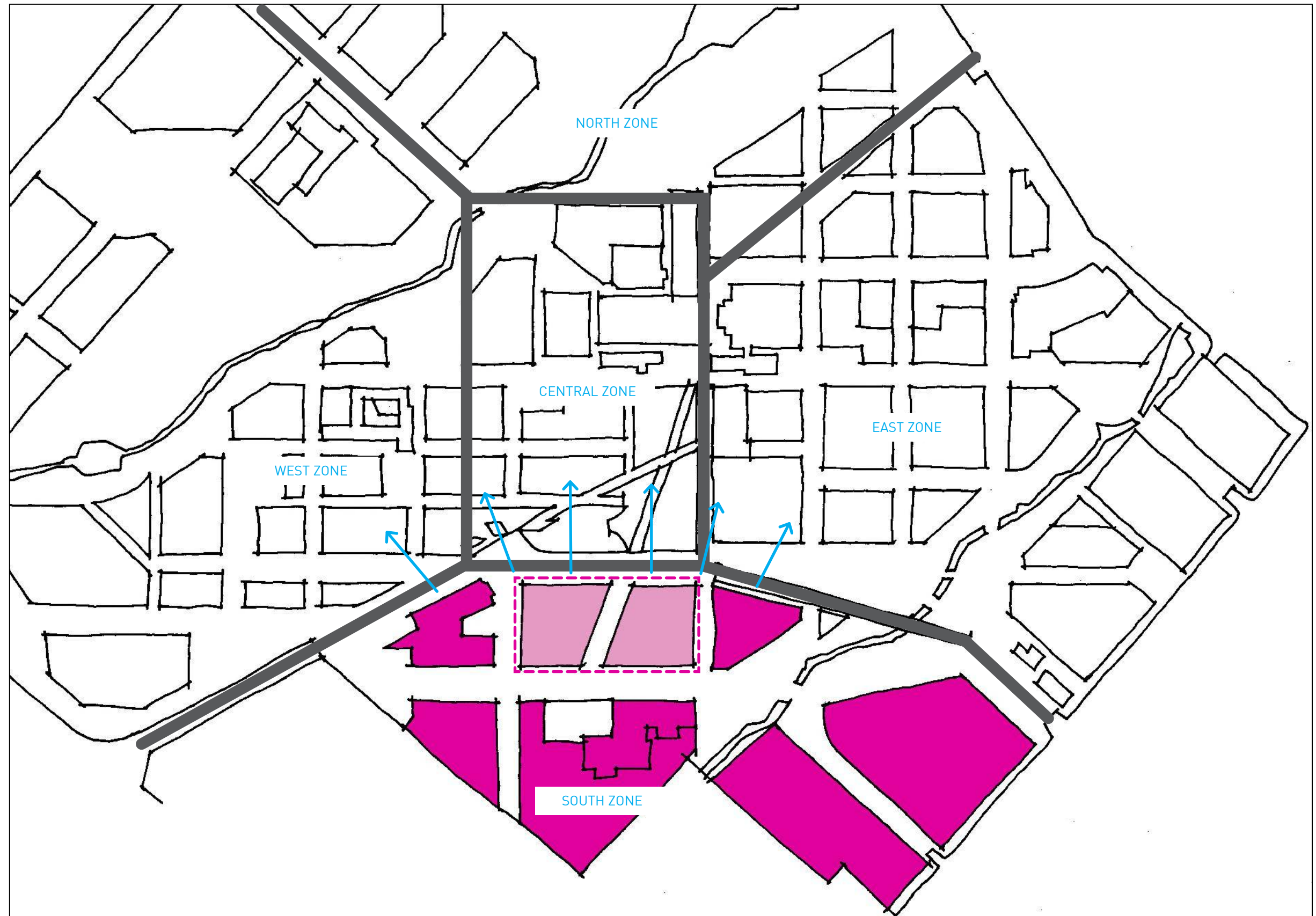


ZONING

The University has a number of zones, each of which have a distinctive use and character.

The subject site is located in the South Zone which is predominantly a commercial precinct.

