

University of Newcastle Honeysuckle City Campus Development Volume 1 - Concept Plan





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Site Survey

Executive Summary

Executive Summary

Purpose

This Honeysuckle Concept Plan has been prepared to assist in expanding UON’s City Campus and to establish the principles and parameters for the future design and development of the site. It is part of a suite of documents that will be developed during planning and delivery of the new facilities at the Honeysuckle City Campus.

The Concept Plan:

- Outlines key planning and site configuration decisions
- Identifies design considerations
- Confirms design principles
- Provides a clear basis for future stages in the project.

This Concept Plan has been developed to provide certainty to UON that the site can accommodate a range of academic and student accommodation uses. It has been designed to enable flexibility as the design for the Campus progresses in future stages.

Context

The new Honeysuckle City Campus is located on a series of connected sites being acquired from the Hunter Development Corporation between Honeysuckle Drive and Civic Lane, with good proximity to the Hunter River waterfront and to the Civic precinct of Newcastle.

This development will build on UON’s historical presence (University House, Northumberland House, and Conservatorium of Music) and the more recent strategic development of NeW Space in the CBD to create a contemporary city based education precinct for the UON’s future success and prosperity.

UON’s NeW Futures Strategic Plan (2016-2025) outlines UON’s 2025 vision. The Honeysuckle City Campus supports this Plan which seeks to create a University that is engaged, innovative, has a world perspective and committed to the wider community and the environment.



Figure E2: Honeysuckle City Campus Location Context Plan



Figure E3: Newcastle Light Rail, artist's impression



Figure E4: Market Street Lawn, artist's impression

Executive Summary

The Opportunity at Honeysuckle

The closure of the heavy rail corridor now offers uninhibited access to the waterfront from the CBD. Redevelopment of the former rail corridor through a comprehensive plan by UrbanGrowth NSW seeks to redefine the experience of the Newcastle CBD.

With significant investment from government, new initiatives to increase Newcastle’s international profile and programs to attract talent and investment into the CBD will directly support UON’s objectives for its Honeysuckle City Campus.

The higher learning industry is increasingly competitive. Students are not only after a high quality education but are looking for a complete experience with a focus social, lifestyle and urban living opportunities.

The Newcastle CBD has the potential to create an integrated urban education environment that builds off the amenity offered by a CBD location, the proximity to world class beaches and a fast developing urban waterfront. In addition to this, the CBD represents an opportunity for UON to better engage with the community and industry.

Concept Plan

The Concept Plan provides UON with a sensible and flexible development framework to further extend its academic presence in the Newcastle CBD over time. Academic facilities are proposed to be positioned so that they capitalise on visibility, views and accessibility. Associated activities such as student accommodation are co-located to provide a full campus experience without dominating or overshadowing UON’s primary business of education.

Conclusion

The Concept Plan guides the future development of the Honeysuckle City Campus in a way that enables UON to fully realise the opportunity of the site and align with vision in the Strategic Plan.

The physical connectivity with the CBD will open UON up to new and diverse uses, collaboration and community engagement, as well as providing an attractive and vibrant place to work, live, study and visit.



Figure E1: Honeysuckle City Campus Illustrative Master Plan

Introduction

1. Introduction

1.1 Background

The University of Newcastle's (UON) NeW Futures Strategic Plan (2016-2025) outlines UON's 2025 vision and confirms the need for capital investment decisions to reflect and support the strategy and to deliver contemporary physical assets that allow UON to produce outstanding education, research and innovation outcomes.

This vision for the next decade of education at UON, identifies the following outcomes:

- New modes of education delivered from innovative and collaborative facilities in compact vibrant campus settings will maximise education outcomes and provide the best possible student experience;
- Excellent facilities in attractive locations with strong civic and lifestyle amenity are crucial to the attraction and retention of outstanding local and international students and staff.

The expansion of UON's Newcastle CBD presence to include future educational and mixed-use developments offers a number of important advantages:

- The presence of existing UON CBD facilities and disciplines in CBD, that support interdisciplinary learning and research;
- The City provides the most accessible and visible presence for UON to deliver education to local, regional and global communities that it aims to serve;

- An accessible campus in the heart of the City is a strong attractor of students for whom university may not be considered an option;
- A strong and enhanced future multi-discipline CBD presence can support engagement with business, government and community organisations and provide UON with a distinctive and visible community presence and impact;
- City campuses and facilities are highly attractive to the best international staff and students as places to work, research, study and live. UON's strengthened presence in the CBD will create a more vibrant and global city and enhance UON's global reputation and attractiveness to the international markets, which is necessary for the future financial sustainability of UON;
- The City presence enhances UON's positive civic, cultural and social impact on the region and provides positive brand recognition and positioning for UON;

This Concept Plan has been prepared for the development of facilities on land being acquired by UON in the Honeysuckle precinct of the Newcastle CBD. It identifies the built form and public domain design framework for the design of the future facilities. The Concept Plan supports both the NeW Futures Strategic Plan and the 2016 Estate Strategy.



Figure 1.1.1: Honeysuckle City Campus, location within the Newcastle CBD.

1. Introduction

1.1.1 2016-2025 NeW Futures Strategic Plan

Successful university plans are underpinned by a clear vision and institutional framework that provides a roadmap for the future and articulates the values and the direction of the organisation. The expression of shared goals and a shared future is important in the realisation of plans that confidently address the future.

The Honeysuckle Concept Plan outlines a development proposal that supports the UON NeW Futures Strategic Plan (2016-2025). The NeW Futures Strategic Plan identifies eight key objectives:

- An enduring commitment to equity and social justice
- Graduates who make a difference
- A passion for excellence and discovery
- Driving global and regional impact
- Engaging across the globe
- A shared future with our communities
- Staff who make their mark
- Building a sustainable future

The Strategy seeks to create a university that is engaged, innovative, has a world perspective and committed to the wider community and the environment.

1.1.2 Estate Strategy 2016

Complementing the Strategic Plan, the Estate Strategy identifies the important built and physical outcomes of a dispersed university. The document seeks to outline the common approaches to place, services, sustainability, management and facilities while articulating high level principles for the Callaghan, City Precinct and Ourimbah campuses.

Clustering development around Civic is intended to facilitate interconnection within existing and future CBD elements.

The draft plan for the City Precinct outlined in the Estate Strategy identifies a series of objectives:

- A strong CBD presence
- New learning opportunities
- Regional and industry engagement
- Activating the CBD
- A campus accessible by the community
- Contributing to the richness of the CBD
- Attracting investors
- An integrated development

The objectives within the NeW Futures Strategic Plan and Estate Strategy have been integral in shaping the Honeysuckle Concept Plan and remain as the key foundation in supporting this new development.



Figure 1.1.2: NeW Futures Strategic Plan 2016-2025

1. Introduction

1.2 Purpose

This Honeysuckle Concept Plan has been prepared to assist in expanding UON's City Campus and to establish the principles and parameters for the future design and development of the site. It is part of a suite of documents that will be developed during planning and delivery of the new facilities at the Honeysuckle City Campus.

The Concept Plan:

- Outlines key planning and site configuration decisions
- Identifies design considerations
- Confirms design principles
- Provides a clear basis for future stages in the project.

The Concept Plan will form the basis for creating a brief for the future engagement of architects to design and deliver buildings

1.3 Design Process

A structured process of analysis, options development, review and development of a preferred concept commenced in April 2017. The preparation of the Concept Plan for the Honeysuckle City Campus site has been developed focusing on three key areas:

1.3.1 Collaborative Design

Cox Architecture and Johnstaff Projects undertook a series of structured workshops and briefings with key stakeholders from both within and outside UON. Inputs from this process were key to:

- Confirming the project design drivers and master planning principles
- Review and feedback on the of site planning options
- Development of preferred concept option
- Determining future design requirements.

The key advisory body was the Focus Group – Research and Education which had participants drawn from across the faculty and key support areas. They participated in a series of workshops that focused on key areas of the project from high level principles through to conceptual area planning options.

1.3.2 Outputs

Site Assessment and Planning Options

High level scoping of the possible development options for the site was undertaken. This considered:

- Academic facilities that provide flexibility to accommodate a range of faculties
- Student accommodation to meet current and possible future demand
- Associated complimentary student services, retail, recreational and support facilities
- Parking and end of trip facilities to meet reasonable campus user requirements in the context of broader Newcastle parking and transport strategies.

Campus Integration

To successfully integrate the City Campus into the surrounding area, the master planning process included the following:

- Development of recommendations following site analysis and connectivity studies, for the integration of the site with the surrounding precinct, and connection with other University facilities
- Uses positioned on the site to maximise opportunities for community and industry interaction with UON
- Built form and public domain framework that maximises the amenity of the site for both users and visitors, making the Honeysuckle City Campus a memorable and enjoyable place to be in the heart of the Newcastle CBD and connected to the waterfront.

Building Concept Development

Built form proposed in the Concept Plan was developed with a number of key considerations:

- Testing of development envelopes to maximise amenity and balance required site development capacity
- In anticipation of the design quality of future developments and the positive impact of a strong University presence in the CBD, UON should consider pursuing available floor space bonuses
- Preparation of possible blocking and stacking arrangements
- Development of project staging that supports discrete delivery of facilities on the campus
- Development of land uses and development envelopes that respond appropriately to the planning regulations for the site.
- Advice on parking and transportation issues
- Advice on infrastructure services requirements for the development of the campus.

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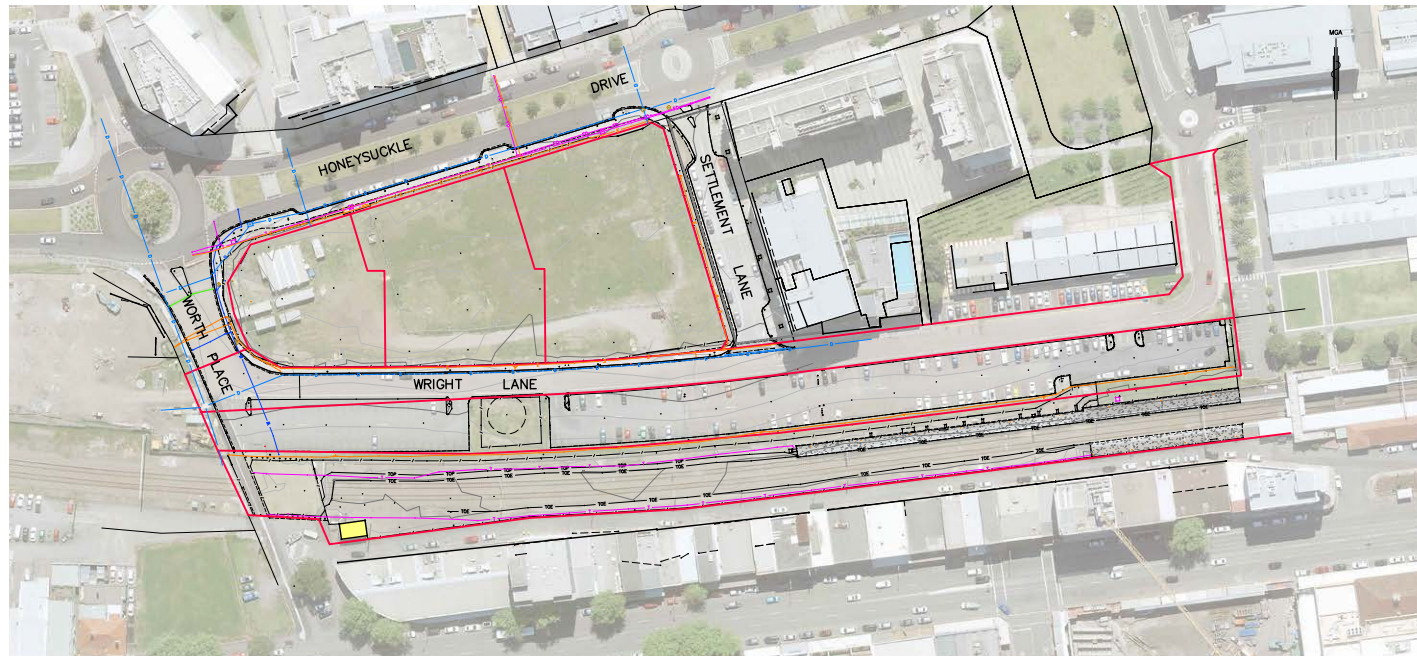


Figure 1.3.1: Honeysuckle City Campus Site Survey



Figure 1.3.2: Honeysuckle City Campus Blocking and Stacking

1.4 Design Excellence

The UON is committed to a Design Excellence Strategy and process that ensures design excellence will be achieved throughout the various stages of the development. A combination of proven techniques is proposed to ensure that design excellence can be achieved.

The design excellence provisions at Clause 7.5(3) of Newcastle Local Environmental Plan (LEP) 2012 seek to deliver the highest standard of architecture and urban design. It requires that all new development in the Newcastle City Centre exhibits 'design excellence' and criteria are prescribed in the clause that must be met for this to be achieved. The Site is within the defined Newcastle City Centre area and as such must satisfy the design excellence criteria under this clause.

In addition, Clause 7.5(4) specifies criteria that trigger the requirement for a design competition to be undertaken for a development, however the development proposed under the Concept Plan or subsequent detailed design applications does not trigger any of the specific criteria. Whilst UON is not required to undertake a competitive design process, Clause 7.5(3) of the Newcastle LEP will be achieved through UON's own alternative design excellence process, which has been specifically developed for this project and which includes a competitive procurement process as detailed below.

5.1 Design Excellence Approach

This Strategy sets out techniques that follow a clear and iterative process where the critical review and input of design ideas can be exchanged between the design professionals on the UON project team as well as external independent design experts.

The approach is consistent with what has been adopted for other major State Significant Development projects in Sydney and beyond. By following this framework and its design development process, the community and the consent authority can have confidence that an excellent design outcome will be achieved.

The design excellence strategy, as set out in this document, revolves around four key elements:

- The engagement of an expert and varied design team through UON's established competitive procurement process, featuring;
- Shortlisting of capable design firms and their key nominated team members who demonstrated experience in the achieving design excellence through previous projects;
- Inclusion of a concept design criteria for evaluation of the proponents submission with a requirement to evidence how design excellence is achieved in the proponents proposed concept design;
- A technical assessment of the concept design submission by Subject Matter Experts including an assessment of the proponents ability to achieve design

1. Introduction

excellence through their concept design submission;

- A Concept Design Evaluation Panel to evaluate the concept design submission.
- The selection of an internal Design Review Panel and engagement with the NSW State Design Review Panel;
- The adoption of Design Guidelines that will guide the design development and assist the Design Review Panel in their deliberations;
- Engagement with other Design Advisors; and
- The implementation of reporting and review processes to safeguard design excellence and design integrity.

5.2 The Concept Plan Design Process to Date

Design Framework

The University of Newcastle is committed to buildings that not only meet their specific educational and services requirements but are well designed, well resolved and appropriate to site and location.

The Structure Plan for the Honeysuckle Campus precinct provides a framework for the future delivery of high quality buildings and public domain detail. The design principles seek to create a precinct and new buildings that are:

- Engaged
- Unique
- Sustainable

The emphasis at Honeysuckle will be on quality and developing a coherent and consistent language on the new campus. The New Space building on Hunter Street, opened in late 2017 has been designed as a landmark expression of the University and its new commitment to establishing a greater presence in the CBD. It is not intended that the Honeysuckle Precinct complex will replicate this powerful and unique statement but create its own distinct character that complements the existing heritage context and new development within the Honeysuckle precinct.

Design Excellence Requirements

The Newcastle LEP outlines the city's Design Excellence criteria. The Structure Plan provides a framework that outlines the overall requirements of key elements within the site as the basis for design excellence. The Structure Plan identifies:

- the overall form of the development and its relationship to the quality and amenity of the public domain
- impacts on view corridors identified in the Newcastle City Development Control Plan 2012
- heritage issues and streetscape constraints
- the location of tall buildings, having regard to the need to achieve an acceptable relationship with other buildings on the site and on neighbouring sites in terms of separation, setbacks, amenity and urban form
- bulk, massing and modulation of buildings
- street frontage heights
- pedestrian, cycle, vehicular and service access, and circulation requirements,

Individual building designs must demonstrate:

- whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved
- how the development addresses:
 - environmental impacts such as sustainable design, overshadowing, wind and reflectivity
 - the achievement of the principles of ecologically sustainable development
 - the impact on, and any proposed improvements to, the public domain

To address the Design Excellence framework, design guidelines have been prepared for the precinct. These requirements identify the common elements intended to unite building designs within a strong public domain framework. The guidelines address:

- Design Principles
 - Planning Principles
 - Development Parcels
 - Building Heights
 - Setbacks
 - Address
 - Site Infrastructure
- Public Domain Strategies
 - Site Interfaces
 - Public Domain
- Public Domain Elements
 - Planting
 - Paving
 - Public Domain Lighting
 - Street Furniture
 - Public Art
 - Heritage Interpretation
 - Built Form Elements
 - Articulation
 - Materials
 - Building Lighting
 - Building Signage
 - Sustainability

A series of control diagrams for each lot illustrates the built form requirements

1. Introduction

5.3 UON Procurement Process

The University is invested in achieving design excellence outcomes throughout the procurement processes when delivering future developments in the Honeysuckle City Campus.

The University’s procurement approach includes the following key features which contribute to the achievement of design excellence outcomes in the procurement process:

- Shortlisting of capable design firms and their key nominated team members who demonstrated experience in the achieving design excellence through previous projects;
- Inclusion of a concept design criteria for evaluation of the proponents submission with a requirement to evidence the approach to ‘Better Placed’ and how design excellence is achieved in the proponents proposed concept design;
- A technical assessment of the concept design submission by Subject Matter Experts including an assessment of the proponents ability to achieve design excellence through their concept design submission;
- A Concept Design Evaluation Panel to evaluate the concept design submission.

The above procurement process demonstrates UON’s commitment to achieving design excellence.

5.4 Design Review Panels

Ongoing engagement with the State Design Review Panel (SDRP) and the establishment of a UON Design Review Panel (UDRP) forms a major component of the overall framework to ensure design excellence is achieved. An overview of the role that the two Panels will have throughout the design process is provided below.

5.4.1 State Design Review Panel

The recently established SDRP is convened by the NSW Government Architect and its role is to provide independent, expert and impartial design advice on significant development proposals across the State. The SDRP evaluates the design quality of a proposal by reviewing it against the objectives of Better Placed and the requirements of any relevant planning instruments.

The UON project team is committed to meaningful engagement with the SDRP for this significant project and endeavours to meet with the SDRP at key stages throughout the design process in accordance with their Terms of Reference and the project SEARs for each stage.

Feedback provided by the SDRP both verbally and through written minutes will be considered by the design team and applied to the project where practicable. A summary of how the proposal responds to matters raised by the SDRP through the consultation process will be documented within the Environmental Impact Statement (EIS) for each stage.

5.4.2 UON Design Review Panel

The UDRP will be a project-specific panel, compiled specially to oversee the development of the new campus, and will be tasked with providing independent, impartial advice on the design of buildings, infrastructure, landscapes and public spaces being delivered. The detailed process, governance, and composition of the UDRP will be outlined in the UDRP Terms of Reference and are discussed broadly in the sections below.

Objectives

The objectives of the UDRP are:

- To provide independent, high-level, design advice for UON Honeysuckle City Campus.
- To advise on the implementation of the Design Guidelines adopted by UON
- To help ensure ‘design excellence’ is achieved.

Role

The UDRP will review and provide feedback on the detailed design of each stage of the proposal as it emerges. This approach ensures the UDRP interacts with the design team and their advisors early in the process to more fully contribute to the design as it emerges and develops. More specifically, the UDRP will be required to:

- Meet at key milestones during the preparation of the Development Application, up to the lodgement of the application;
- Provide feedback on design development and advise on the application of the Design Guidelines to key design elements;

- Provide feedback on responses to any design-related conditions of the Concept Plan, if required; and
- Review design and confirm design integrity is retained in any s4.55 modifications to the SSD approved plans, and construction drawings (if necessary).

It is noted that the role of the UDRP is advisory, and that its recommendations are non-binding. The UDRP will not be responsible for authorising any expenditure, works or consultancies, and all meetings and discussions will be confidential unless otherwise confirmed.

Figure 4 below illustrates the iterative process and relationship between the UDRP, Design Team, and advisors through the design and delivery stages of the development.