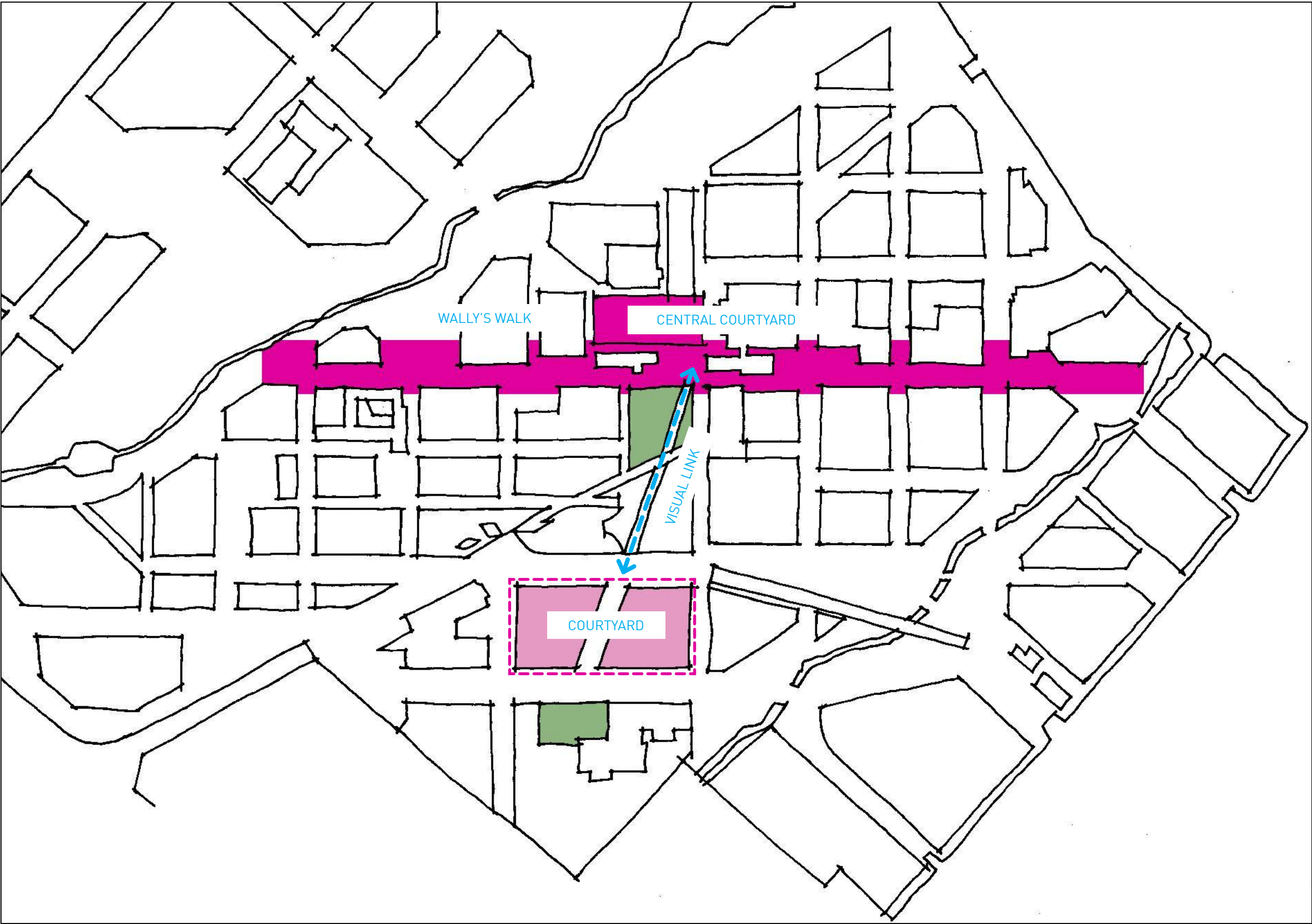
The site has a strong interface with the Central Zone which is the academic heart of the campus. There is a great opportunity to generate a creative tension between enterprise and academia.



PRIMARY SPACES

Wally's Walk is the primary east west pedestrian spine. the Central Courtyard is the primary space at the centre of the site.

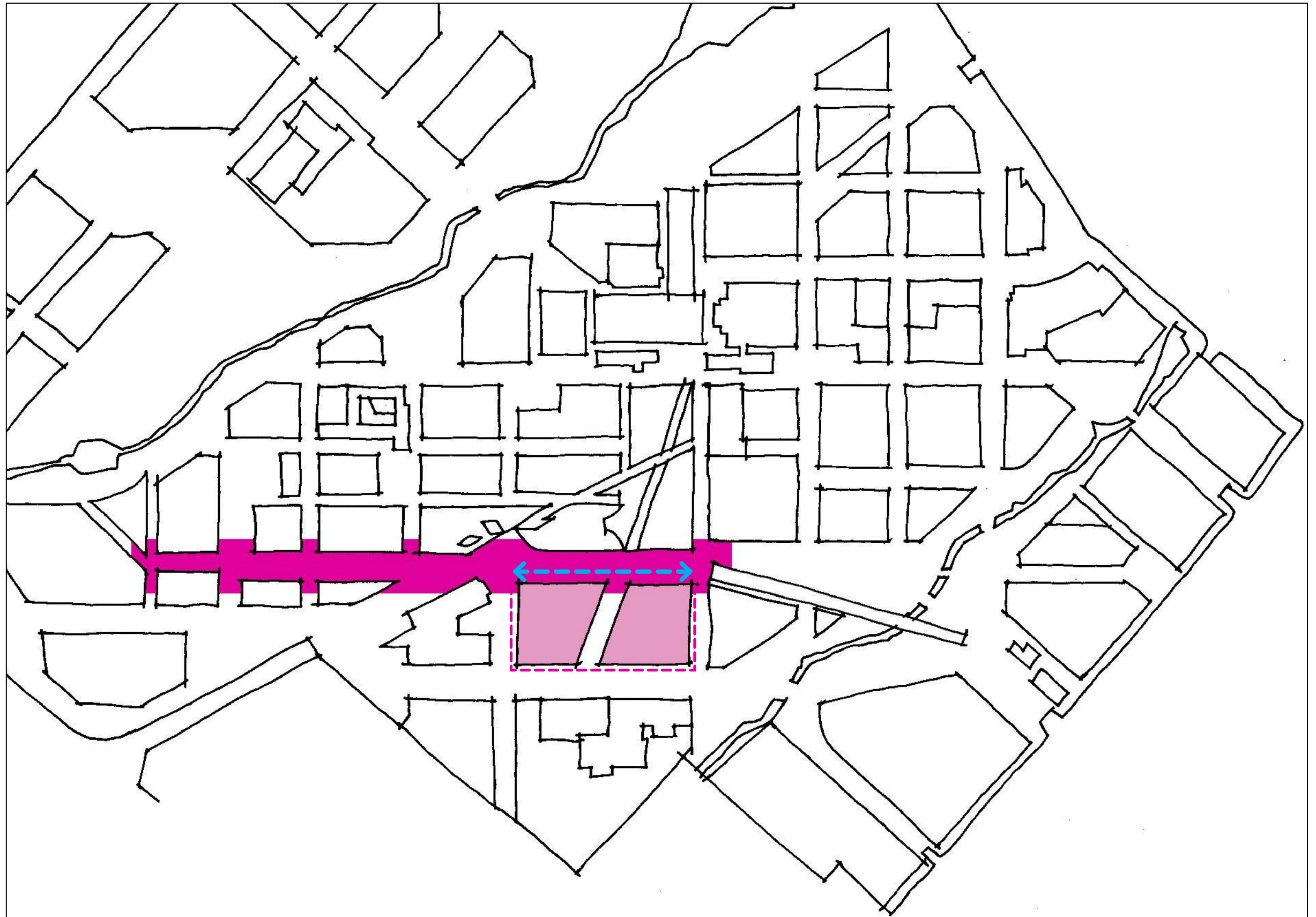
The masterplan creates a strong angled visual link from the Central Courtyard, through the subject site, into a future pocket park in the South Zone.



MACQUARIE WALK

Macquarie Walk is being reworked to remove vehicle access. It will become the primary new east-west pedestrian link (similar to Wally's Walk) in the southern zone. It will incorporate high quality landscaping with an avenue of shade trees.

The subject site will have its broad northern face addressing this new link. there will be opportunities for retail uses as well as active tenancy uses along this thoroughfare.