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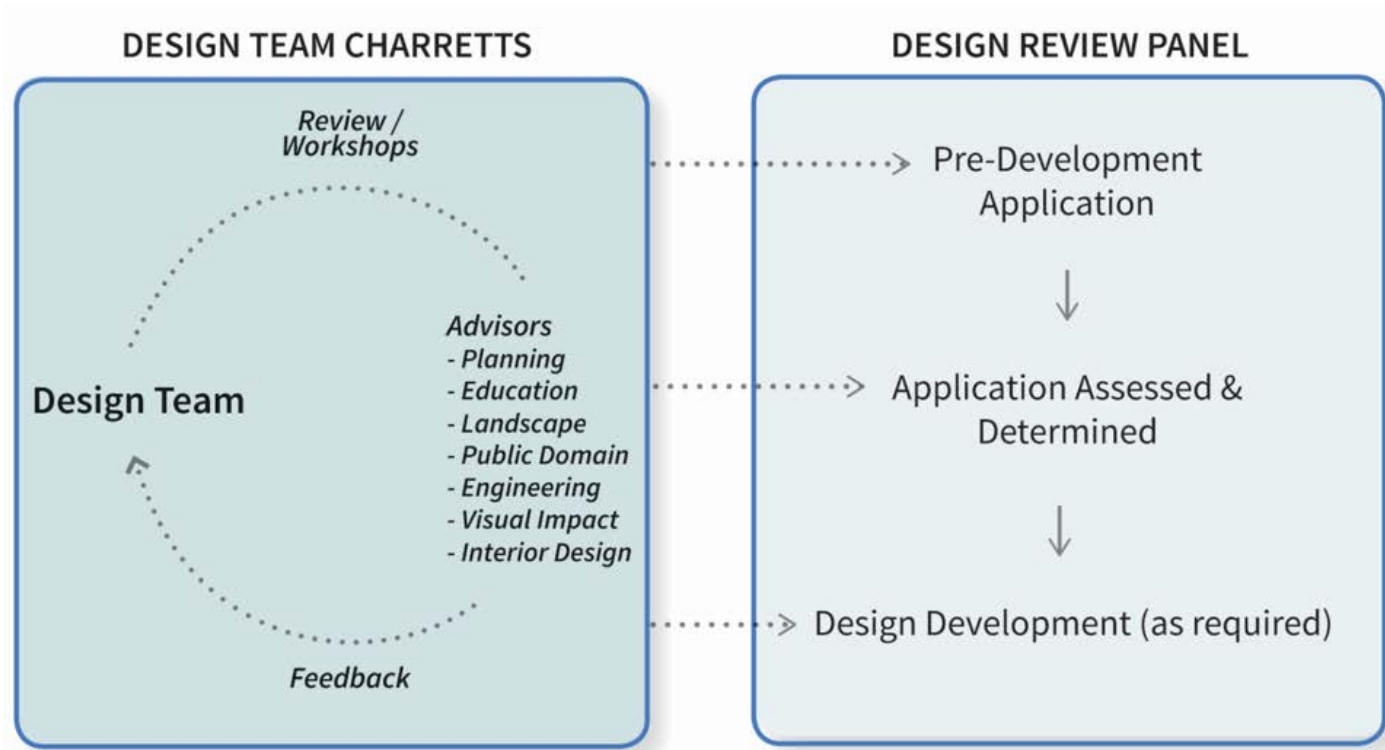


Figure 1.4.1 Process and relationship between Design Team, Advisors and Design Review Panel

Composition

The UDRP will comprise of minimum three independent experts in the fields of architecture and/or urban design. The independent members of the UDRP will be required to demonstrate their relevant design expertise and experience.

The chair of the UDRP may approve changes to the UDRP membership, with the concurrence of the proponent and DPE, including extensions to appointments and alternate members.

Operational Matters

The UDRP will meet at key milestones, to review the design of all components up to the lodgement of each Development Application. The UDRP is expected to provide verbal advice and comments at any meetings and review material circulated prior to a meeting and confirm written advice, minutes, and action lists. The UDRP may provide formal feedback on particular items when requested by a presenter. Feedback from the deliberations will be provided to the Design Team as soon as practical, either as recorded in meeting minutes, or in more detailed Advice Sheets attached to the minutes.

UON will provide secretarial services to assist the UDRP. An agenda will be prepared and circulated prior to each meeting, including a review of the minutes from the last meeting, discussion and feedback on the project, agreed actions moving forward, and a forward agenda. Deliberations will occur in closed session following any presentations

and may include any invitees as relevant. The final minutes and formal feedback will be prepared by the secretariat but will be endorsed by the UDRP and issued by the Chair.

Independent Observer

Representatives of the Department of Planning and Environment and Government Architect Offices will be invited to attend sessions of the UDRP as observers.

Other Design Advisors

To provide additional technical advice, and design rigour to the various aspects of the proposal, UoN has also engaged a number of specialist consultants to act as expert advisors to the Design Team. These advisors have been tasked with providing on-going advice on technical matters and specialised operational matters as the design progresses, including critically evaluating the design and providing feedback to the Design Team at key milestones. This ensures that the final design achieves the relevant engineering, social, cultural and functional standards necessary.

1. Introduction

5.5 Design Guidelines

To guide the architectural and urban design of the UON Honeysuckle City Campus, specific design principles and objectives have been developed for the site as a whole as well as each individual stage. These will be used as part of the evaluation and assessment process to determine whether each stage of the development achieves design excellence, and are detailed in the UON Honeysuckle City Campus Design Guidelines that accompany this Strategy at Appendix A. The Design Guidelines have been developed to shape development and assist in creating:

- A high standard of architectural and urban design, materials and detailing appropriate to the building type and location;
- A form and external appearance for each building that benefits the quality and amenity of the public domain; A unique and engaged campus that is welcoming to students, staff and visitors and contributes to a sense of identity and place;
- A functional and inclusive design that satisfies the varied uses and users of the university; and
- Development that meets the university's sustainability standards including demonstrating a commitment to social, environmental and economic leadership.

The Design Guidelines are specific to the new campus and ensure a high quality design and amenity outcome is achieved for the future visitors and neighbouring developments. Their application during the design development and assessment of each development stage will safeguard the delivery of an excellent and coherent vision for the campus.

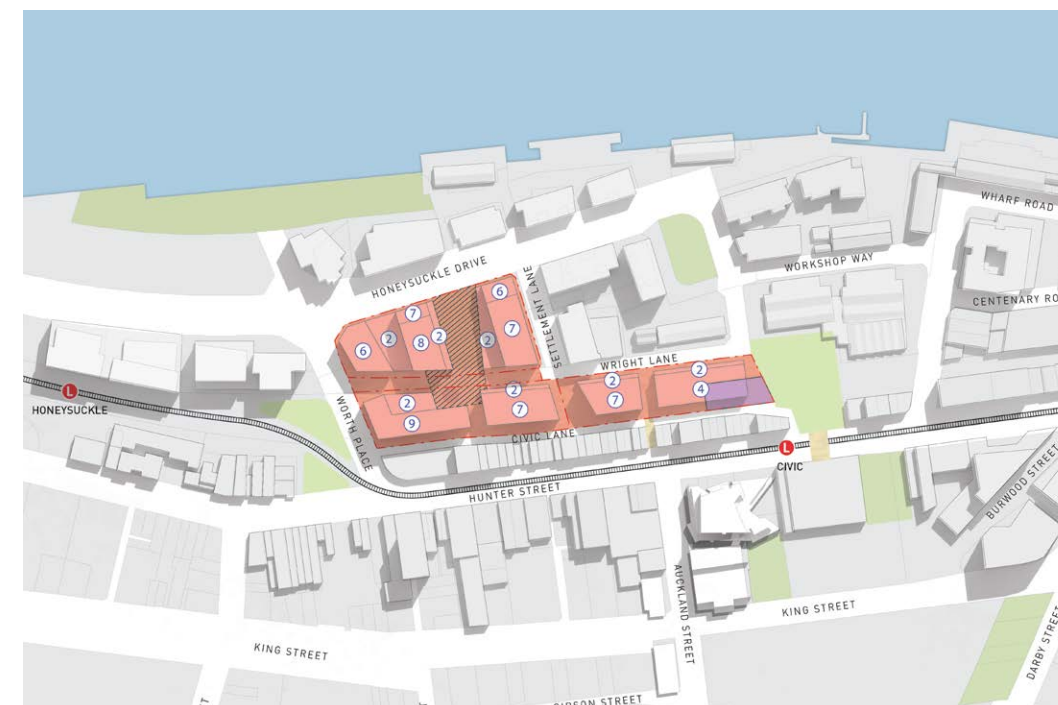


Figure 1.4.2 Height Diagram

5.6 Reporting and Review

This component of the Strategy confirms that the final design outcome has achieved design excellence, and that design excellence is translated through to the buildings' construction.

Design Excellence Statement

As part of the Environmental Impact Statement for each stage, a Design Statement will be prepared by the relevant architectural firm on the project team. This Statement will demonstrate how the proposed development has achieved the adopted Design Guidelines discussed in Section 3.3, how it achieves design excellence, how it addresses Better Placed, and how the design development has incorporated and addressed feedback from the SDRP and UDRP process.

Design Integrity

To ensure that design integrity is maintained, the nominated Design Team will also be retained throughout the design process for the relevant stage. In addition to preparing the relevant Development Application documentation, the Design Team will be expected to:

- Retain lead roles over the relevant design decisions in the preparation of the design drawings for a construction certificate for the preferred design;
- Retain lead roles over design decisions in the preparation of the design drawings for the contract documentation; and
- Maintain continuity during the construction phases to the completion of the project.



Figure 1.4.3 Setbacks Diagram

Design Considerations

2. Design Considerations

2.1 Campus Trends

2.1.1 Urban integration

Increasingly, universities are looking to relocate both teaching and accommodation facilities into city centres as a means of appealing to a more urbanised student cohort.

The urban setting offers a wider range of services, accommodation and entertainment options. The increasing affluence of students is driving a shift towards a desire for more lifestyle choices and convenience. The increasing trend for students to work part-time means locations closer to potential work or transport options are preferred.

Often, the university has been a catalyst for urban renewal that meets the changing demand brought about by a high student population in terms of access, safety, a high quality setting and variety of supporting activities and amenities.

The relocation of the University of Washington into downtown Tacoma saw not only investment into new and refurbished buildings, but upgrades of the surrounding public domain. Safe access to parking and public transport were key elements in the place-making strategy.



Figure 2.1.1: University of Washington Tacoma



Figure 2.1.2: University of Washington Tacoma, Light Rail Station



Figure 2.1.3: University of Washington Tacoma

2. Design Considerations

2.1.2 University identity

The positioning of well located and visible university assets in highly trafficked and busy urban centres can assist in raising an institution's profile as well as:

- Generating improved recognition within the city
- Using the city's assets to attract and retain students
- Creating commercial opportunities through the rental of meeting and function spaces.

Universities such as New York University have grown and expanded across their urban precincts. With no defined campus, signage and wayfinding elements are important in establishing their identity within the city framework.

Key strategies that reinforce the identity of the urban campus are:

- Movement & collaboration spaces visible from the street
- Activity within the building visible from a distance,
- Student activities (common spaces, dining sports facilities) that activate the streetscape
- Public/private functions expressed on the facade
- Atrium and public uses within the building (retail/café's etc) visible from the street



Figure 2.1.3: New York University branding

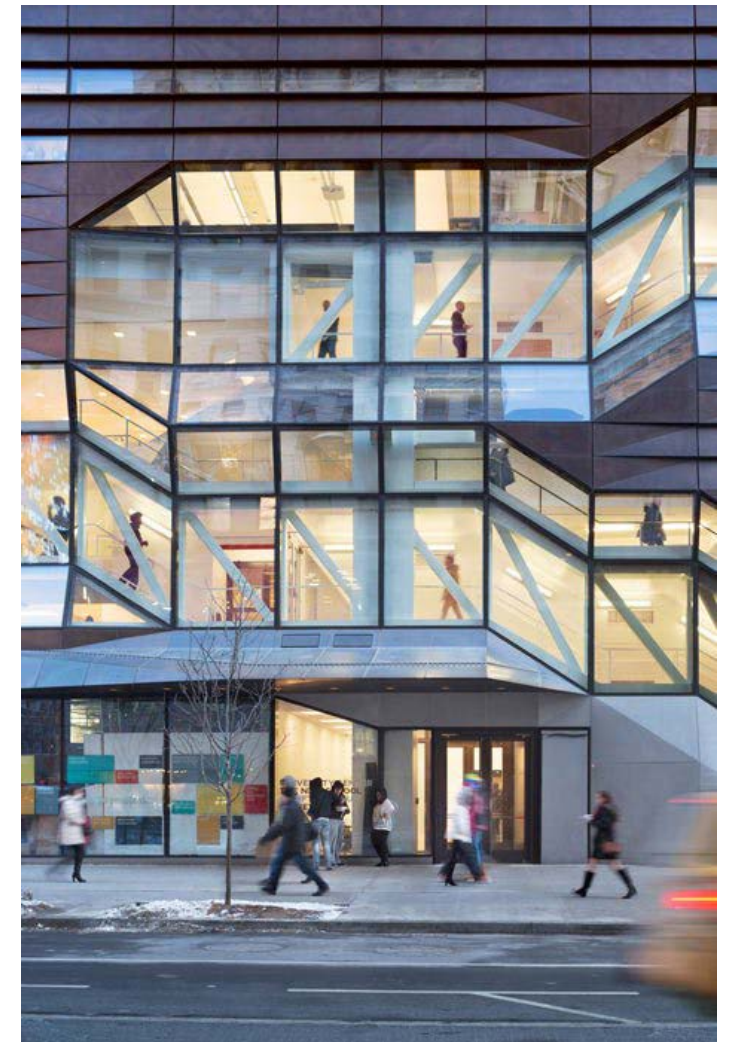


Figure 2.1.4: New School active façades

2. Design Considerations

2.1.3 Collaboration and Engagement

There is now much more competition for the best students. The quality of student experience is critical in attracting and retaining the best students.

The creation of state of the art facilities and quality spaces within campuses and buildings is a response to the changing expectations and aspirations of students.

New facilities must focus on the place-making elements of new learning environments and include:

- Informal student-centred spaces,
- Visual links and connections through buildings
- Public event spaces
- Inside and outside learning environments
- Group learning spaces
- Access to WiFi and power throughout the facility.

Student experience is also fundamental to reputation and retention and can be seen to impact the long-term loyalty to the institution of graduates, post-graduates and beyond.

The objective is to deliver an intimate experience where students feel at home and not part of a vast educational machine. Opportunities for collaboration, interaction and social engagement through the creation of a range of intimate and accessible spaces is critical in creating a sense of place and ownership.

The fostering of collaborative relationships between students and academics is likely to result in better outcomes.

Curated public events, university showcase spaces and a high degree of site permeability contribute to the fostering of closer community and industry connections with the university. At The New School in New York City, new high quality facilities at University Centre are used by the university to host public and private events that engage in public discourse and showcase student and staff talent to the wider community. These facilities can also be leased to external groups for conferences and functions, further opening up the university to the community and providing additional revenue streams.



Figure 2.1.5: Vertical physical and visual connections, VUC Denmark



Figure 2.1.6: Griffith University informal learning and collaboration spaces, COX Architecture



Figure 2.1.7: Auditorium at University Centre, The New School, NYC

2. Design Considerations

2.1.4 Community Engagement

Universities increasingly see themselves as a resource for a wider community. The desire for increased engagement within the local community can deliver tangible benefits for the university through:

- Fostering a sense of community ownership that builds identity and helps attract local students
- Engaging in city cultural events that enhance the reputation of the university
- Providing better access to research and service programs that benefit students and higher degree researchers
- Increasing opportunities for community engagement
- Demonstrating ongoing commitment to social engagement, innovation and research
- Decrease the separation that can lead to an 'us and them' mentality.

The University of Newcastle was created through the efforts of the local community and businesses. The Newcastle University Establishment Group in 1950 and the Lord Mayor's Committee for the Establishment of an Autonomous University of Newcastle were instrumental in the creation of UON.

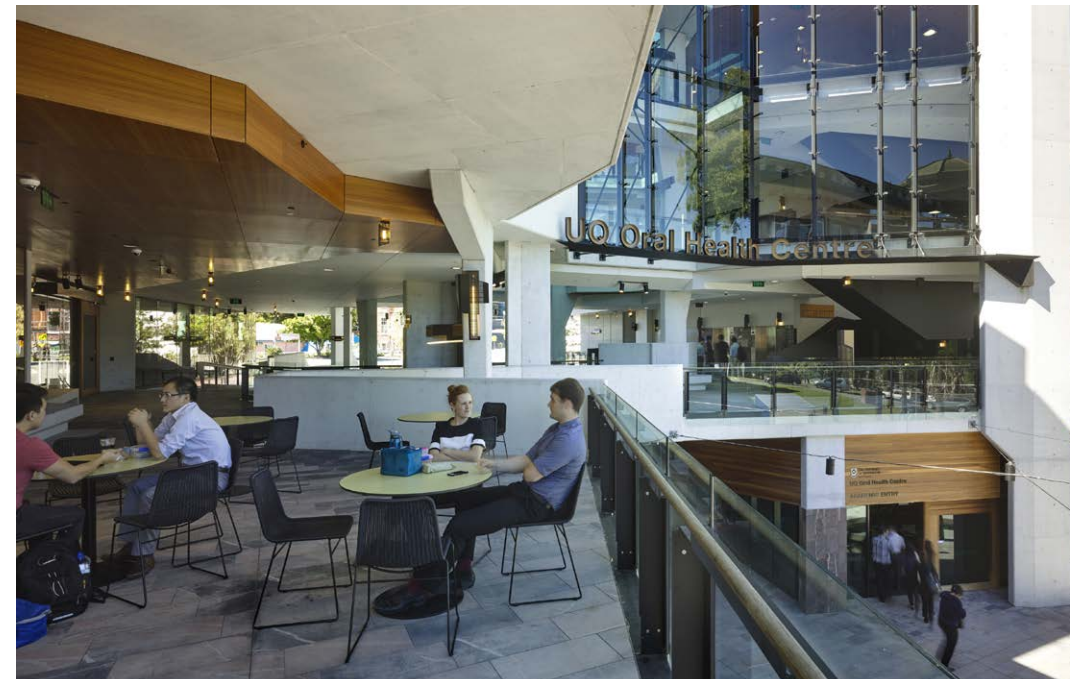


Figure 2.1.8: University of Queensland Oral Health Centre, COX Architecture

Having been originally created by the community, the opportunity to better engage with Newcastle society is a key factor in UON's strategy to explore opportunities to strengthen its presence in the Newcastle CBD. UON at Honeysuckle can act as the connector in the CBD, bringing together thought leaders, industry, small businesses, not-for-profits and start-ups to co-create solutions to social challenges through social enterprise and knowledge transfer.



Figure 2.1.9: Alumni Green, UTS, Aspect Studios

2. Design Considerations

2.1.5 Technology

Today's campus is now a digital campus. The impact of rapidly changing technologies is felt by teaching staff, researchers and students as well as industry.

The ability to work anywhere by utilising technology has changed the student experience and increased demands for UON to support the concept of working anywhere, anyway, anyhow.

The ability to implement, operate and change new technologies is essential in the future proofing of new education facilities.

The ability for UON to utilise technology to readily showcase its research, student work and engagement to the wider community is a key opportunity in the CBD environment.

2.1.6 Industry engagement

Increased industry engagement is seen as a critical driver for university growth and reputation. The development of joint programs with industry and employer groups allows for:

- Exposure to new ideas
- Access to new funding streams
- Stronger connections with industry that equip students and graduates with valuable skills that cannot always be taught
- Research outcomes and innovations that are deeply connected to real-world issues and have meaningful social impact
- Improvements in student job-readiness and employability.

2.1.7 Mixed use environments

The increasingly flexible teaching methods and learning environments, as well as changed practices of students working while studying has seen student use of campuses extend late into the night. Library facilities at Callaghan are now offered 24 hours a day. Successful urban campuses are live-work-study precincts.

With this extended access to the campus, new support facilities are needed that activate a wider precinct and support students. On-site accommodation and access to a range of dining and after-hours retail options or pastoral care services are increasingly important.

The creation of mixed use precincts that generate all day activity require a number of design elements in addition to the mixture of uses in order to be successful:

- Ground floor activation through the introduction of retail and dining
- Outdoor recreation spaces
- Outdoor dining that extends into the evening
- A high quality public domain with good solar access and amenity
- Enriched public domain through heritage interpretation that contributes to sense of place,
- The provision of safe, active and open connections
- Public art opportunities/student work display
- A range of spatial experiences – plazas, laneways, and links that establish a legible hierarchy of spaces.



Figure 2.1.10: Student centred spaces, Ryerson, Toronto



Figure 2.1.11: Technology equipped inside/outside work spaces, WeWork

2. Design Considerations

2.2 Student Accommodation

The provision of student accommodation at the Honeysuckle City Campus site will bring 24/7 life and activity to UON's wider emerging CBD campus.

There is currently no dedicated UON student accommodation within the Newcastle CBD as an option for Callaghan students, or to support the UON faculties already located in the CBD.