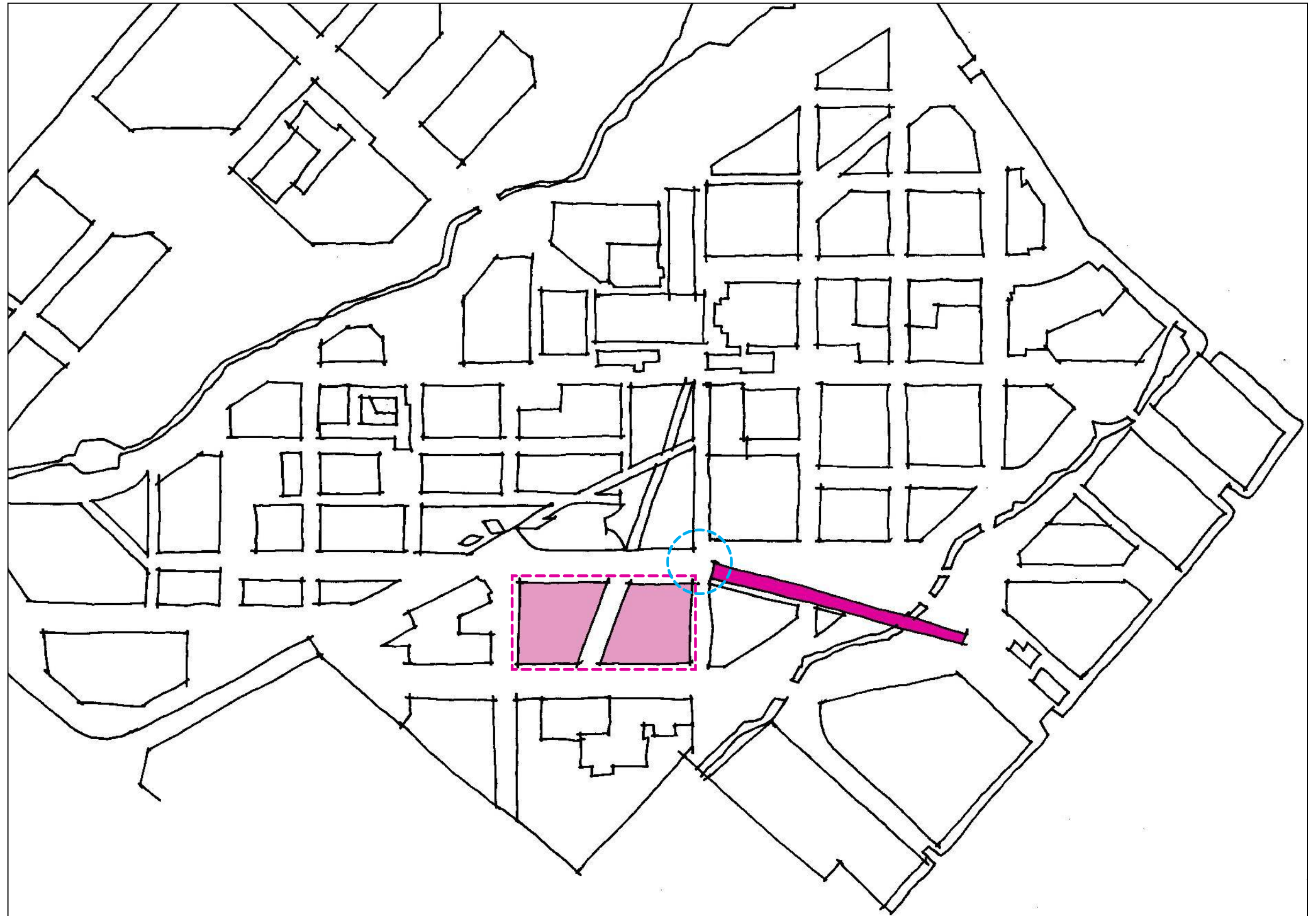


THE CROSSING

The Crossing is a new pedestrian connection from the railway station into the heart of the site.

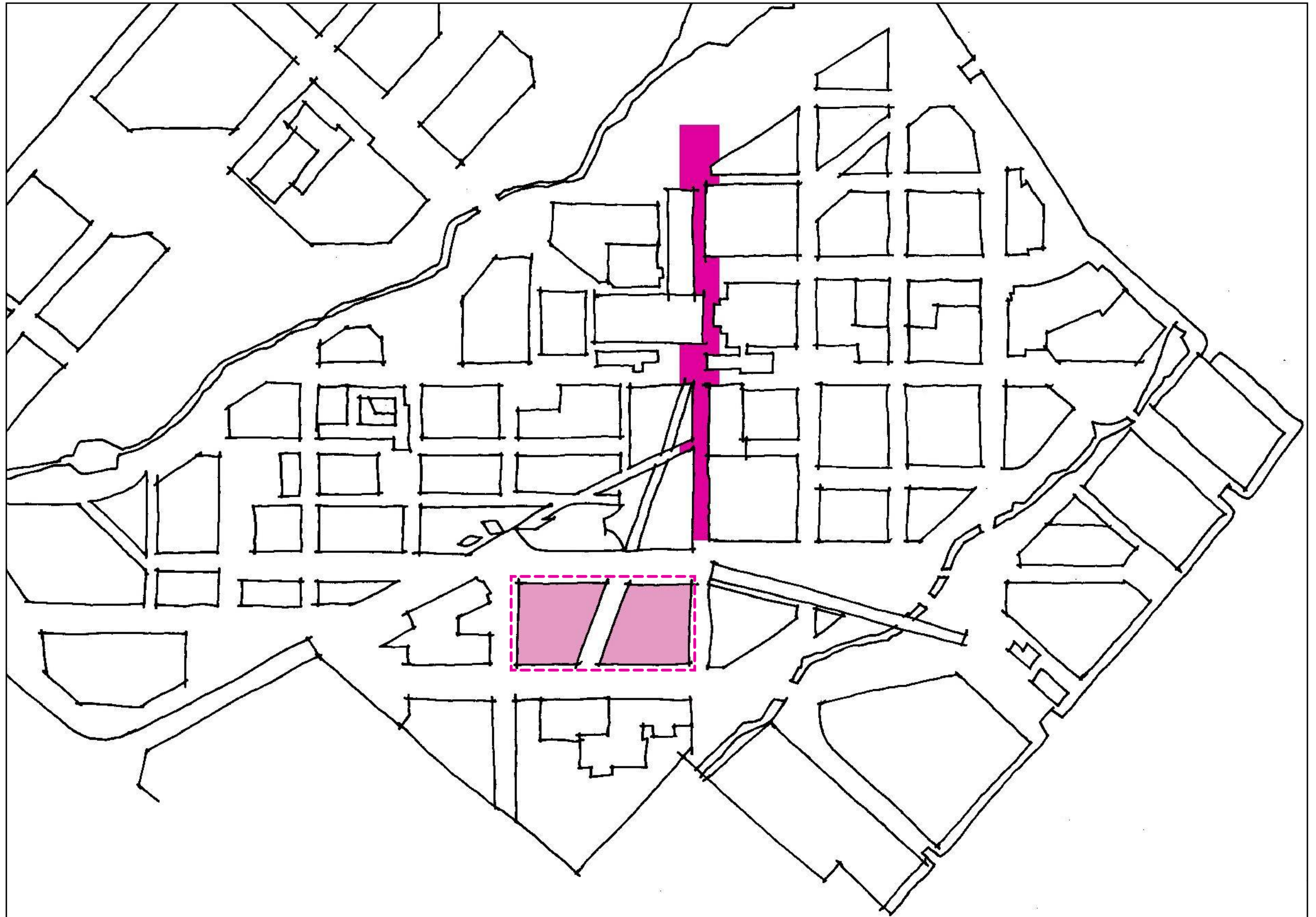
It arrives at The Landing - a critical point along Sir Christopher Ondaatje Avenue which redirects pedestrian movements northward.

The Landing will become a place in its own right, with opportunities for the subject site to make a positive contribution to this experience.