Increasingly, lifestyle is a key issue that impacts the decision of a prospective student on whether to go to a particular university. The result of this trend has been higher space needs and the locating of facilities where students are not only close to learning facilities, but have easy access to recreational, retail and lifestyle offerings.

Facilities

Student accommodation is seen as a growth industry with a number of international companies now established in the Australian market, and Australian companies expanding into Europe. Each operator has a distinct product and approach to accommodation options however a number of common elements underpin the product offer.

There is an expectation that student accommodation facilities will provide superior amenity throughout. High quality facilities should include:

- Secure bicycle parking facilities
- Generous shared spaces for students to socialise, relax, or work together
- Outdoor recreation spaces that are comfortable for individuals to spend time in, and large enough to accommodate groups
- A variety of gathering or meeting spaces for small and large groups
- Access to high speed internet
- A mixture of studio apartments and bedrooms within larger shared apartments.

The student accommodation identified for the Honeysuckle City Campus is assumed to include a mixture of accommodation styles and will be developed further as detailed planning for the Campus progresses. The social spaces associated with the student accommodation are expected to enhance activation of the Honeysuckle precinct, through the strategic positioning of these spaces and a high degree of transparency at ground level.



Figure 2.2.1: RMIT Student lounge, Source: RMA



Figure 2.2.2: Urbanest Studio Room



Figure 2.2.3: Duke University Special Events & Dining Pavilion

2. Design Considerations

2.3 Benchmarks

A benchmark study has been undertaken to find comparable projects and developments in urban areas that offer lessons and ideas for the Honeysuckle City Campus. These benchmarks also assist in the visualisation and understanding of how design concepts can be translated into successful built outcomes.

2.3.1 Academic Projects

University Centre, The New School, NY

Key Facts:

- Architect: SOM
- 16 storeys, 35,000m²
- Levels G-7 = multi-purpose classrooms, design studios, laboratories, an 800-seat auditorium and the main university library
- 2,800m² academic floor plate
- Levels 8-16 = student accommodation floors (600 beds)
- LEED Gold

Design Elements:

- Designed as a campus within a building
- Vertically integrated academic spaces and student accommodation
- Social spaces interspersed throughout building - 'sky quads'
- Internal activity highly visible through the façades of the building
- Range of function spaces used for academic functions and to engage with the wider community.



Figure 2.3.1: University Centre, The New School, NY



Figure 2.3.2: University Centre, visible circulation



Figure 2.3.3: University Centre, community event auditorium

Lessons Learned

- Ground level transparency showcases activity and events happening within the Centre, contributing to The New School's public identity
- Vertical circulation displayed on the facade highlights activity and movement within the building
- Integrated student accommodation and academic uses provides a potential model for the Honeysuckle City Campus
- Flexible learning spaces provided opportunities for collaboration
- Variety of large event spaces enable wider engagement with the community, reflecting The New School's identity and brand.



Figure 2.3.4: University Centre, light filled student centred spaces

2. Design Considerations

Ryerson Student Learning Centre, Toronto

Key Facts:

- Architect: Zeidler Partnership Architects & Snohetta
- 14,400m², 8 storeys
- Ground floor retail
- LEED Silver
- 50% green roof

Design Elements:

- Provides Ryerson students with an exceptional place to study, collaborate and discover.
- Academic, study and collaborative spaces
- Glazed facade acts as a lantern during the evening.
- Integrated into the urban environment with ground level retail and welcoming public forecourt
- Each floor has its own personality: open / flexible / enclosed / quiet



Figure 2.3.5: Ryerson Student Learning Centre, Toronto



Figure 2.3.6: Ryerson flexible student centred spaces



Figure 2.3.7: Each floor has its own personality



Figure 2.3.8: Building Concept Section

Lessons Learned

- Variety in student centred spaces throughout the building enables a personalised student experience
- The ground level is activated by retail and generous sheltered public space to provide a sense of arrival and gathering place within the urban environment

2. Design Considerations

1PSQ Western Sydney University, Parramatta

Key Facts:

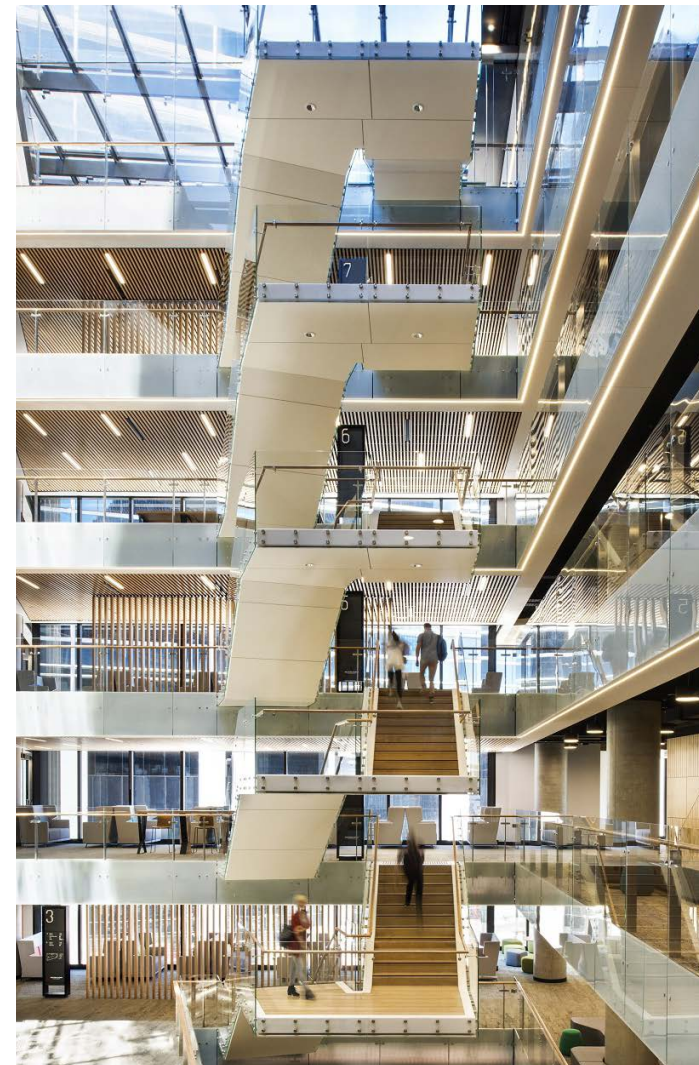
- Architect: Architectus
- Flagship WSU Parramatta City Campus
- 11 storeys of educational facilities, 3 storeys commercial A-grade office space
- Central atrium connecting podium floors
- Roof terrace with break out area and expansive views
- 5 Green Star rating

Design Elements:

- Commercial office space at upper levels provides for close academic and industry partnership.
- Highly integrated spaces with inter-floor connectivity
- Conference space at upper level to bring community uses through the building
- Informal learning and collaboration spaces located at every level

Lessons Learned

- Internal atrium provides good visual and physical connectivity between floors and brings in natural light
- Co-location of commercial office enables opportunity for collaboration between WSU and industry



High Rise School, Adelaide

Key Facts:

- Architect: Cox Architecture
- South Australia's first high-tech vertical school (Adelaide CBD High School)
- 5 Green Star rating
- Under design development, scheduled to open in term 1 2019

Design Elements:

- Multi-disciplinary learning environment
- 'Active atrium' - passive learning opportunities
- 'Maker spaces' - innovative and collaborative learning spaces at each level
- Exhibition/gallery space at plaza level for community events
- Strong connection to surrounding landscape

Lessons Learned

- Internal atrium space used for passive learning and breakout spaces, as well as for circulation and to bring in natural light
- Ground level exhibition space enables community engagement with the school



2. Design Considerations

Innovation Central, Cardiff University

Key Facts:

- Architect: Hawkins Brown
- 12,000m² building - includes 2,800m² commercial units for start-ups
- Ground floor public space used to collaborate and communicate

Design Elements:

- Designed to link together academics and commercial tenants
- The 'Oculus' open staircase through void to drive engagement and collaboration
- Flexible, re-programmable floor plate
- Showcasing activity - facade enables viewing of activity from outside
- Flexible auditorium made up of big steps and pull-out flexible seating cubes
- Secure data facility, fabrication lab, visualisation lab, TV studio



Lessons Learned

- Flexibility is a key design driver to enable changing building programmes, and adaptation of event spaces
- Co-location of academic and commercial start-up tenants fosters research and innovation

Axel Springer Campus, Berlin

Key Facts:

- Architect: OMA
- Winning design competition scheme for new Axel Springer campus
- Under design development

Design Elements:

- New building will act as both a symbol and a tool, highlighting the transition from print to digital media
- Cultural transformation through radically modern workspaces
- Series of terraced floors form a valley, an informal stage at the centre
- Publicly accessible rooftop park
- Ground floor open to the city, containing studios, event and exhibition spaces, restaurants and cafés



Lessons Learned

- Strong narrative about how the building is designed to foster cultural transformation within the workplace
- Facade designed to reveal public facing activity, and conceal private activity

2. Design Considerations

2.3.2 Student Accommodation Models

North, South, East and West Residences, Newcastle

Operated by UON Student Living, the North, South, East and West Residences at the Callaghan campus were opened in 2015. This award winning development features 778 beds in a series of mid-rise buildings that offer a mix of studio rooms, one and two bedroom self-contained apartments, five and six bedroom share apartments.



Callaghan Campus Student Accommodation

2. Design Considerations

Urbanest, Southbank Brisbane

Higher density student accommodation is common around the world. Urbanest's South Bank accommodation in Brisbane by Cox Architecture (716 beds in a 14 storey complex) has a range of studio and shared formats with apartments ranging from studios and four to 16 bed configurations.



Urbanest Student Accommodation, South Bank QLD. Cox Architecture

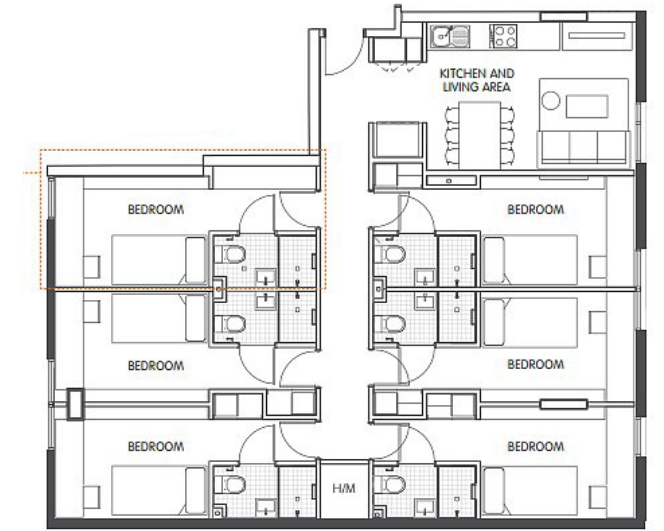


Iglu, Central Sydney

Iglu's Central property in Sydney offers high rise living in an inner city location close to UTS and to Central Station. A range of apartment types - studio, two, four and six Bed shared apartments are provided.



Iglu, Central Sydney



The Opportunity at Honeysuckle

3. The Opportunity at Honeysuckle

3.1 The Site

3.1.1 Site Description

The new Honeysuckle City Campus is located on a series of connected lots between Honeysuckle Drive and Civic Lane. Site 1 is currently being acquired from the Hunter Development Corporation. There is an optional Purchase Agreement for two further adjacent sites, Sites 2 and 3, on rail corridor land north of Civic Lane.

The full site area is made up of the following parcels:

- Lots 1, 2 and 3 DP 1163346 (Site 1);
- Lot 21 DP 1165985 (part Sites 2 and 3); and
- Part Lot 2 DP 1226145 (part Sites 2 and 3, referred to as Rail Corridor within this report).

The site is bounded by Honeysuckle Drive to the north, a private lot with Right of Public Access known as Settlement Lane to the east, Civic Lane to the south, Worth Place to the west and future Civic Link to the east. Wright Lane - a private lot with Right of Access / Right of Carriageway runs along the northern edge of Sites 2 and 3.

The total site area of the three sites is 20,412m².

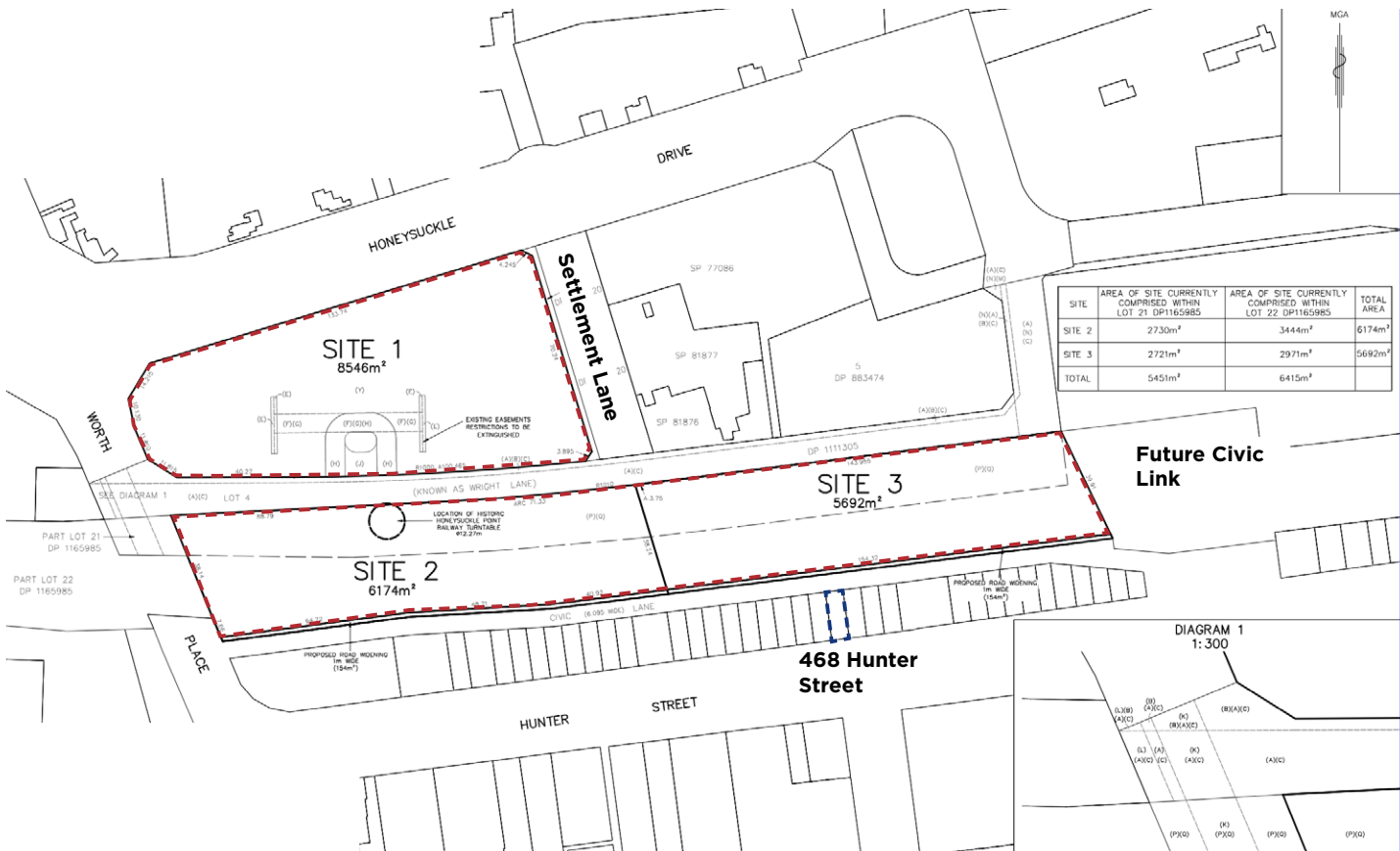
Immediately to the south of Site 3 is 468 Hunter Street, a property already owned by UON. While not included in the site area, this Concept Plan considers this site as an important opportunity to create a future pedestrian connection between the Honeysuckle City Campus and NeW Space.

3.1.2 Site Capacity

The maximum floor space for the site is based on existed and planned zoning for the site..

The calculations that have been used to formulate the Concept Plan are as follows:

Site	Site Area	FSR	GFA	Target GFA
1	8,546m ²	2.5:1	21,365m ²	23,502m ²
2	6,174m ²	3.0:1	18,522m ²	20,374m ²
3	5,692m ²	3.0:1	17,076m ²	18,784m ²
Total	20,412m ²		56,963m ²	62,659m ²



3. The Opportunity at Honeysuckle

3.1.3 City Context

The site's location close to the waterfront and its relationship to both Civic and the emerging urban education precinct represent significant opportunities for the new campus.

The Honeysuckle site is well positioned to reinforce a highly walkable and accessible UON education precinct in the CBD, with easy access to both the Honeysuckle and Civic light rail stations.

The site's north facing aspect and close proximity to the Hunter River waterfront in Honeysuckle provides the opportunity to create a great environment for students, staff and visitors to enjoy.



3. The Opportunity at Honeysuckle

3.1.4 University Developments in the CBD

The development of this site for the Honeysuckle City Campus will enhance UON's future presence in the Newcastle CBD. It builds on UON's historical presence (University House, Northumberland House, and Conservatorium of Music) and the more recent strategic development of NeW Space to create a contemporary city based campus for UON's future success and prosperity.

The existing UON assets in the CBD will be supported by the development of a dedicated facility that complements existing uses and provides new support services and functional areas including expanded library, collaboration spaces, community venues and student accommodation.

UON's acquisition of 468 Hunter Street may facilitate a future pedestrian link that enhances connectivity between UON developments.



3. The Opportunity at Honeysuckle

3.2 Leverage Newcastle's investments

The closure of the heavy rail corridor will transform the CBD with new, uninhibited north-south connections to the waterfront from the city. The development of a comprehensive plan for the CBD by UrbanGrowth NSW and the delivery of the new light rail seek to redefine the experience of Newcastle.

The Newcastle Urban Transformation and Transport Program (NUTTP) aims to strengthen connections between the city and the waterfront, create new jobs, provide more public space and amenity and deliver better transport.

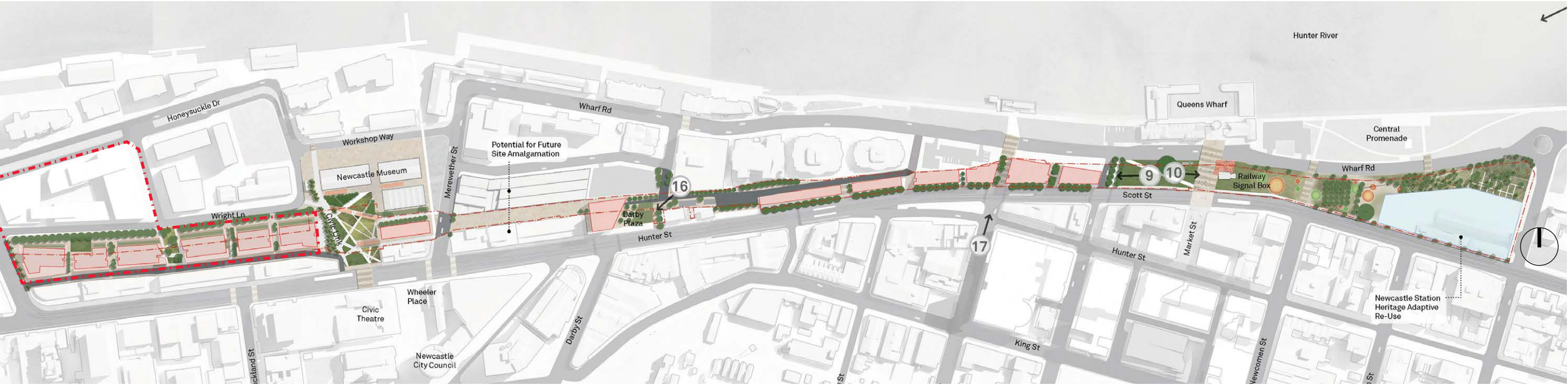
The NUTTP is part of the NSW Government's more than \$500 million commitment to revitalise Newcastle's city centre.

Civic Link is a new public open space, proposed as part of the NUTTP, located directly to the east of the Honeysuckle City Campus site. This space will become a vibrant community hub at site of the former Civic Station, and as the forecourt to the Newcastle Museum. As well as a recreation space, it will be an important pedestrian and visual link that connects Hunter Street to the waterfront.

This open space has the potential to provide significant amenity to the Honeysuckle City Campus.