SIR CHRISTOPHER ONDAATJE AVENUE

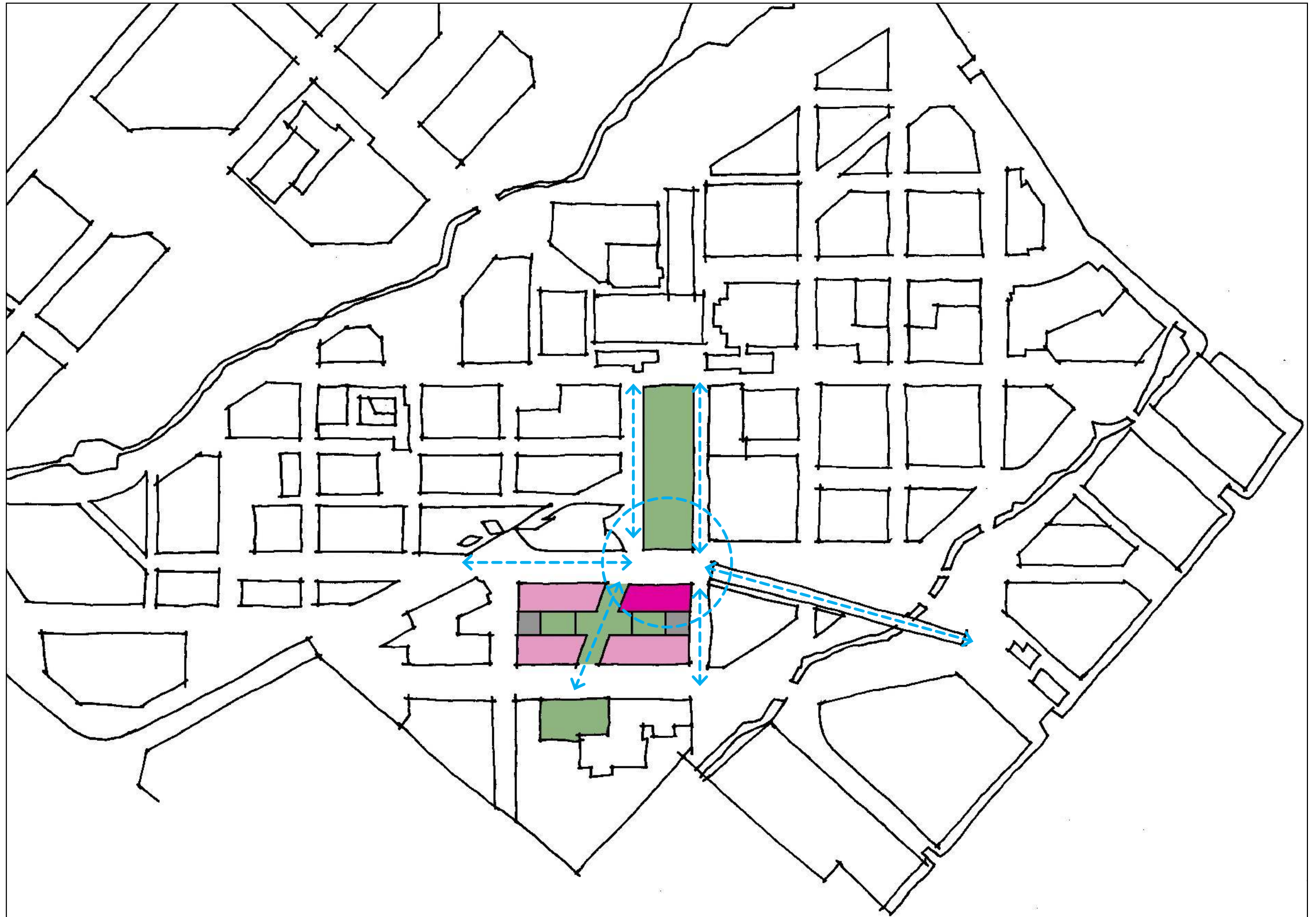
This north south link is a critical part of the pedestrian network, connecting the southern, central and northern zones. It re-inforces the importance of the north eastern corner of the subject site, in terms of creating a destination and a strong sense of place.



THE BUILDING'S ROLE IN THE CAMPUS

8-12 University Avenue plays a crucial role in the success of the campus vision. It forms a nexus or gateway into the pedestrian precinct of the campus with particular emphasis upon the railway and public transport connections.

Our design strategy is informed by this role, and seeks to create a strong and memorable contribution, with a distinctive building form that is active and permeable.



3.0 SITE ANALYSIS

SITE ANALYSIS

Figure 3.16, Sun Path

8-12 University Avenue is located South of the new University library and common. With low rise buildings and predominately green space to the North, both sites receive high levels of direct sunlight.

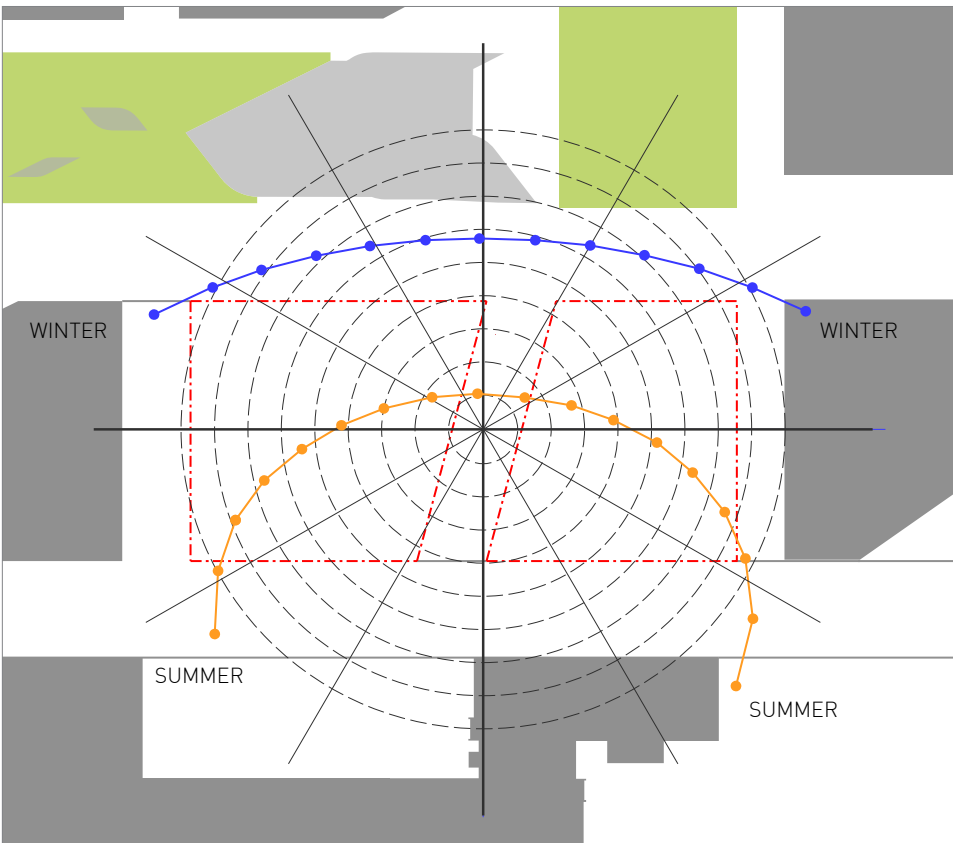
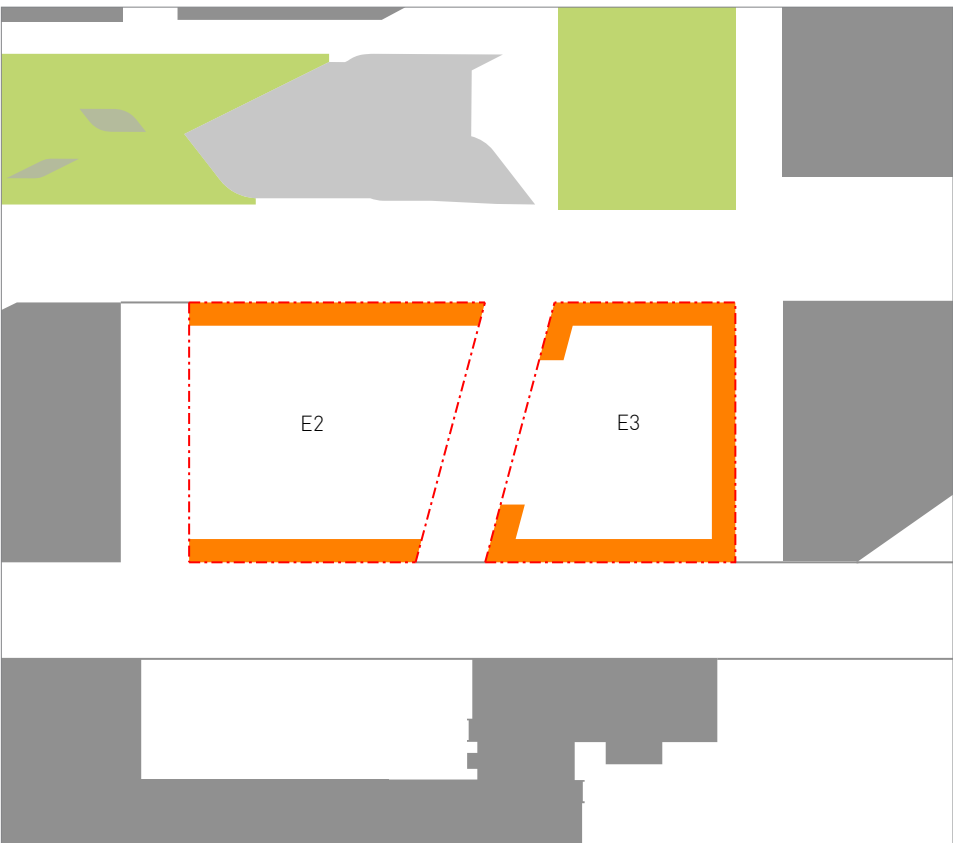