Civic Link, Artist's Impression, UrbanGrowth NSW



Revitalising Newcastle Corridor Map, NSW Government

3. The Opportunity at Honeysuckle

Under the NUTTP, projects currently in planning or under construction are:

- Newcastle Light Rail
- Wickham Transport Interchange
- Market Street Lawn
- New public spaces at Darby Street and at Civic
- Refurbishment and reuse of the old Newcastle Rail Station.

The opening of the Newcastle Courthouse complex in February 2016 represents a further \$90 million in the CBD by the NSW Government.

Responding to the opportunity for and investment in the renewal of Newcastle, Newcastle City Council has established the Newcastle Smart City Initiative which provides a framework for maximising opportunities in new technology, advanced manufacturing, the digital economy and creative industries. The initiative aims to improve develop economic diversity and strengthen local innovation. One element of this, the Hunter Innovation Project of which UON is a partner, is developing innovation spaces, data connectivity and smart city infrastructure to leverage investment in research and technology within the precinct.

With more than \$700 million investment, government support for local innovation, efforts to increase Newcastle's international profile and programs to attract talent and investment into the city will directly support the UON's objectives for its Honeysuckle City Campus.



Newcastle Light Rail, artist's impression



Hunter Innovation Project



Newcastle Light Rail route

3. The Opportunity at Honeysuckle

3.3 Leveraging UON's Assets

UON already has a significant presence in, and commitment to the Newcastle CBD.

UON's NeW Space and the refurbishment of University House represent over \$100 million in investment in the CBD and demonstrate a significant commitment to the creation of a CBD presence and a new focus on UON's identity and profile.

UON's identity has traditionally been associated with greenfield campuses at Callaghan and Ourimbah. While several departments have a CBD presence (University House, Northumberland House and Conservatorium of Music), the opening of NeW Space is influencing the community's perception of UON's commitment to the Newcastle CBD.

The potential relocation of additional disciplines alongside the introduction of new initiatives including the Global Impact Clusters have the potential to change the perception of UON. This consolidation provides the opportunity to strengthen industry connections and support further interdisciplinary links.

With its mix of uses, the Newcastle CBD has the potential to create an integrated urban higher learning cluster that leverages the amenity offered by a CBD location, the proximity to world class beaches and a fast developing urban waterfront.

The CBD location provides the opportunity to display and showcase the disciplines and innovations of the whole University to the community. The showroom concept allows for changing displays that generate community and industry interest and raise UON's profile.

Digital displays on the outside of the building can be used to showcase UON and the products of specific courses such as animation and video art.



NeW Space



University House



The Conservatorium



Three76 Hub

3. The Opportunity at Honeysuckle

3.4 Advantages for UON

The higher learning industry is increasingly competitive. Students are not only after a high quality education but are looking for a complete experience that includes the social, lifestyle and employment opportunities brought by urban living.

The quality of life and urban experience created in the Newcastle CBD may not only help make University of Newcastle the first choice of new students but also help grow higher degree enrolments and consolidate new and existing research partnerships.

The Concept Plan looks beyond building outcomes and focuses on the assets and opportunities that this site in the CBD and on the waterfront have, that help make UON increasingly attractive.

The direct advantages for UON are seen as:

- Growing UON presence and profile in the CBD;
- Embedding a permanent concentration of human capital into the CBD;
- Contributing to the social, cultural and economic prosperity of Newcastle;
- Engaging in high impact research in the CBD;
- Integrating seamlessly with the city's key connections, transport system, cultural, civil, commercial, service, residential, leisure and retail offering; and
- Close connection to Newcastle's world class natural assets including its beaches and parks that contribute to a highly attractive and balanced lifestyle.

The proposal provides a framework to support the ongoing integration of UON into the urban fabric of Newcastle, connecting and supporting UON assets including NeW Space and University House.



Merewether Baths



Civic Theatre

3. The Opportunity at Honeysuckle



Honeysuckle Waterfront Dining



Darby Street Cafés



Newcastle Beach

Site Assessment

4. Site Assessment

4.1 Site Conditions

4.1.1 Site History

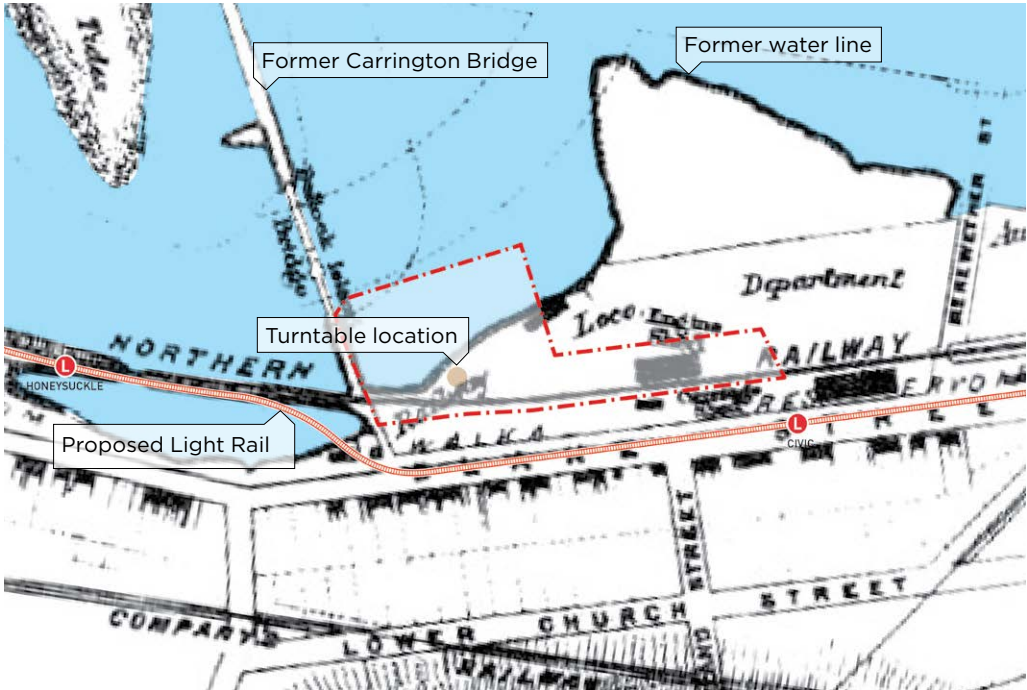
The site is located within the Honeysuckle redevelopment precinct and includes part of the old rail corridor. Known by the Aboriginal people as Meekarlba, Honeysuckle was originally the home of the Awabakal People.

The rail previously ran along the water’s edge with the original Honeysuckle station to the east of the UON site lying directly on the harbour. The original Carrington Bridge ran across the river mouth, north from today’s Worth Place.

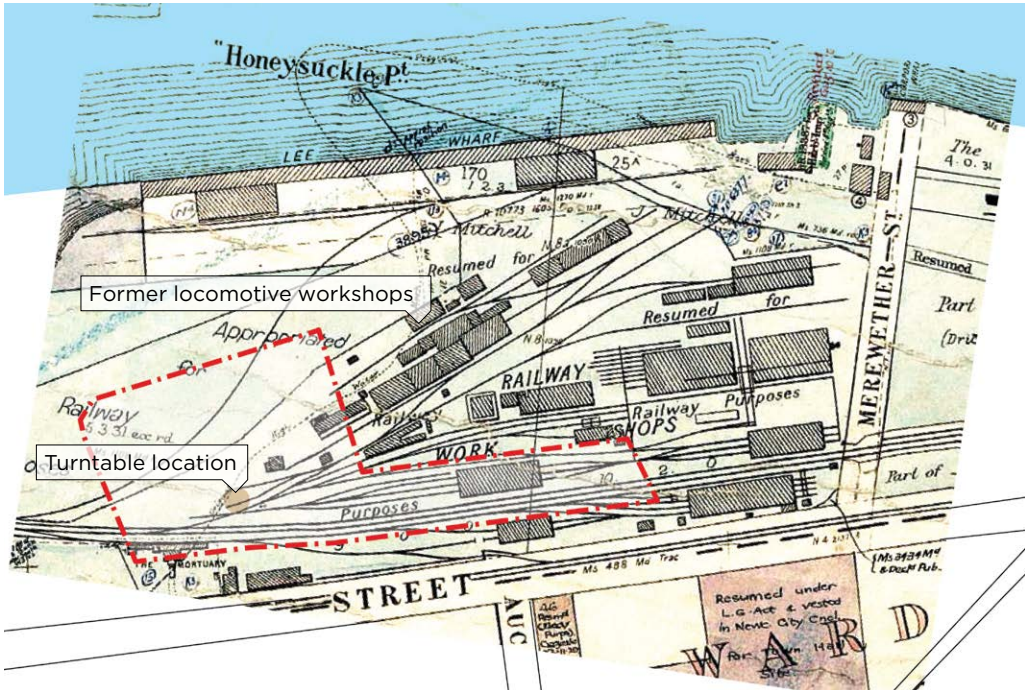
The area was filled in the 1880s and was the site of new wharves on the harbour and the Locomotive Works. A number of the original buildings are kept throughout the precinct.

The remnants of a locomotive turntable dating between 1856-1895 are located on the site and are considered to be of very high archaeological significance. Elements of the turntable may be the oldest surviving railway relics in NSW. Previous heritage studies by GML (2008) and Peter Fenwick (1994) indicate that the turntable’s significance warrants in-situ retention. The turntable is currently not exposed and is understood to sit largely within Site 2. Recommended options for retention by previous studies include:

- Excavation and exposure of turntable as display of early railway technology
- Turntable left unexposed with its position marked by circular paving with interpretive panels erected.



Honeysuckle 1876 - Overlay on existing Aerial



Honeysuckle 1916, prior to construction of Civic Station - Overlay on existing Aerial



Honeysuckle Station on the waterfront, built 1872



Locomotive and Turntable at Honeysuckle, installed 1857

4. Site Assessment

In 1908 a sea wall was constructed along the foreshore and included significant land reclamation along the foreshore.

Operation of the railway workshops declined following the closure of the foundry in 1958, with closure of the railway yards in the 1990s. The site was handed to the Honeysuckle Development Corporation in 1992, who were tasked with planning for the redevelopment

of a 4km stretch of the waterfront. Some demolition, clearance and decontamination of the former rail yards took place to enable new development and private investment.

Some site contamination is still present on the site in both the soil and groundwater following its industrial history. Management of contamination will require a detailed site management plan prior to development.

The former commuter rail line that ran through the site from Wickham Station to Newcastle Station has been removed, however the platforms of former Civic Station remain on Site 3. These will require removal and possible fill to level the ground prior to development of that site.



Lee Wharf and railway workshops, Circa late 1930s



Honeysuckle 1970s

4. Site Assessment

4.1.2 Adjoining uses

In partnership with the local community, the State Government in 1992 set about to transform 50 hectares of surplus government land along the Hunter River waterfront adjacent to the Newcastle CBD.

The Honeysuckle Development Corporation (now Hunter Development Corporation) has overseen the construction of new commercial, residential and hotel uses within the precinct. An extensive waterfront open space network offers significant amenity to users.

The precinct has seen steady development since its inception with key commercial users (NIB and Hunter Water) relocating to the development area. Reflecting market conditions, most recent development has been residential.

Sites adjoining UON’s site are predominantly residential to the north, and mixed use commercial and residential to the south. The Newcastle Museum is located north of the old Civic Station to the east of the UON sites.



4. Site Assessment



Newcastle Harbour waterfront promenade



Serviced apartments to the east of the site



Newcastle Museum



Honeysuckle waterfront dining and residential



Heritage locomotive buildings



Residential development on Honeysuckle Drive

4. Site Assessment

4.1.3 Key Attractors

The site's location at Civic means that the Honeysuckle City Campus site is close to key cultural and civic assets. These include:

- Wheeler Place
- The Civic Theatre
- Newcastle Art Museum
- Newcastle Library
- Newcastle TAFE
- Newcastle Courthouse

The delivery of the new light rail (replacing the rail service between Wickham and the old Newcastle Station) is seen a catalyst for new development in the precinct. With a service of approximately every 15 minutes in peak, the light rail will be more frequent than the trains that previously stopped at Civic and extends to the east to serve the beaches at Pacific Park.

The light rail will open up easy access to a broader range of amenities and attractions within the Newcastle CBD including a new stop at Pacific Park on the doorstep of Newcastle Beach. The light rail will encourage more pedestrian traffic around the UON Honeysuckle City Campus site with the more permeable street network it will help to catalyse.



4. Site Assessment

4.1.4 Site access

Access to the site will be significantly improved by the closure of the heavy rail, opening of new streets, new light rail stops and new open space upgrades throughout the CBD.

While the main street address is likely to be on Honeysuckle Drive, the primary pedestrian catchment is to the east, west and south. The site is halfway between the Honeysuckle and Civic light rail stops to the west and east respectively, and there are likely to be significant pedestrian flows to and from Hunter Street.

The opening of new links in the block of Hunter Street between Worth Place and Civic will further reinforce movement from the south. UON’s ownership of 468 Hunter Street provides a key opportunity to establish a new pedestrian link between the site and NeW Space. Enhancing pedestrian connections through to the waterfront is critical to providing significant amenity for the precinct.

Vehicular access will be improved by a new link across the rail corridor at Worth Place delivering left-in/left out at Hunter Street with the potential to add a new right turn out of Worth Place into Hunter Street in the future.

Civic Lane will remain as an important point of service to both the UON sites and to Hunter Street properties. The western end of Wright Lane passing through the site has a very limited role in the transport network and may not be required in the future.



4. Site Assessment

4.1.5 Views

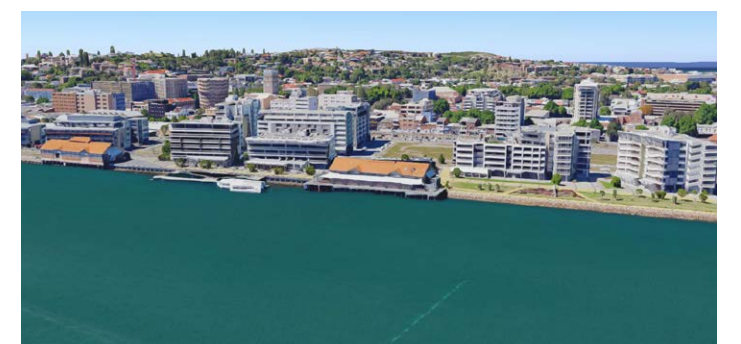
The development of 6-9 storey residential buildings along the waterfront provides a barrier to much of the potential for views from the site.

There are however a number of slot views (down Worth Place) and views over low rise heritage buildings in the centre and at the eastern end of the site.

The views to the river are long fetch views along the arm of the Hunter River at Wickham or the high quality views towards Stockton and the distant hills to the north.

Newcastle City Council's DCP identifies a series of view axes to the waterfront that should be preserved in the public domain.

The design of built form at the Honeysuckle City Campus has the opportunity to capture these to the waterfront in the north, while still retaining public view corridors in the public domain.



4. Site Assessment

4.2 Traffic and Access

4.2.1 Newcastle Light Rail

Newcastle Light Rail is a key element of the Newcastle Urban Transformation and Transport Program, helping to facilitate urban redevelopment of public, residential and commercial land as well as providing an efficient and accessible mode of transport through the Newcastle CBD. The light rail will extend along the former heavy rail corridor from Wickham Transport Interchange, and transition to Hunter Street at Worth Place, extending to Pacific Park in the east. Six light rail stops will be provided along the route, including one at Honeysuckle directly to the west of the Honeysuckle City Campus site, and one directly to the east at Civic.

4.2.2 Expected Travel Mode

A transport assessment undertaken by Seca Solution to support the Concept Plan identifies the expected travel mode for different users and provides recommendations for parking and cycling provisions at the site.

The HCCD Transport Access Strategy confirmed that in a manner similar to NeW Space it is expected that 66% of students and staff will live within the CBD and its environs within a distance suitable for walking and cycling or able to affectively access public transport.

Public Transport

Access to public transport is readily available via the light rail system which sees two stations, Civic and Honeysuckle, both within 100m of the campus with appropriate pedestrian connectivity available. The light rail has been designed to accommodate the future demands of the city, of which HCCD is one of the key drivers. Therefore there is adequate capacity available to meet the demands of the campus over time.

Vehicle

As vehicle demands associated with HCCD are primarily related to servicing for the site with some demands for the pick up and drop off of people as well as for those staff or students requiring accessible parking, the vehicle traffic generated by the site has been determined as being less than that previously allowed for in modelling for the precinct.

The cumulative impact of this has also been taken into consideration with the various road and intersection upgrades currently proposed or being undertaken in conjunction with the light rail project forecast to 2028. The impact of vehicle traffic on the local road network has therefore been assessed as acceptable.

The University currently operates a Campus Shuttle which provides connection between the city and Callaghan campus for staff and students who need to travel between both campuses for lessons etc. This service where appropriate shall be extended to include HCCD. The shuttle also acts as a Park and Ride for those staff and students who choose to drive to Callaghan and then commute to the CBD.

It is recognised that there may be some demands generated by people who do not choose to live within close proximity to the city and for whom public transport is not feasible. The Council Park and Ride at Broadmeadow provides a viable option for these people. For the balance there may be some demand for parking. Such demands can be accommodated within the existing public parking supply available in the city which has been reviewed in conjunction with the various strategies and found adequate to accommodate the city's future needs.

Walking and Cycling

The use of alternate modes, particularly cycling, is promoted through the provision of end of trip facilities and bike storage on site. Such facilities will be incorporated into each of the buildings to ensure adequacy of supply. Changes to cycling, including bike share programs such as Bykko and the more affordable availability of electric bikes will require consideration of charging stations which is consistent with the Smart Cities program.

On-Site Parking

Allowing for the implementation of the Transport Access Strategy, supported by the promotion of active travel and public transport, the proposal to provide a small amount of specialised parking for accessible, bicycle and servicing along with drop off and pick up zones but with no general parking is supported.

4. Site Assessment

4.3 Engineering services Infrastructure

An investigation of infrastructure servicing the site has been undertaken to determine the enabling works requirements as well as future capacity requirements for development of the Honeysuckle City Campus. Initial assessment confirms that development can be accommodated on the site and that there are few impediments to delivering the project.

4.3.1 Water

- As part of Stage 1A and 1B enabling works, Hunter Water Corporation (HWC) have requested the extension of an existing 150mm watermain along Worth Place to connect into the existing 200mm main on Honeysuckle Drive.
- Subsequent stages will require the construction of a 150mm watermain from Worth Place along Wright Lane, for future connection into the 200mm main at Honeysuckle Drive.

4.3.2 Sewer

- Existing waste water pump station and sewer rising main has sufficient capacity
- New development in the catchment by others may absorb spare capacity and upgrade would be required to enable Honeysuckle City Campus development
- Staged connection works will be required
- An internal gravity sewer main will be constructed along Wright Lane, which will connect into an existing maintenance hole on Worth Place.

4.3.3 Stormwater

It is understood that existing site stormwater drainage infrastructure is as follows:

- Existing drainage infrastructure installed in Wright Lane;
- Existing drainage infrastructure in Honeysuckle Drive; and
- The above items connect to a trunk drainage culvert to the west of the site beneath Worth Place which drains north to Newcastle Harbour.

The existing drainage infrastructure in Wright Lane will require relocation to avoid the proposed development footprint.

Following review of the surveyed ground levels, a ground level connection must remain open along Wright Lane to enable overland flow through the site.

On-site stormwater retention and detention will be required with each development stage.

Site	Building	Total Site Area (m2)	Estimated Impervious Area (m2)	Impervious Fraction	Estimated Combined Storage Requirement
Site 1	A1	2,000	1,790	89%	40 kL
	A2	2,150	2,010	93%	50 kL
	C	4,750	4,260	90%	95 kL
Site 2	B	3,800	3,430	90%	80 kL
	D	3,370	2,990	89%	70 kL
Site 3	E	1,950	1,790	91%	45 kL
	F	3,000	2,770	92%	65 kL

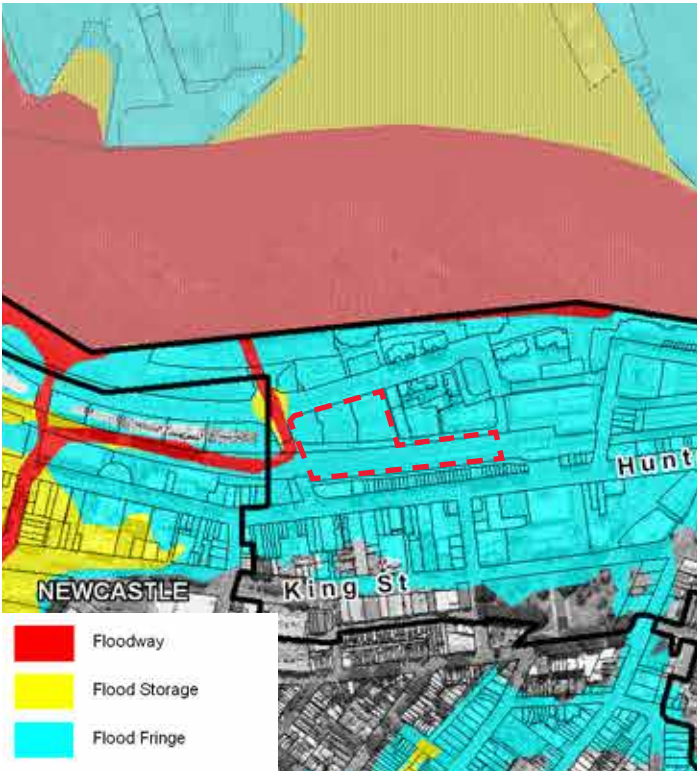
4.3.4 Flooding

Flooding of the Hunter River in Newcastle is a significant issue with large parts of the CBD affected.

Flood mapping assesses a series of flood types and risk categories across the Hunter River catchment. The UON site is noted as being a Flood Fringe site. Worth Place is noted as a major floodway with depths up to 1m possible.

Flood planning levels have identified by Northrop as follows:

1% AEP Ocean Flooding 2.30m AHD	2.28m AHD
1% AEP Local Catchment Flooding 2.43m AHD	2.58m AHD
PMF Ocean Flooding 3.40m AHD	3.38m AHD
PMF Local Catchment Flooding 3.31m AHD	3.38m AHD
Proposed Minimum Habitable Floor Level	2.80m AHD



Newcastle Floodplain Risk Management Map



2007 flooding in Newcastle CBD



Historical photograph of flooding in Steele Street, Newcastle CBD

4. Site Assessment

4.3.5 Electricity

Enabling works will be required to service the development of the site including:

- Relocation of existing electrical infrastructure in Wright Lane and under future development footprints and maintain electrical feed to the existing kiosk substation at the eastern end of Wright Lane.
- Relocation of overhead lighting infrastructure in Civic Lane
- Installation of 2 x new 4,500kVA chamber substations to service the new development. One to be developed with a Stage 1 building, with the second developed with a Stage 2 building.
- Existing chamber substation at the western end of Civic Lane in the south west corner of the site to be demolished with capacity catered for in the new Stage 1 chamber substation

Due to ongoing works within the rail corridor it is not possible to ascertain the status of electrical supply within the rail corridor from Ausgrid.

Further discussion with HDC is required to establish what, if any electrical infrastructure would remain at handover of the property. Note that this infrastructure is shown to cross the boundary with the existing carpark toward the eastern end of the site.

It is also noted that the electrical infrastructure in Honeysuckle Drive and Settlement Lane are in close proximity to the building footprint. Relocation is not required but care must be taken to ensure that the services are not damaged during construction.

4.3.6 Telecommunications

Based on Dial Before You Dig Information, the following services have been identified:

- Fibre Optic NBN infrastructure installed in the southern verge of Honeysuckle Drive to the north of the site; and
- AARnet infrastructure is available to the south of the site in Hunter Street with a short connection required.

There are NBN connection stubs within the development footprint on Site 1 (Lots 2 and 3 DP 1163346) that will require demolition. There are also Telstra services within the rail corridor which will require demolition.

4.3.7 Gas

Based on Dial Before You Dig Information, the following services have been identified:

- Existing 1050 kPa secondary steel main is installed in the northern verge of Honeysuckle Drive; and
- Existing medium pressure mains installed in the northern verge of Honeysuckle Drive and in Worth Place.

Jemena have advised that there is sufficient capacity within the existing distribution mains to service the development.

4.3.8 Subsidence

There are varying extents of mining below much of the Newcastle CBD. The Mine Subsidence Board (now Subsidence Advisory NSW) is responsible for identifying areas of risk and potential impact for land affected by possible subsidence of old mines.

A review of contamination, mine subsidence and geotechnical data for Sites 1, 2 and 3 was undertaken by Coffey and identified the following:

Site 1:

- This site is underlain by mine workings at a depth of approximately 75m
- Site 1 has been the subject of a previous mine subsidence assessment (N0849/04-AG July 2004) with grouting previously started then halted (2011-2012) (GEOTWARA20903AD-AC June 2013).
- Some grouting works occurred for the previously approved development of this site, however details are unclear and it is anticipated that most grout boreholes will need to be re-drilled.

Site 2:

- This site is unlikely to be constrained by mine subsidence issues

Site 3:

- This site is unlikely to be constrained by mine subsidence issues however it is unclear if Subsidence Advisory NSW will be stricter on this site than neighbouring sites

as there is a small pocket of mine workings within the site. Due to the limited nature of this pocket of workings, failure of the workings is unlikely.

Coffey has recently completed the numerical modelling across Sites 1 and Sites 2 and 3 for the revision/development of the grouting strategies.

4.3.9 Contamination

Sites 1, 2 and 3. Site 1, currently has seven (7) sampling locations assessed for a suite of contaminants of concern (CoCs) and requires an additional thirteen (13) locations to comply with the requirements detailed in the NSW Sampling Design Guidelines (1995). Sites 2 and 3 have been previously assessed by others, with lead and asbestos being identified at less than 1 metre below the surface in the fill. Sites 2 and 3 are currently managed under a site audit statement (SAS) for the specific use as a car park.

Coffey has recommended to undertake detailed site investigations (DSIs) at each of the three (3) sites to best inform the UON of the current contamination status of each site. The DSIs will also assess the suitability of the land for the revised land uses proposed (i.e. commercial/industrial and residential (minimal soil access mixed uses) and the specific requirements for remediation, if required.

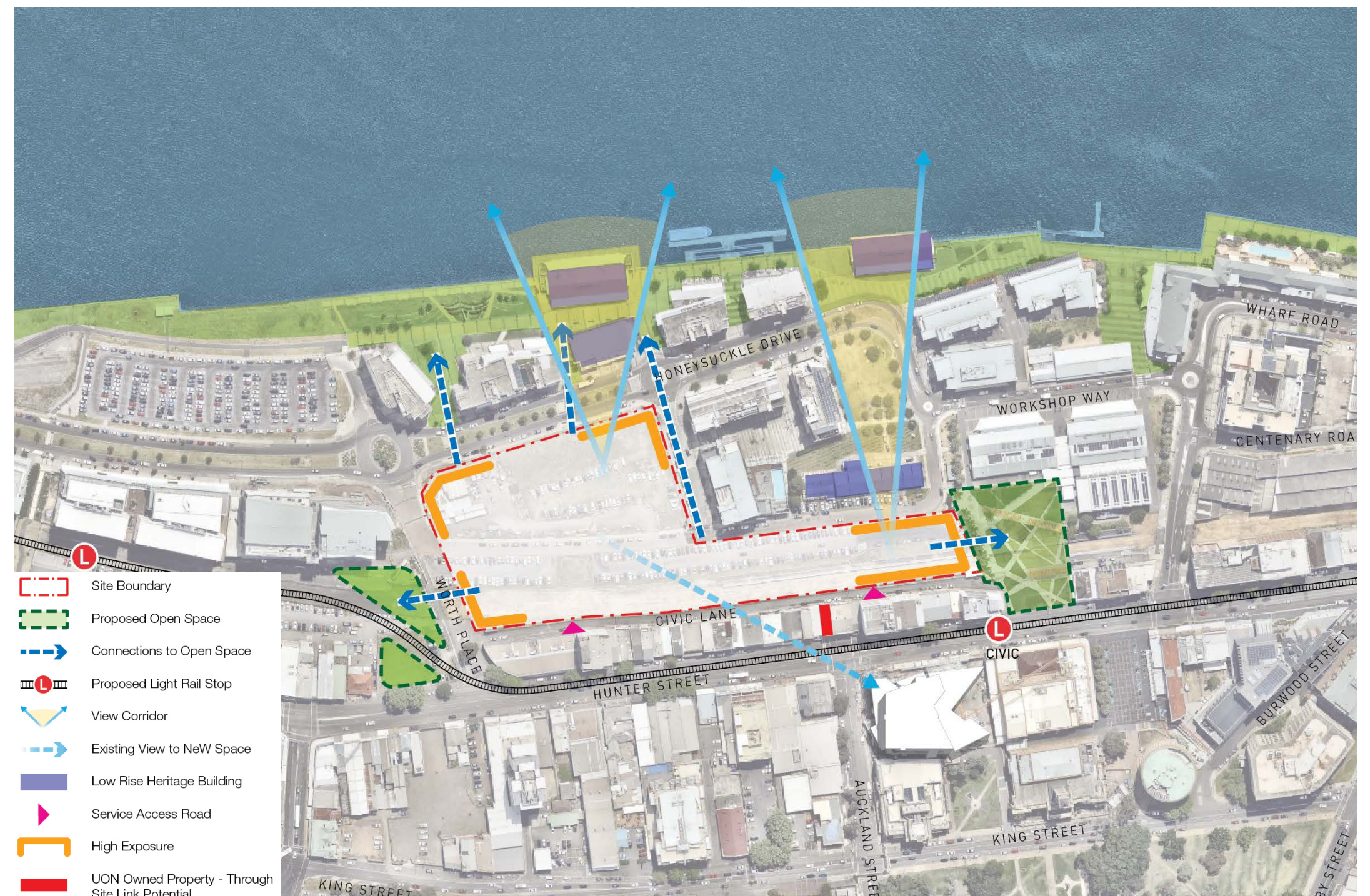
4. Site Assessment

4.4 Site opportunities and constraints

In developing a comprehensive response based on the site and the context, it is important to identify a site's opportunities and constraints so that the design can build on the site's strengths and mitigate any weaknesses.

4.4.1 Opportunities

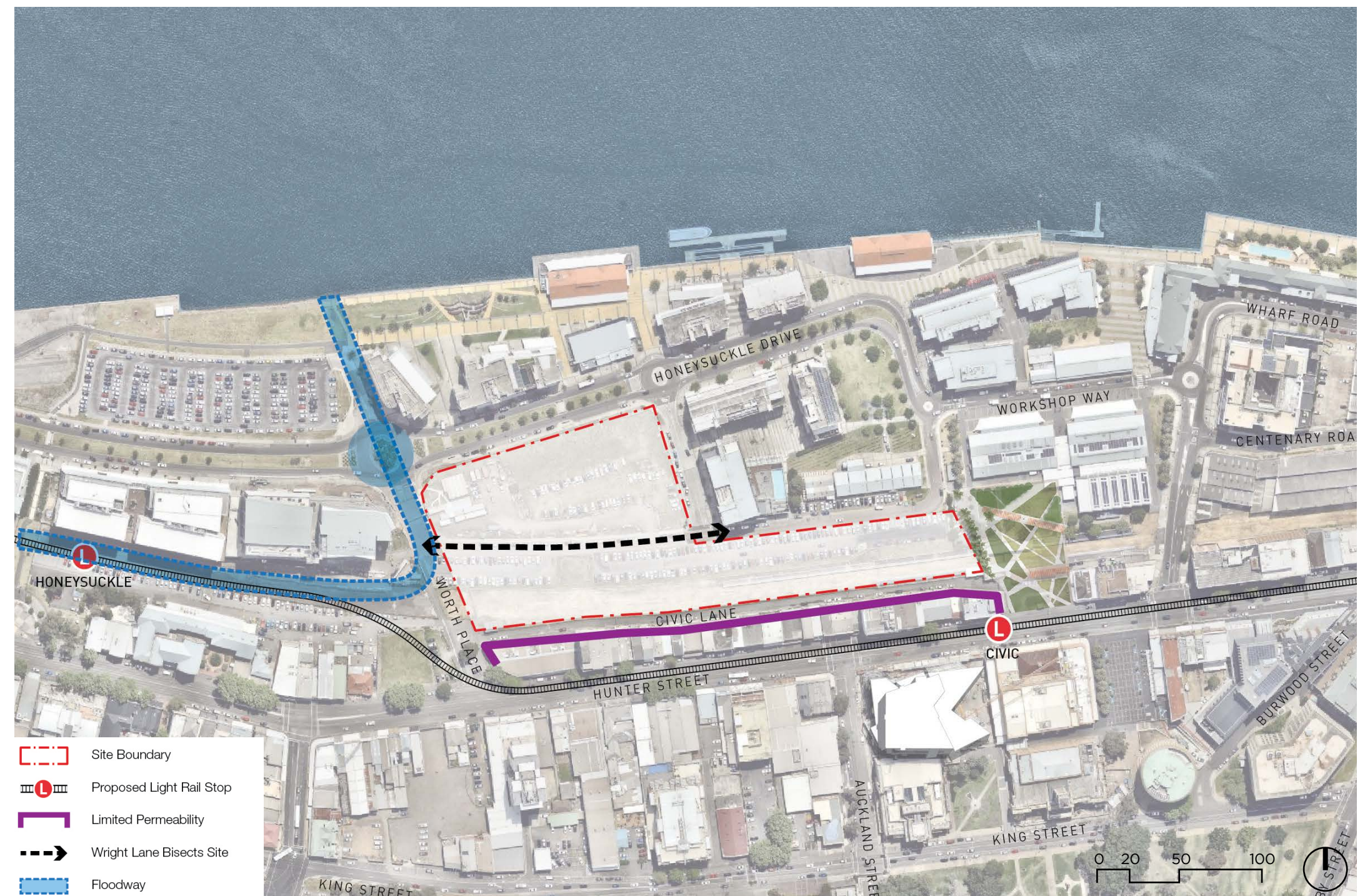
- Located at the prime frontage on Honeysuckle Drive
- Large contiguous site that will be under single ownership
- Potential access to new open spaces to the east (Civic Station) and the west (Worth Place)
- Good views over low rise heritage buildings to the north
- Potential views to the site from Hunter Street at both Worth Place and Civic
- Servicing of consolidated site possible via Civic Lane
- Good solar access from the north
- Wright Lane not essential to overall road network
- Close connection with the Honeysuckle waterfront.



4. Site Assessment

4.4.2 Constraints

- Although improved by rail closure, there is limited road access from Hunter Street.
- Flood impacts - Worth Place is identified as a 'floodway', with the whole site within the 'flood fringe' zone
- Mine subsidence
- Views back to NeW Space may be lost with redevelopment on Hunter Street
- Wright Lane bisects the site if it were to be left open to traffic



Design Principles

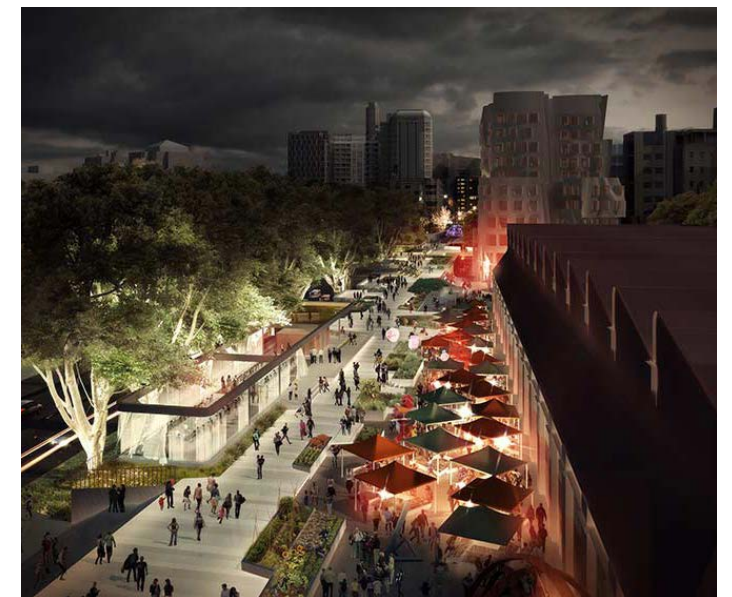
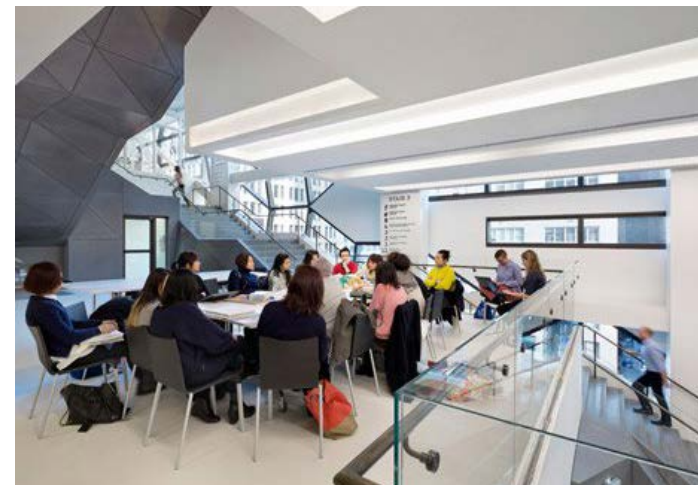
5. Design Principles

5.1 Master Plan Principles

A series of design principles have been developed through the workshop process to guide the master plan response.

Engaged

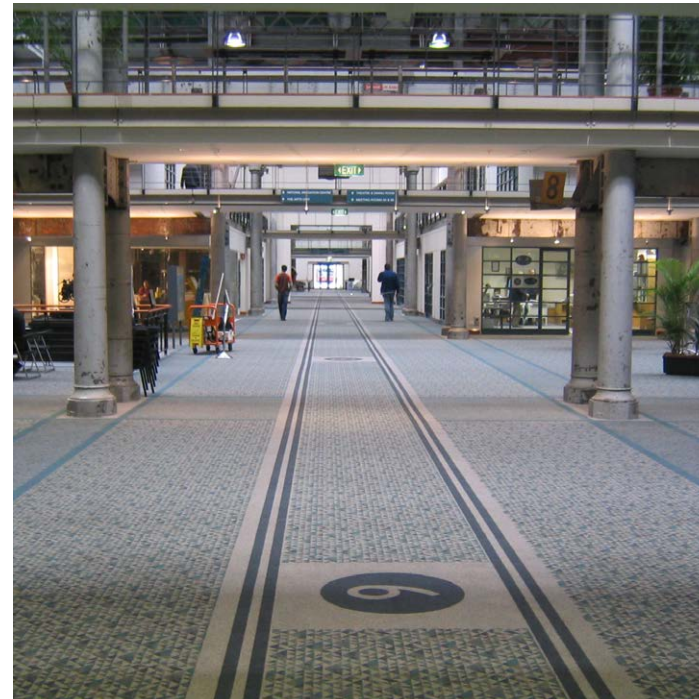
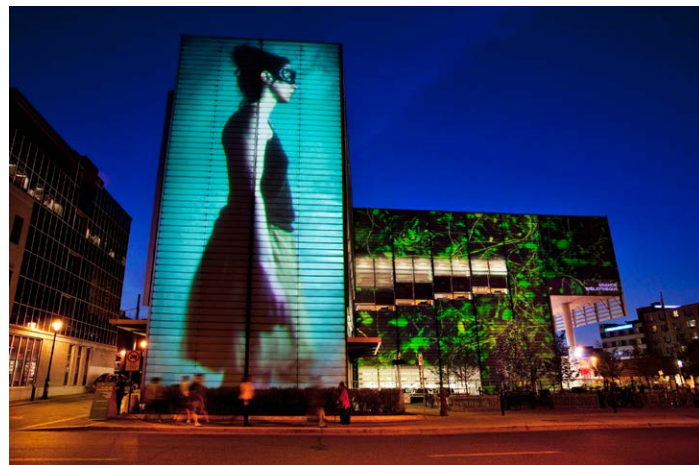
- Create a strong, **visible** UON presence in the Newcastle CBD that is welcoming to students, staff and visitors and contributes to a **sense of identity and place**.
- Contribute to the **vibrancy** of the Newcastle CBD during the **day and night** by designing the urban environment to be have **safe** and **open** connections, with ground level activation.
- Create an **urban campus** that is **integrated** with the CBD and enables boundaries between university and city to be **dissolved** through **physical and visual links** in the built form and public domain.



5. Design Principles

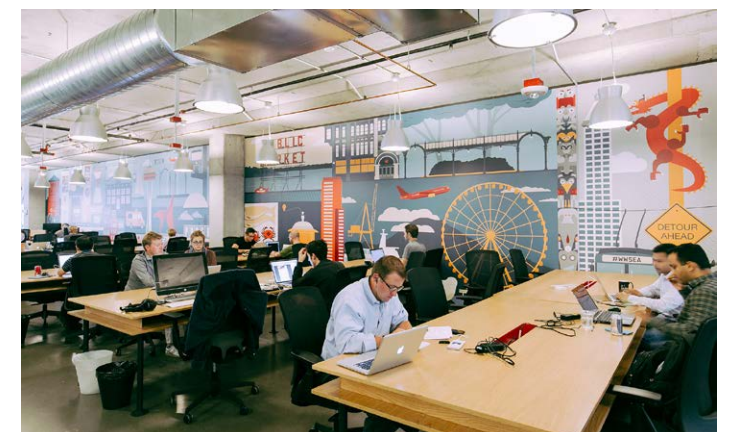
Unique

- Create a campus environment that is a **vibrant** and attractive **destination** offering a **variety** of spaces and experiences for UON students, staff and visitors, but that also **welcomes** the wider Newcastle community
- Respond to the unique **history** of the site by reinterpreting the **locomotive, industrial and indigenous heritage** of the place through opportunities in the design of public domain, landscape and building spaces
- Design the public domain as an **urban campus heart** that provides enjoyable places for people to meet and gather, and that maximises **solar access** and connections to its location between the **waterfront and city**.