Figure 3.17, Street Definition

The campus masterplan and precinct E guidelines highlight the need to create street definition as illustrated in the diagram below.

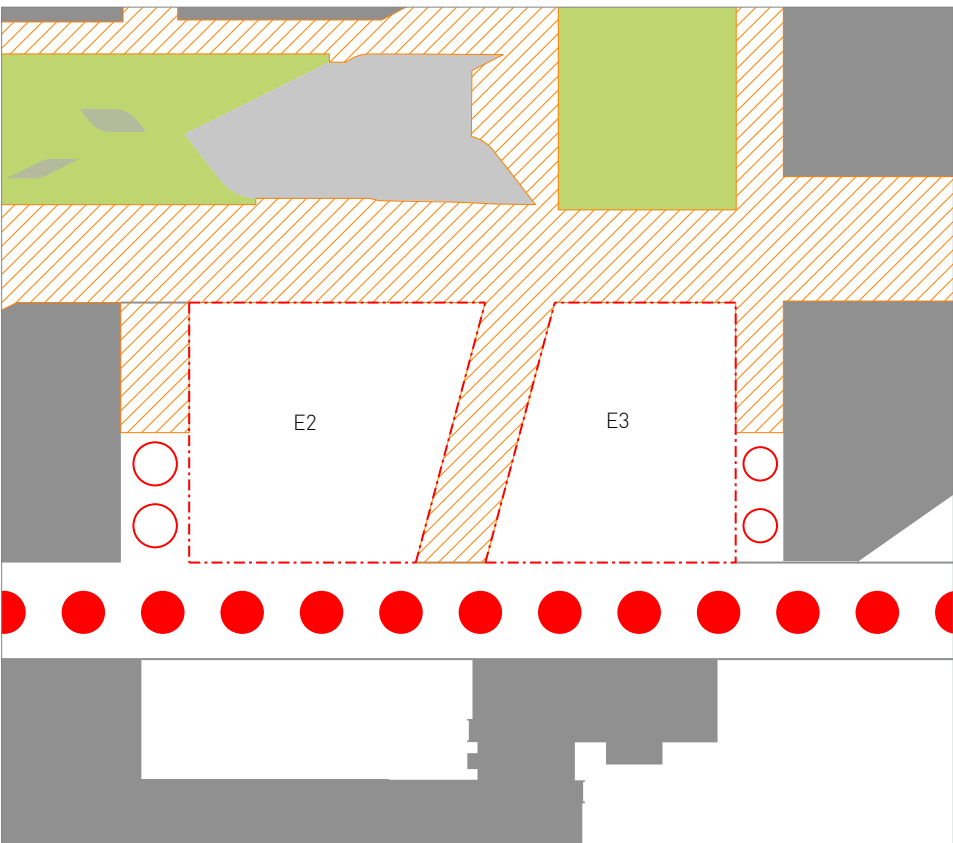


Legend:

Street definition

Figure 3.18, Pedestrians / vehicle relationship

8-12 University Avenue will sit amongst a network of pedestrianised streets. University Avenue to the South will be one of the primary roads for vehicular access to the campus.



Legend:

/// Pedestrianised
● Vehicles
○ Carpark Access