Sustainable

- Create a **world class**, sustainable facility that demonstrates a commitment to **social environmental and economic leadership**
- Social: Reinforce UON's relationship with the wider **Newcastle community** and meet **social responsibilities** by dissolving the boundaries between university and city
- Environmental: Meet the challenges of a **low-carbon future** through energy efficient and environmentally sustainable design and operation of the Campus
- Economic: Design and develop accessible and engaging work/study environments that **attract leading academic talent**



Concept Plan



6. Concept Plan

6.1 Illustrative Plan

The Honeysuckle City Campus is a mixed use, integrated education precinct with 24 hour a day activation that is engaged with the community and integrated with uses across the CBD education precinct, as well as the Honeysuckle waterfront.

The Honeysuckle City Campus will be one of Newcastle CBD's most significant developments. The development will be a catalyst for the urban renewal of Newcastle and will have the opportunity to leverage investment committed by government supporting this renewal.

6.1.1 Planning Principles

The illustrative plan presents a cohesive concept for the site and its relationship to the CBD. Key planning principles include:

- Campus Heart located at the core of the campus with good solar access and amenity
- Respond to place and heritage through interpretation of heritage turntable in the Campus Heart
- Built form positioned to enable easy through site links from Worth Place to Civic Link, and from Hunter Street to the waterfront
- Ground level activation fronting major pedestrian links and Campus Heart
- Recognising NeW Space as the flagship UON building in the CBD with a secondary UON address at Honeysuckle Drive

All elements will be subject to further architectural and public domain design.





Artists Impression: Aerial view looking south



Artists Impression: Elevated view of Campus Heart from Honeysuckle Drive

6. Concept Plan

6.2 Blocking & Stacking

The segregation of buildings into either academic or student accommodation uses simplifies staging and planning of buildings. It allows discreet projects to be brought on-line as required.

The building forms have been positioned to enable a high amenity pedestrian environment within the campus as well as allowing links through the site with view corridors preserved towards the waterfront. Building form and scale has been arranged to maximise solar access to open spaces as well as opportunities to capture views from upper levels over the lower scaled buildings on the waterfront.

Building A1 has been identified as the first stage academic building, located in a visually prominent position on the corner of Honeysuckle Drive and Worth Place.

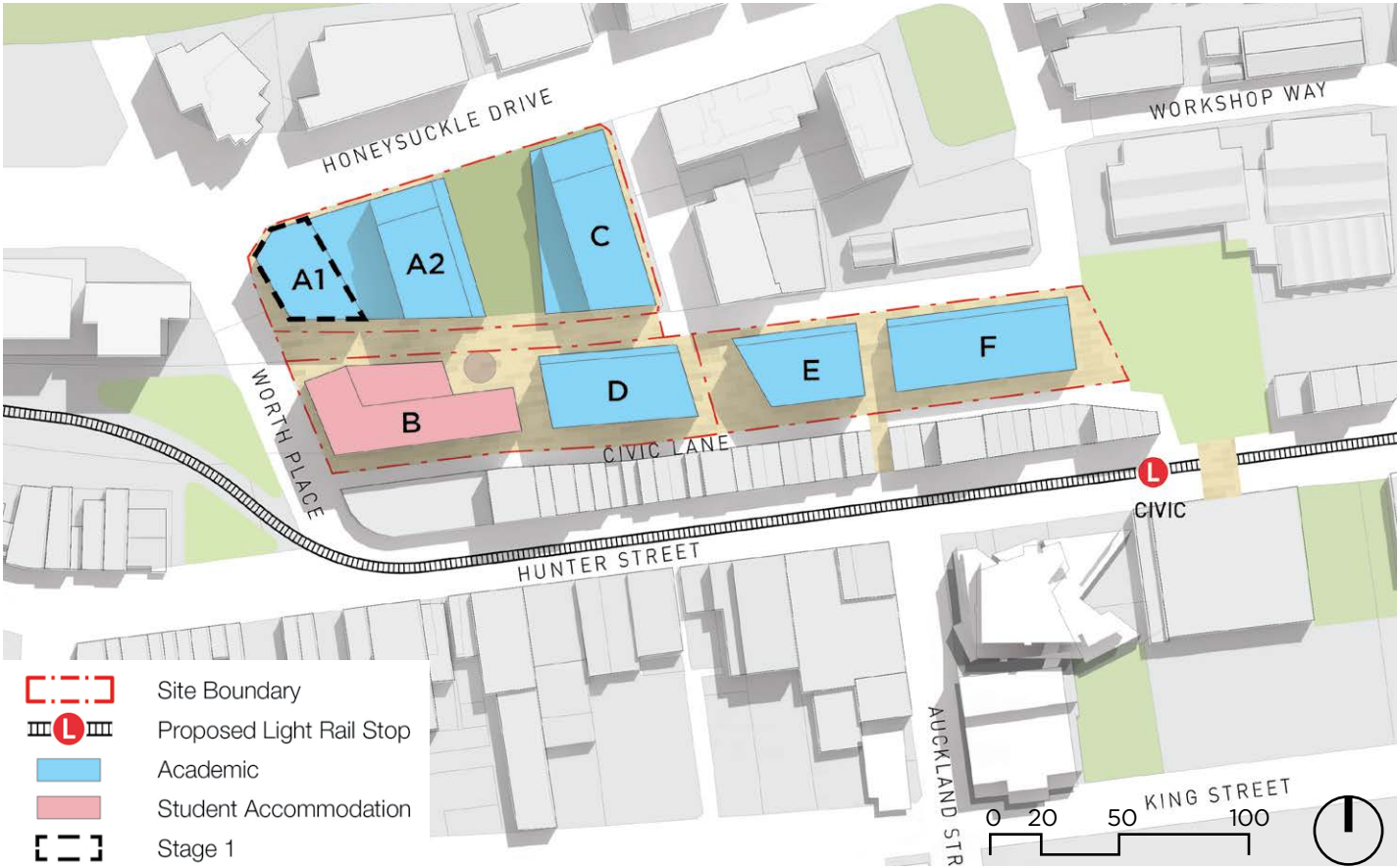
Following this, Building B may be developed for student accommodation and has capacity for up to 400 student beds.

6.2.1 Indicative Development Yield

The table below outlines the GFA for each building proposed in Concept Plan:

Building	GFA	Site	Stage	Use
Building A1	4,608m ²	Site 1	1a	Academic
Building A2	10,299m ²	Site 1		Academic
Building B	11,828m ² 394 beds	Site 2	1b	Student Accommodation
Building C	12,217m ²	Site 2		Academic
Building D	9,415m ²	Site 2		Academic
Building E	7,158m ²	Site 3		Academic
Building F	7,049m ²	Site 3		Academic
Total GFA	62,573m ²			
Target GFA	62,659m ²			

Gross floor area (GFA) refers to the Council definition of floor space which counts all internal floor space above ground excluding voids and plant areas. A factor of 95% has been used on the overall built area (Gross Building Area - GBA on Academic and Commercial uses. On student accommodation, the figure is 80% to allow for more complex floor plates that adjust for differing accommodation unit configurations.



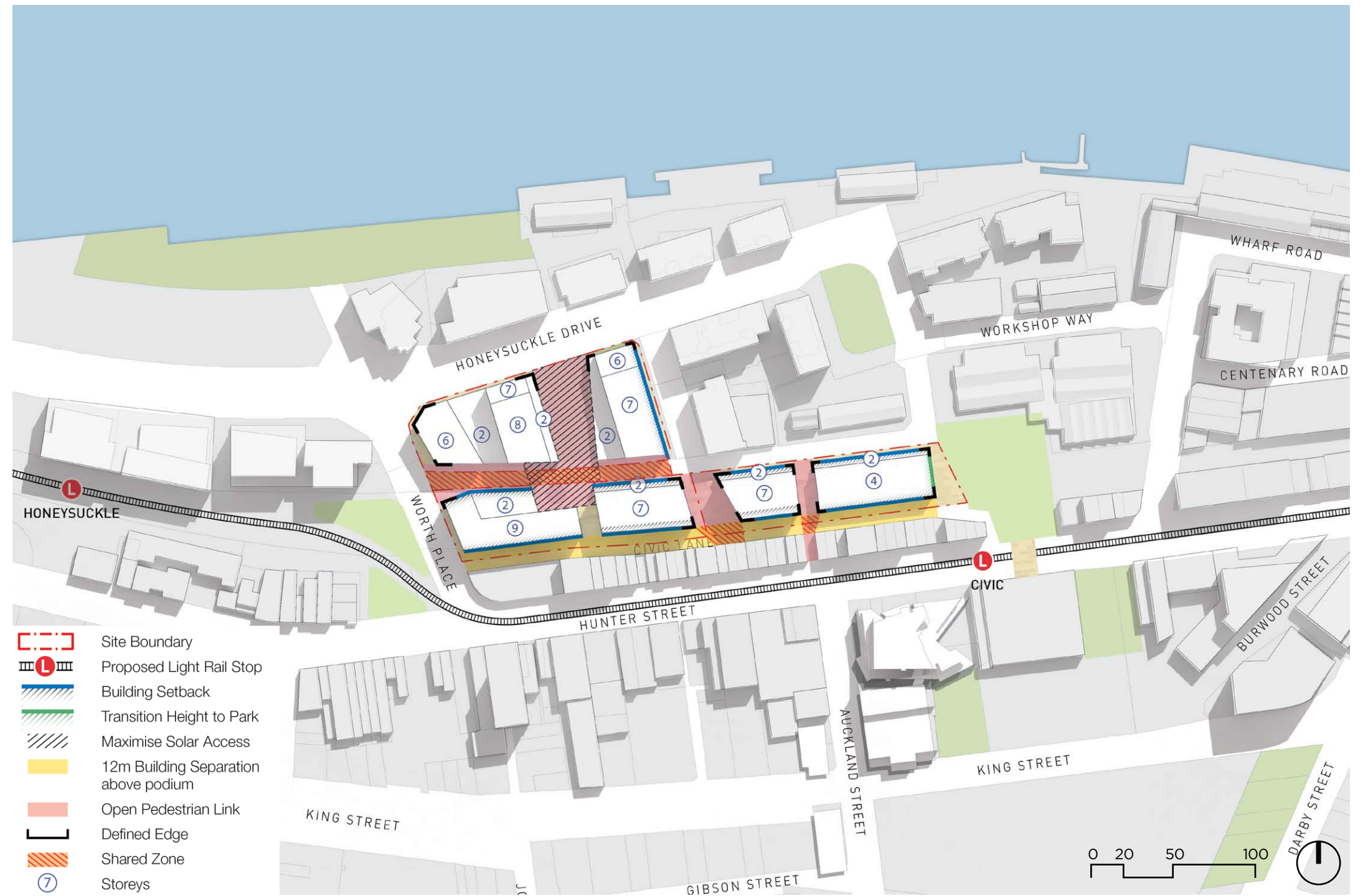
6. Concept Plan

6.3 Built Form

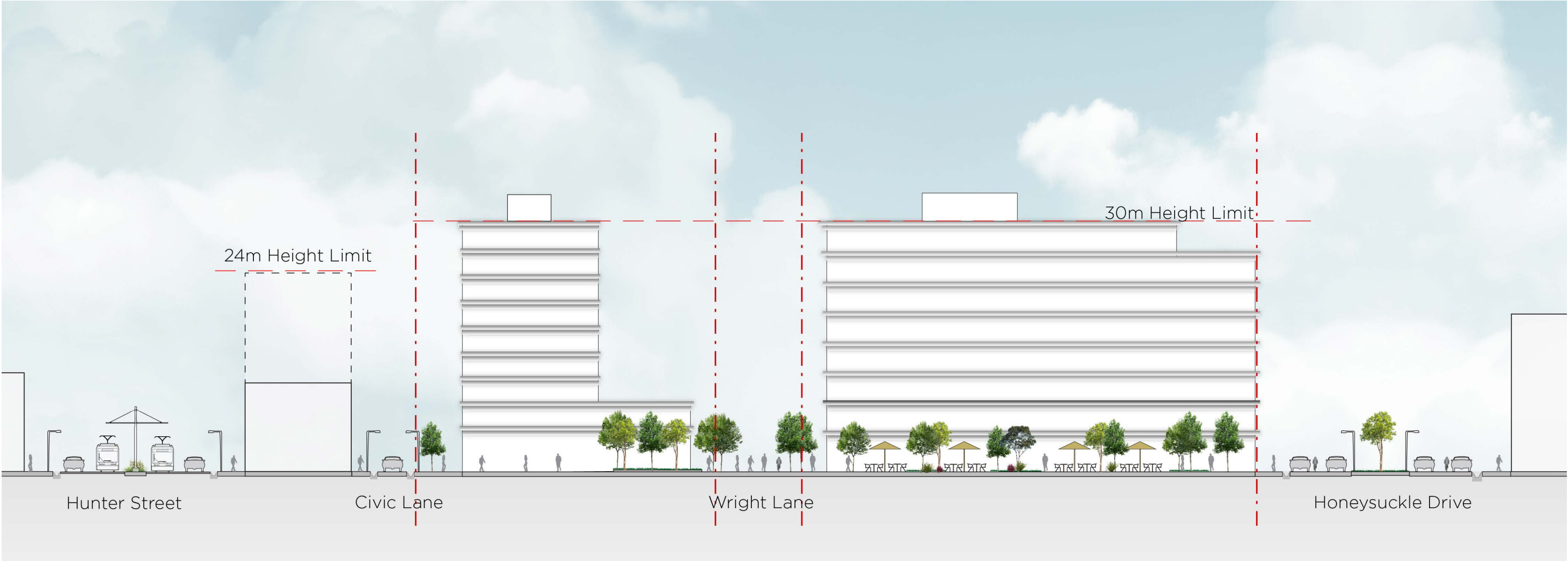
In response to the target floor space and the existing LEP controls, built form on the site has been structured to meet academic and student accommodation requirements. Massing on the site seeks to create well scaled spaces, facilitate views and solar access, and create a unique and memorable campus environment.

Key principles underpinning the built form response are:

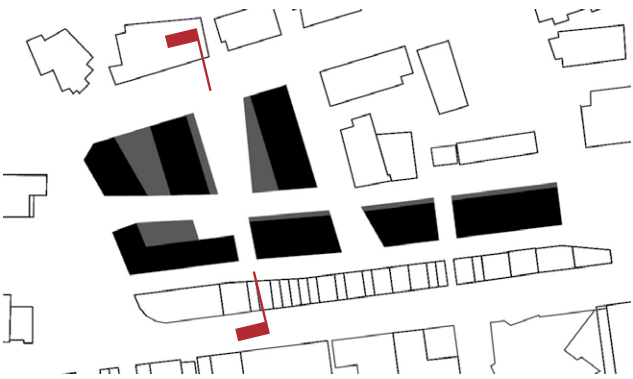
- A maximum height of 8 storeys for academic buildings - floor to floor of 3.65m (8 storey buildings will exceed on the 30m height control)
- Maximum height of 9 storeys for student accommodation - floor to floor of 3.1m (9 storey buildings will exceed on the 30m height control)
- Two storey podium elements
- Creation of a central open space linking the main building elements
- Top floor setback along Honeysuckle Drive frontage to reduce scale
- Buildings setback on Civic Lane to improve amenity and to achieve setbacks to existing and future residential development
- Physical and visual links from the Campus Heart through to Honeysuckle Drive and the waterfront
- Building setback on Settlement Lane to enhance pedestrian connection to waterfront and to accommodation service infrastructure zone
- Reduced building height adjacent to the future Civic Link open space.



6. Concept Plan



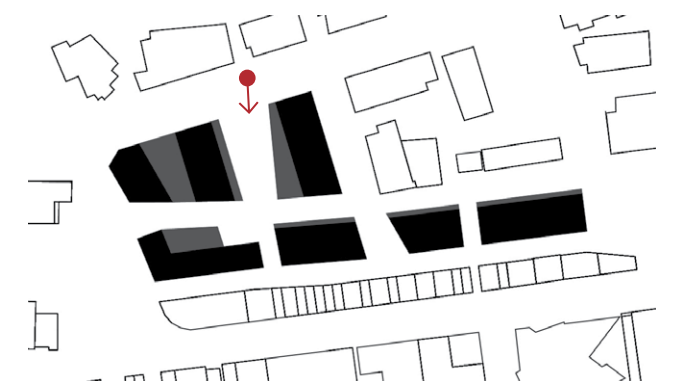
Section through Campus Heart



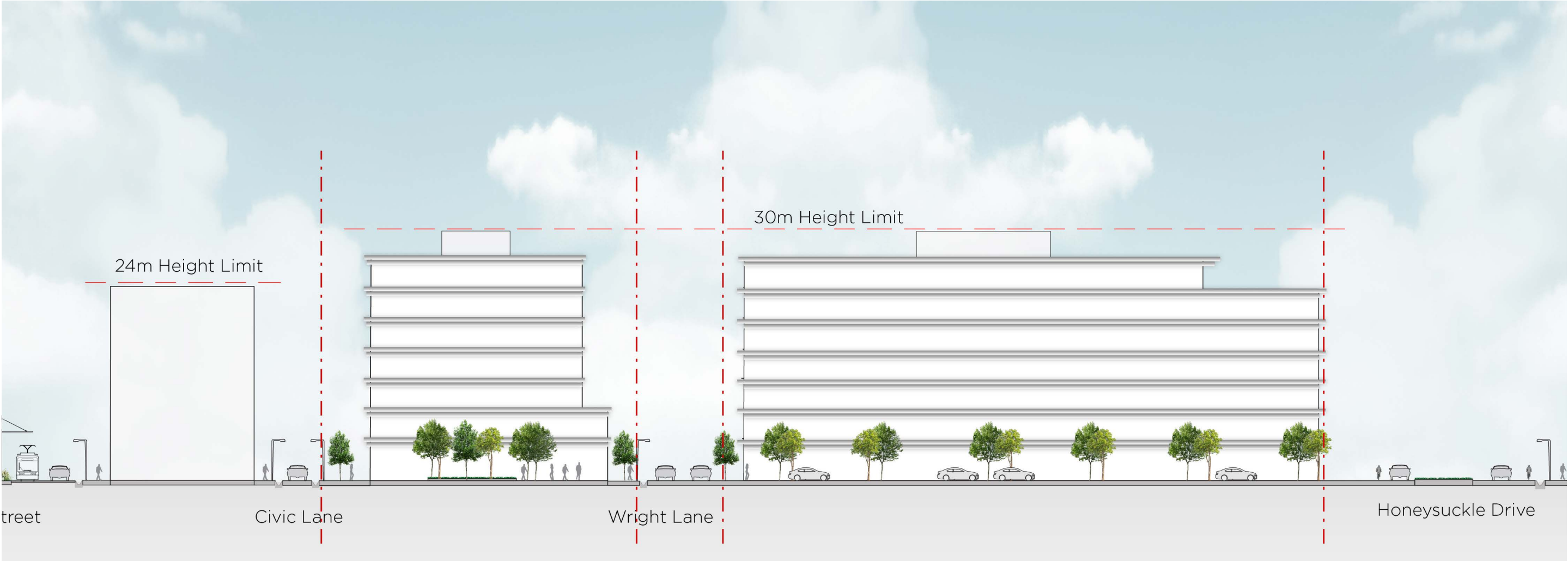
6. Concept Plan



View into the Campus Heart from Honeysuckle Drive



6. Concept Plan



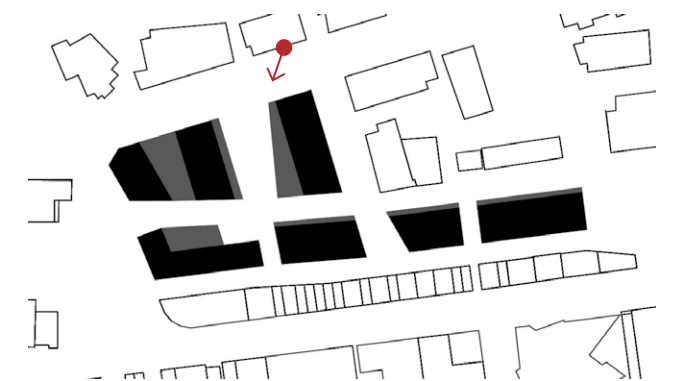
Section at Settlement Lane



6. Concept Plan



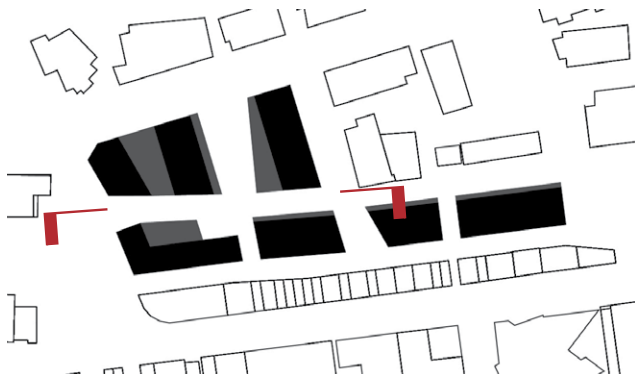
Aerial view of the campus heart



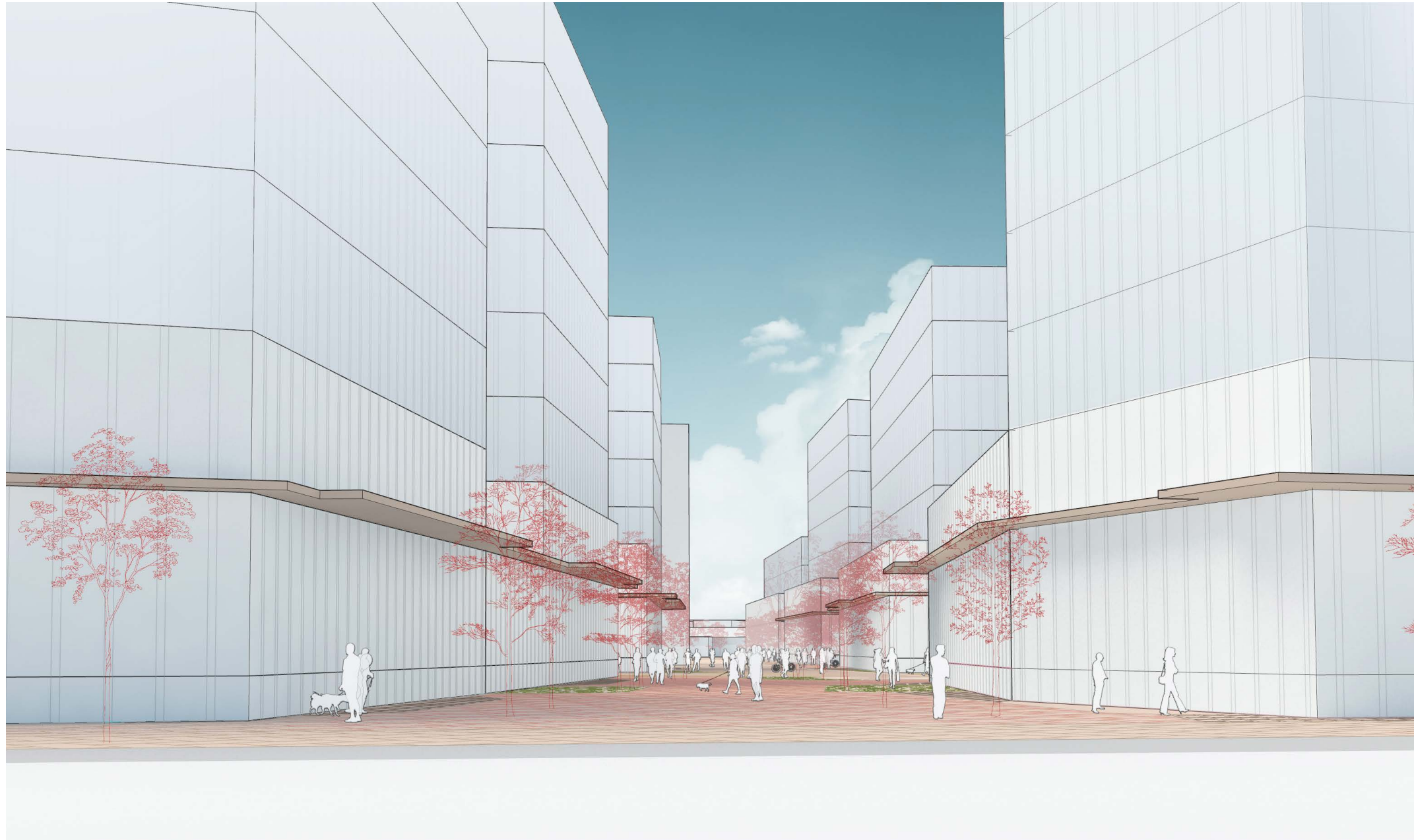
6. Concept Plan



Section through Wright Lane



6. Concept Plan



View down Wright Lane from Worth Place





Artists Impression: Wright Lane looking west towards Turntable Plaza



Artists Impression: Internal atrium view

6. Concept Plan

6.4 Solar Access

Solar access studies demonstrate that the new Campus Heart Open space will have good solar access through the middle of the day all year long.

Equinox



MARCH 21 - 9AM



MARCH 21 - 12PM



MARCH 21 - 2PM

6. Concept Plan

Mid Winter



JUNE 21 - 9AM



JUNE 21 - 12PM



JUNE 21 - 3PM

6. Concept Plan

6.5 Visual Assessment

The impact of new development has been modelled and the scheme has been overlaid on a series of photos across the wider precinct to demonstrate the visual impact of the proposal.

Only one view at Worth Place is a key view identified in the Newcastle City Development Control Plan 2012,

There are no views of the site from the Newcastle Cathedral.



6. Concept Plan



1. Honeysuckle Drive Looking East



2. Honeysuckle Drive Looking West



6. Concept Plan



3. Wright Lane



4. Wheeler Place



6. Concept Plan



Worth Place



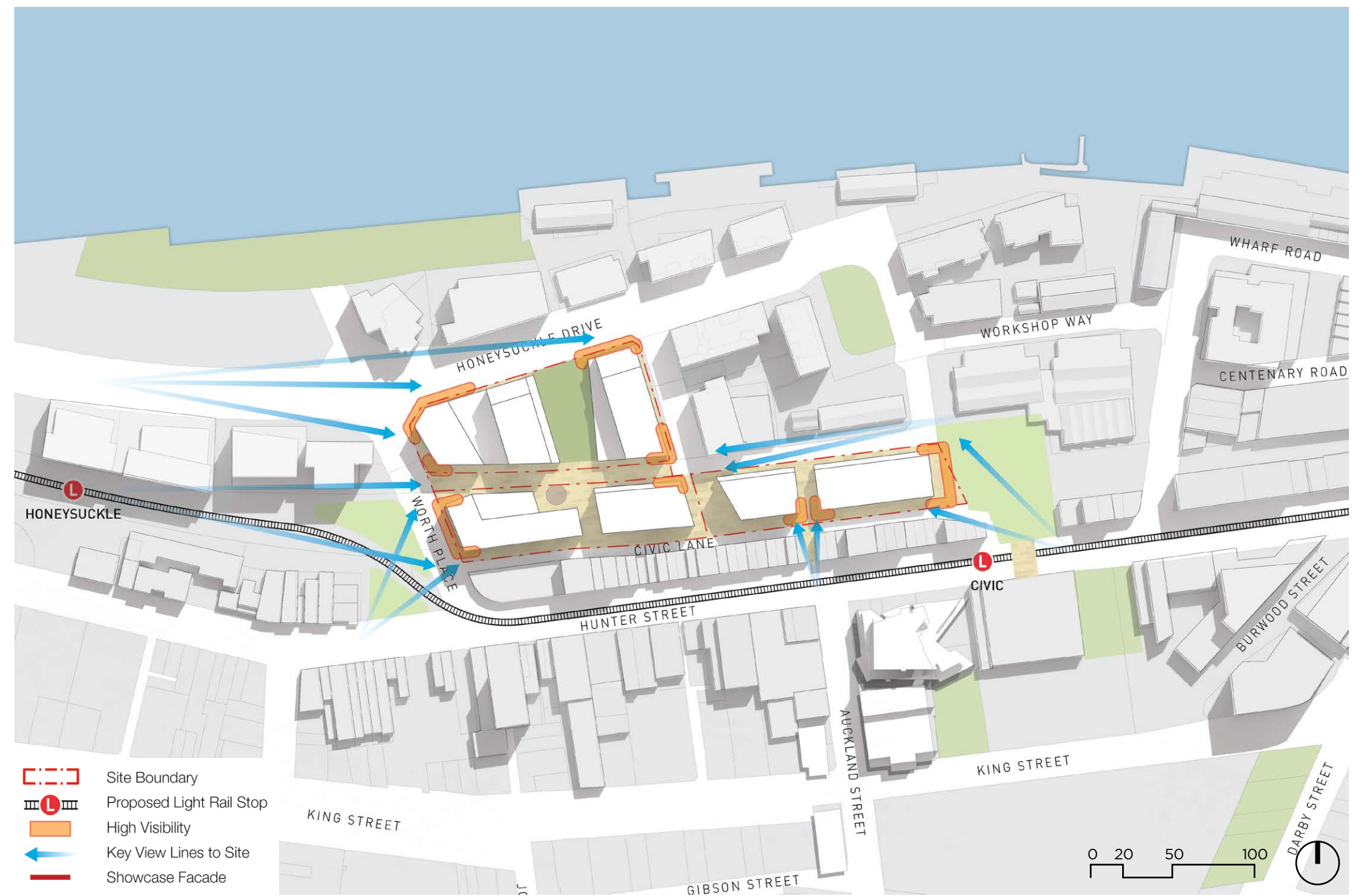
6. Concept Plan

6.6 Identity

The architectural resolution of the buildings should acknowledge the importance of views to the Campus from the east, west and south where most students and visitors will access the site. Views to the Campus from Honeysuckle Drive on the northern edge of the site will represent the formal address.

Key elements that will contribute to the identity of the Campus include:

- Formal address on Honeysuckle Drive
- Building form sculpted to create views into the new central open space from Worth Place and the refurbished rail corridor
- Contemporary, 'green', elegant building character
- Creation of active public spaces at ground level that engage with the city
- Opportunities for showcasing UON's activity through building facades
- Feeling of porosity through the site, enabling new north-south and east-west pedestrian links
- Use of glazed elements to emphasise 24/7 activity at the Campus.



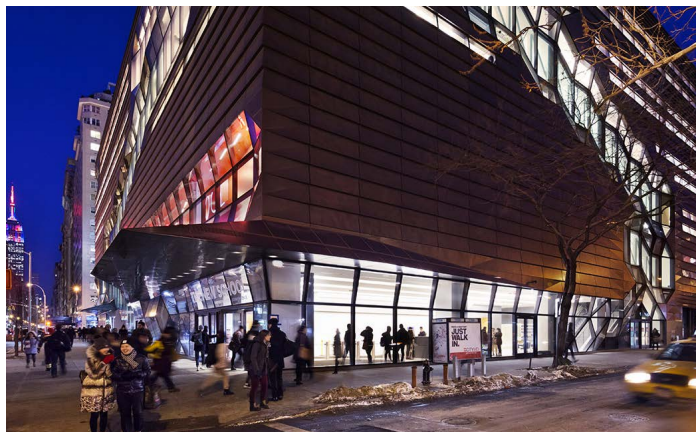
6. Concept Plan



View corridor to destination beyond, Federation Square



Digital showcase facade, University of Copenhagen



High visibility and ground level engagement, The New School



Illustrative Master Plan - Evening Activation

6. Concept Plan

6.7 Public Domain / Landscape

The site requires a high quality and safe public domain solution that provides a common setting for new buildings and enhances the student's (and public's) experience of the site.

- New links between Civic Lane, Wright Lane and Honeysuckle Drive create permeability across the precinct through to the waterfront
- Widening of Civic Lane will improve access, amenity and safety
- Potential closure of Wright Lane to traffic in the east of the site will enhance the experience of users at the Campus as they move between facilities, reinforcing the east-west 'park to park' green connection and creating a safe heart for the Campus
- A setback along Settlement Lane will enable an enhanced landscape and pedestrian zone to reinforce this important connection to the waterfront.
- The Campus Heart, oriented around the heritage turntable, will be an active, social and gathering space with good solar access and amenity
- Setbacks on the northern frontage will allow increased landscaping opportunities that break the uniformity of Honeysuckle Drive and bring some of the bush quality from Callaghan to the CBD.

The selection of landscape species should respond to the coastal environment. Opportunities to introduce woodland species reflect the character of the Callaghan campus.



6. Concept Plan



Garden in an urban plaza, UTS Alumni Green



Coastal Banksia 'honeysuckle'



Active during the day and night, Goods Line artist's impression



Illustrative Master Plan - Public Domain Ground Plane

6. Concept Plan

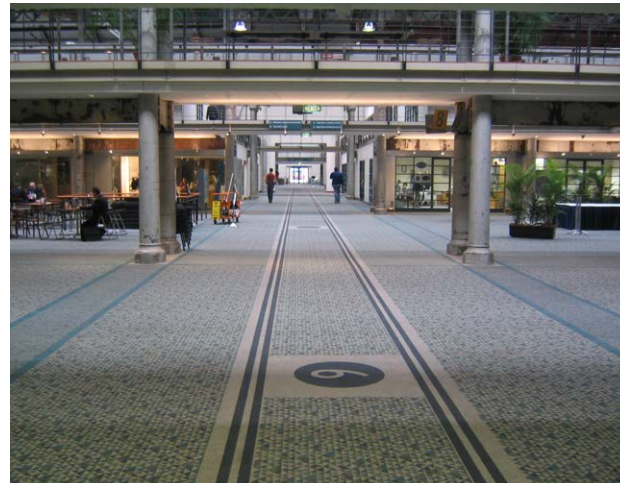
6.8 Heritage Interpretation

The site has a rich history including indigenous heritage, and the transformation associated with the construction of the rail line and workshops, the evolution of Hunter Street and the transformation of the harbour.

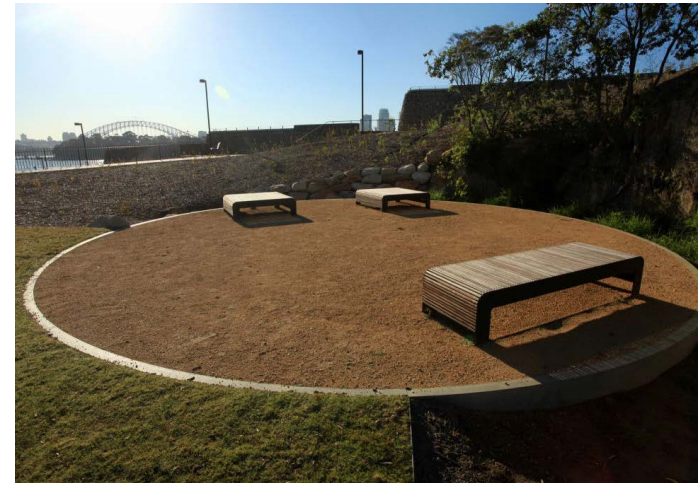
The remnants of the locomotive turntable are an important artefact remaining on the site.

There is an opportunity to integrate heritage interpretation elements into the design based on the advice of specialist heritage consultants.

Interpretation of the turntable within the open space of the campus heart is a key opportunity to express the history of the site and create a memorable and pleasant place for the UON community to gather.



Heritage interpretation, Australian Technology Park



Heritage interpretation, Ballast Point Park



Boilerhouse heritage adaptation, WSU Rydalmere



Heritage rail line expression, Highline New York



Heritage interpretation of former turntable, Roundhouse Turntable Plaza Vancouver



Historic rail line remnants within landscape, Goods Line

6. Concept Plan

6.9 Transport

6.9.1 Access

Pedestrian

Despite the formal address to the Campus being from Honeysuckle Drive, most users of the Campus will approach as pedestrians from the south (Hunter Street), the east (the new Civic Link and Civic light rail stop) and the west (Worth Place and the Honeysuckle light rail stop).

In responding to these desire lines, the plan seeks to reinforce east-west movement along the Wright Lane alignment. New north-south links will improve permeability between Hunter Street and Honeysuckle Drive as well as the waterfront.

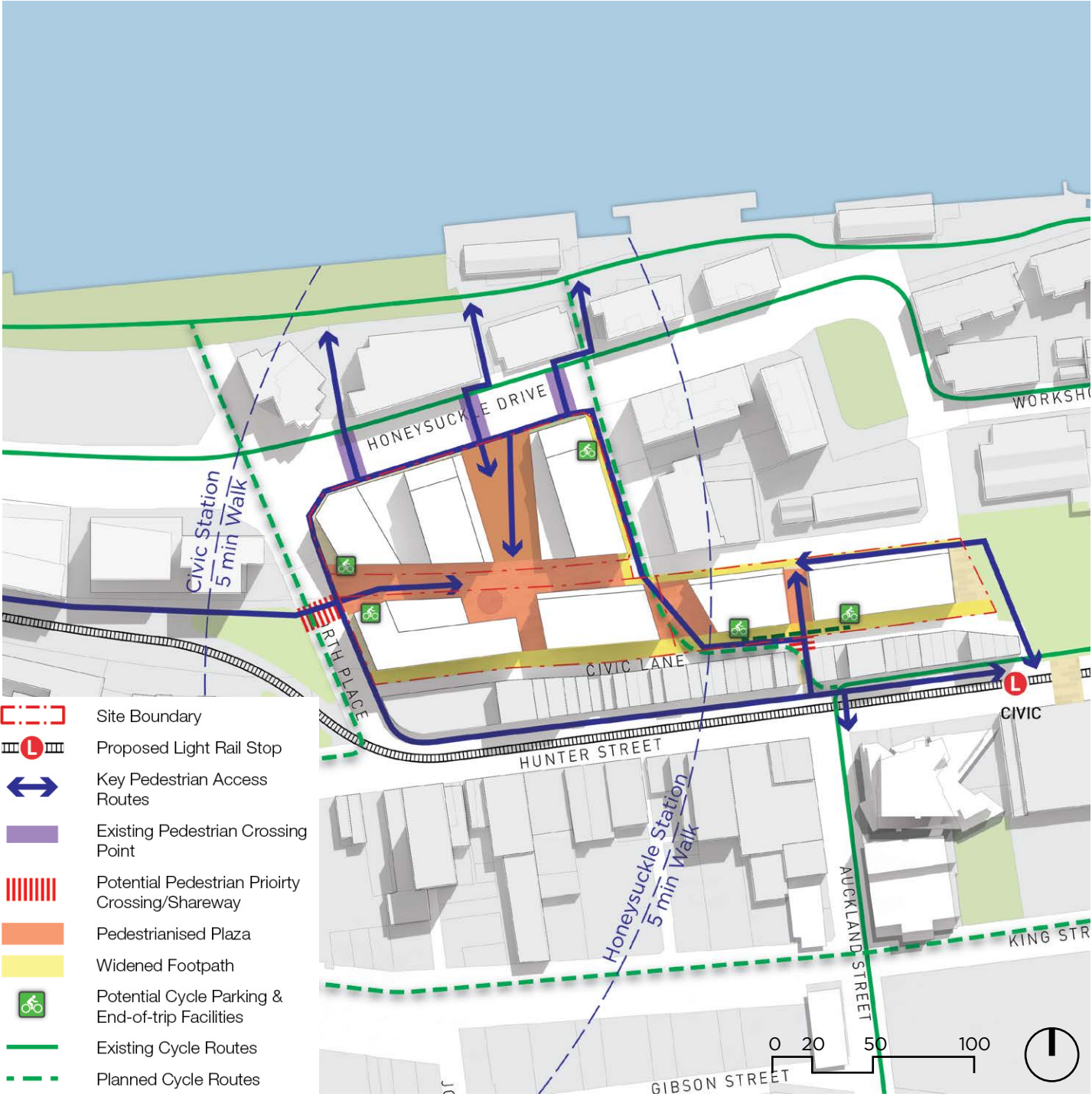
Cycling

The Newcastle City Centre Cycleway Network Strategy, published by the NSW Government in May 2017, identifies opportunities for future active transport networks. The Honeysuckle City Campus would be well served by the proposed network with safe and direct bicycle paths on Hunter Street, Worth Place and Settlement Lane connecting through to Auckland Street.

The Concept Plan identifies opportunities for end of trip facilities within each academic building that include secure bicycle parking, shower and change facilities. This could be accommodated at ground level with direct access from Civic Lane or Settlement Lane. Student accommodation would provide bicycle parking for residents as part of their facilities.

The Transport Assessment has identified the following potential demand for cycle parking at the Campus. It is expected that the majority of cycle parking will be accommodated within buildings, with some parking provided in the public domain.

User	Rate	Number
Staff	3-5% Staff	24-40
Students	5-10% EFTSL	219-438
Student Accommodation	20-30% Beds	80-120



6. Concept Plan

Shuttle bus

A shuttle bus will link the UON CBD properties and provide access to Callaghan. A stop location on either Honeysuckle Drive or Settlement Lane (subject to final route) will provide safe and convenient access and avoid the need for street crossings.

Emergency vehicles

All buildings will be provided with full emergency vehicle access. Existing roads – Honeysuckle Drive, Worth Place, Civic Lane, Wright Lane and Settlement Lane will be used.

Public spaces and pedestrian links will be trafficable with access protection provided by removable bollards.

Campus drop off

The Campus will require general pick off/ pick up to service all uses, particularly the conference facility. The potential provision of childcare on the site will require dedicated drop off/pick up areas.

These will be provided on existing roads through a restricted parking scheme.

Site Servicing

Servicing has been planned to avoid impacting primary frontages and new public spaces.

Associated with building cores, areas at ground level on Civic and Settlement Lanes have been identified. These spaces will manage deliveries and waste for UON functions as well as for retail and allied uses in the development.

6.9.2 Parking

Previous assessments have indicated that the CBD has a surplus of parking provision. The a parking strategy for the Honeysuckle CBD Campus has taken a similar approach to the parking strategy at NeW Space, with the intention to support active and public transport modes.

The Concept Plan has made allowance on-site for a total of 12 parking spaces for the following users:

- Mobility impaired - 3 spaces
- Visiting lecturers/senior staff - 3 spaces
- University operations vehicles - 6 spaces.



6. Concept Plan

6.10 Infrastructure

The Enabling Works Investigation by indicates that adequate infrastructure to service the site appears to be available.

The Concept Plan has been designed to respond to some key infrastructure requirements including:

- Provision for two new chamber substations on the Campus. One will be developed in each stage and will replace the existing substation located on Civic Lane in the south-west corner of the site
- Allowance for overland flow along Wright Lane.
- Setback along Settlement Lane to allow for underground services infrastructure due to the existence of a subterranean car park under Settlement Lane.

The following flood planning levels guide the design of structures on the site:

Area	Level
Minimum Property and On-ground Garaging	2.28m AHD
Minimum Habitable Floor Level	2.8m AHD
Minimum Upper Floor Level Stairway Exit	3.38m AHD
Basement Parking Entry/Exit Crest/ Flood Barrier	3.38m AHD



6. Concept Plan

6.11 Staging

UON has indicated that the first building to be developed will be Building A1 with academic uses. This building sits on a prominent corner of the site, with high visibility from Honeysuckle Drive and from Hunter Street looking down Worth Place.

Following this, Building B would be developed containing up to 400 beds of student accommodation.

Landscaping

With the removal of the railway track, temporary landscaping will be provided on sites designated for Stages 2, 3 and 4 development.

Following ground levelling of the former rail corridor, the site for Building F could accommodate temporary recreation facilities such as basketball courts.

Establishing the Campus Heart as the focal point of the Campus is an important part of the Stage 1 development. Heritage interpretation of the Turntable in Stage 1 will contribute to the Campus character and identity from the outset.

Landscaping of the public domain along Wright Lane can be provided in Stage 2, to provide a safe and pleasant connection between the Campus and Civic Link as the development progresses. The through site link at 486 Hunter Street could be established in Stage 1 to provide a strong connection with NeW Space.





Illustrative Master Plan - Stage 1

Conclusion

7. Conclusion

The Opportunity at Honeysuckle

Leveraging Newcastle's Investment

The closure of the heavy rail corridor will transform the CBD with new, uninhibited access to the waterfront from the city. The development of a comprehensive plan for the CBD by UrbanGrowth NSW and the delivery of the new light rail seek to redefine the experience of Newcastle.

With more than \$700 million investment, government support for local innovation, efforts to increase Newcastle's international profile and programs to attract talent and investment into the city will directly support UON's objectives for its Honeysuckle City Campus.

Leveraging UON Assets

UON already has a significant presence in, and commitment to the Newcastle CBD. This development will secure UON's future presence in the CBD of Newcastle.

Building on this existing presence, the development of the Honeysuckle City Campus will enable the consolidation of additional disciplines in the CBD and provide the opportunity for UON to better engage with the community and industry. Increased engagement will ensure graduates are equipped with the relevant skills to be employable.

Social Engagement

Open and Engaged

The permeability of the site and physical connectivity with the CBD will open UON up to new and diverse uses, collaboration and community engagement, as well as providing an attractive and vibrant place to work, live, study and visit.

The design of the buildings and public domain at the Campus will reflect this philosophy that the UON is open and engaged with the community. A high degree of visual transparency through the façades of buildings, legible pedestrian links, and showcase display of UON activities will support this approach.

Creating a Memorable Place

Urban Amenity

The Concept Plan ensures a high level of urban amenity both for staff, students and visitors to the Honeysuckle site as well as for users of the wider precinct. The Campus will be well integrated into the Newcastle CBD, enabling permeable connections through the site, linking the CBD, the waterfront and UON's existing assets including NeW Space, University House and the Conservatorium.

Creating spaces on the Campus that are sunny during the day, activated by a variety of uses, and safe, will make the Honeysuckle City Campus an enjoyable and memorable place for its users as well as for the wider Newcastle CBD.

Sense of Place

The locomotive history of the site in Honeysuckle is an important part of the future Campus. There is an opportunity to reinforce the sense of place at the Campus by reinterpreting the remnant locomotive turntable within a new public open space.

Landscape planting at the site that is endemic to the coastal environment and that relates to the woodland landscape at Callaghan can assist in reinforcing the UON identity at Honeysuckle by bringing a part of the bush to the city.

Development Potential

Maximising Development Potential

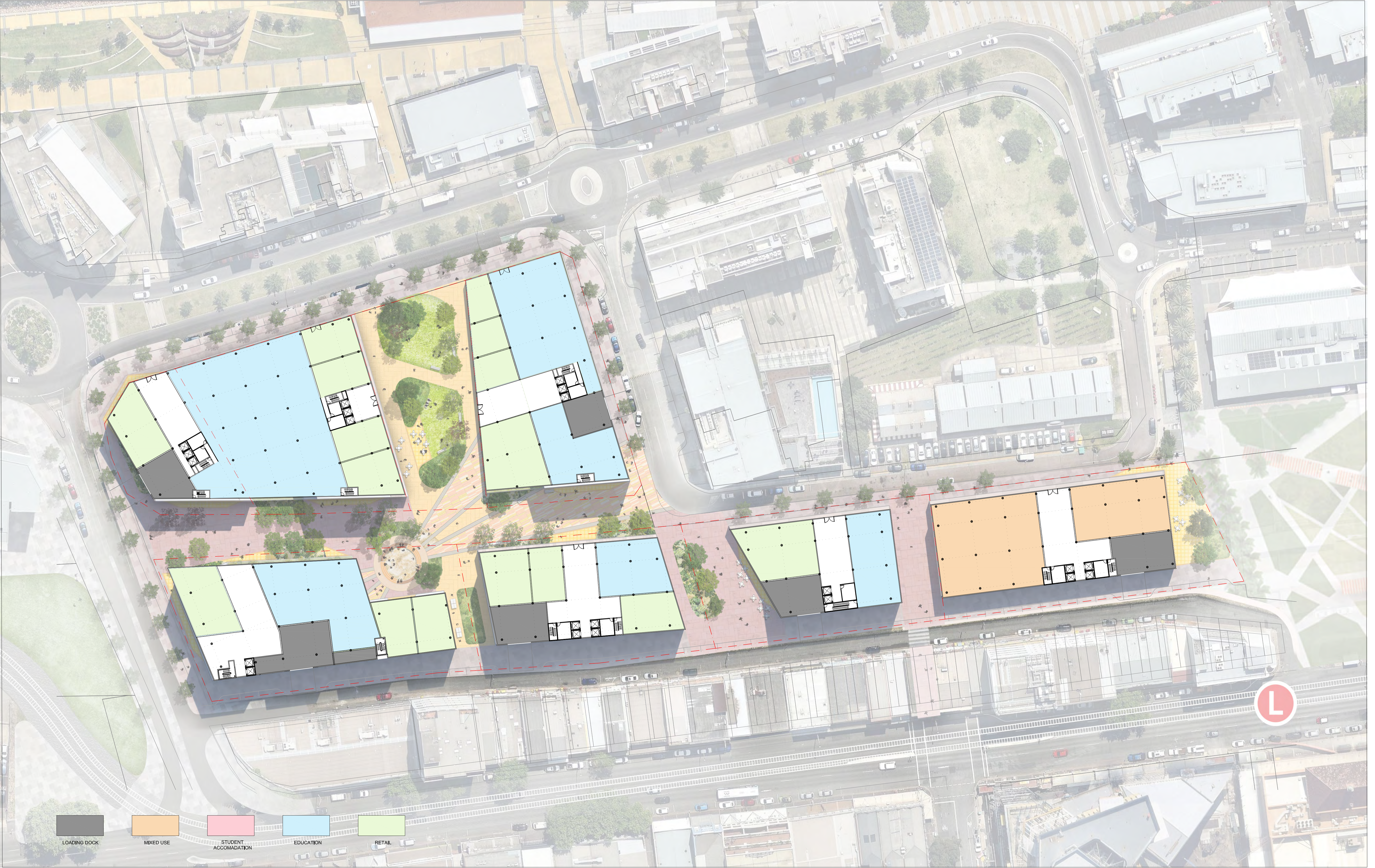
The Honeysuckle Concept Plan maximises the permissible development capacity of the site. The blocking and stacking of the buildings enables flexibility in the functions of each building.

Development Staging

The Concept Plan is designed to be staged, with academic facilities to be developed in Stage 1 followed by student accommodation. The Concept Plan allows for flexibility in the use of future buildings, with parcels able to be developed discretely as required.



Illustrative Floor Plans



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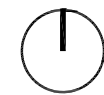
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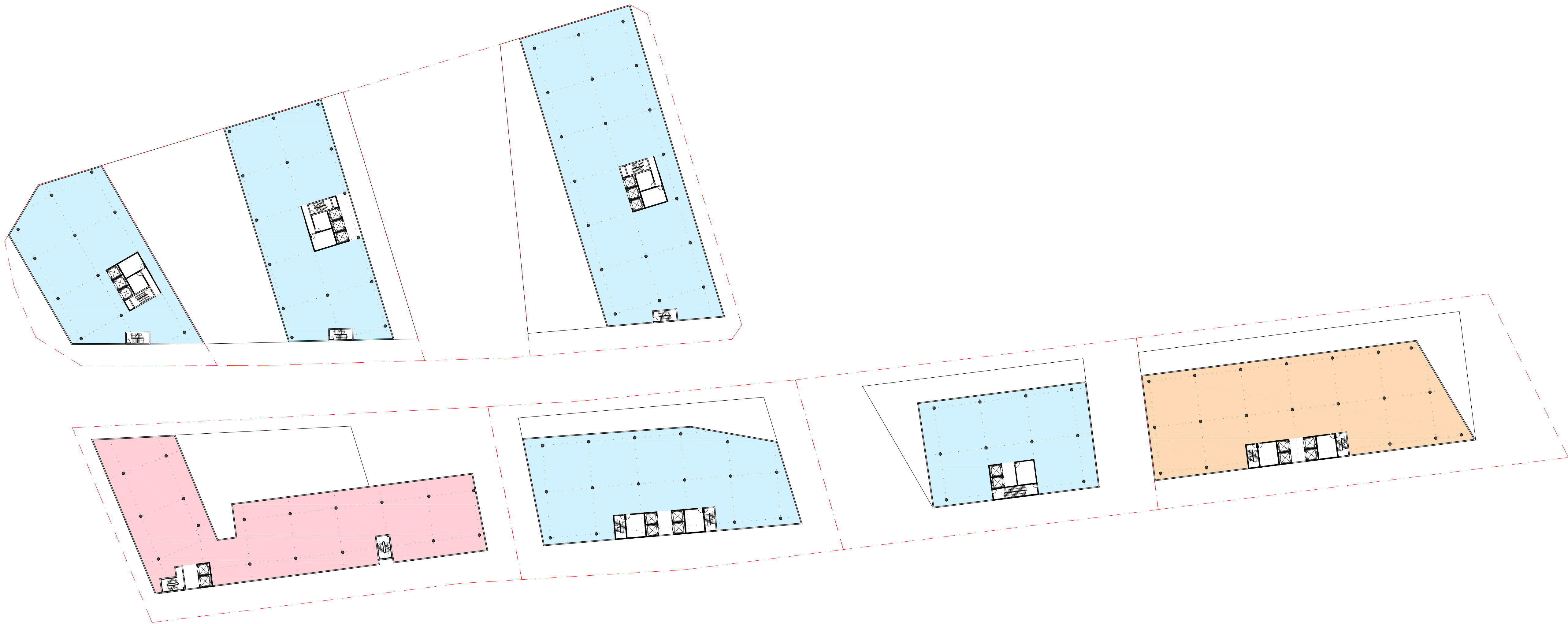
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LOADING DOCK

MIXED USE

STUDENT
ACCOMADATION

EDUCATION

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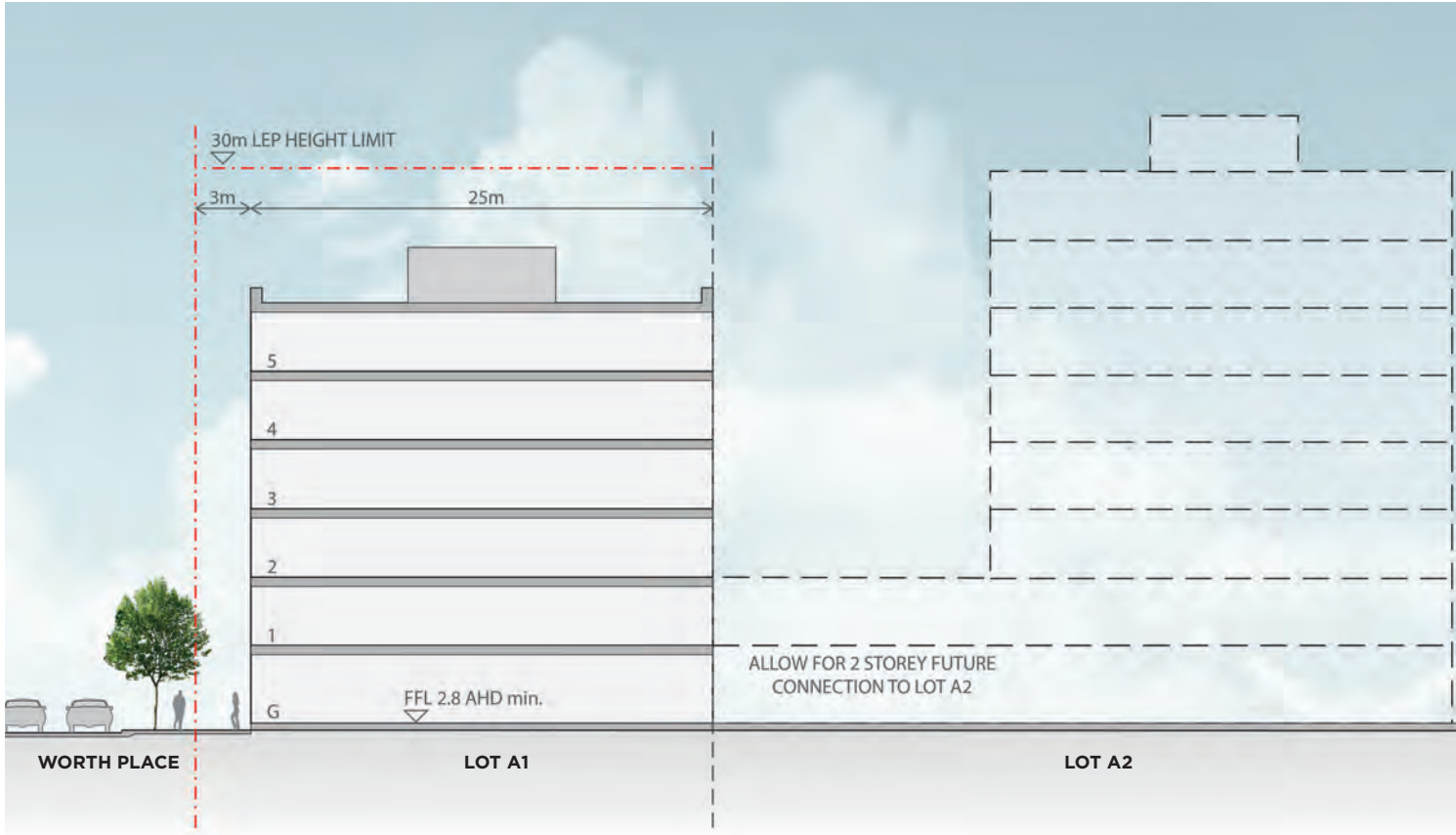
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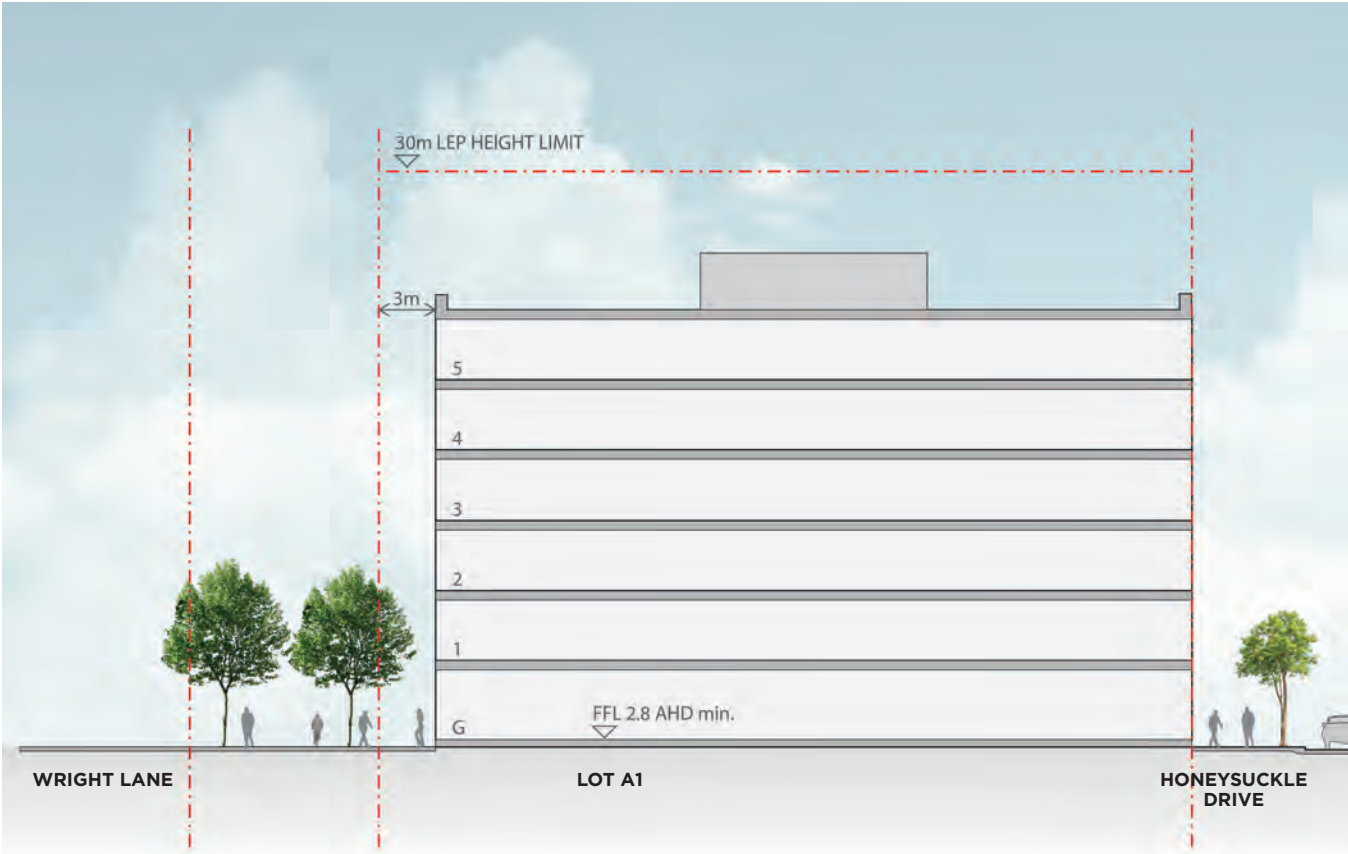
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Height Control Plans



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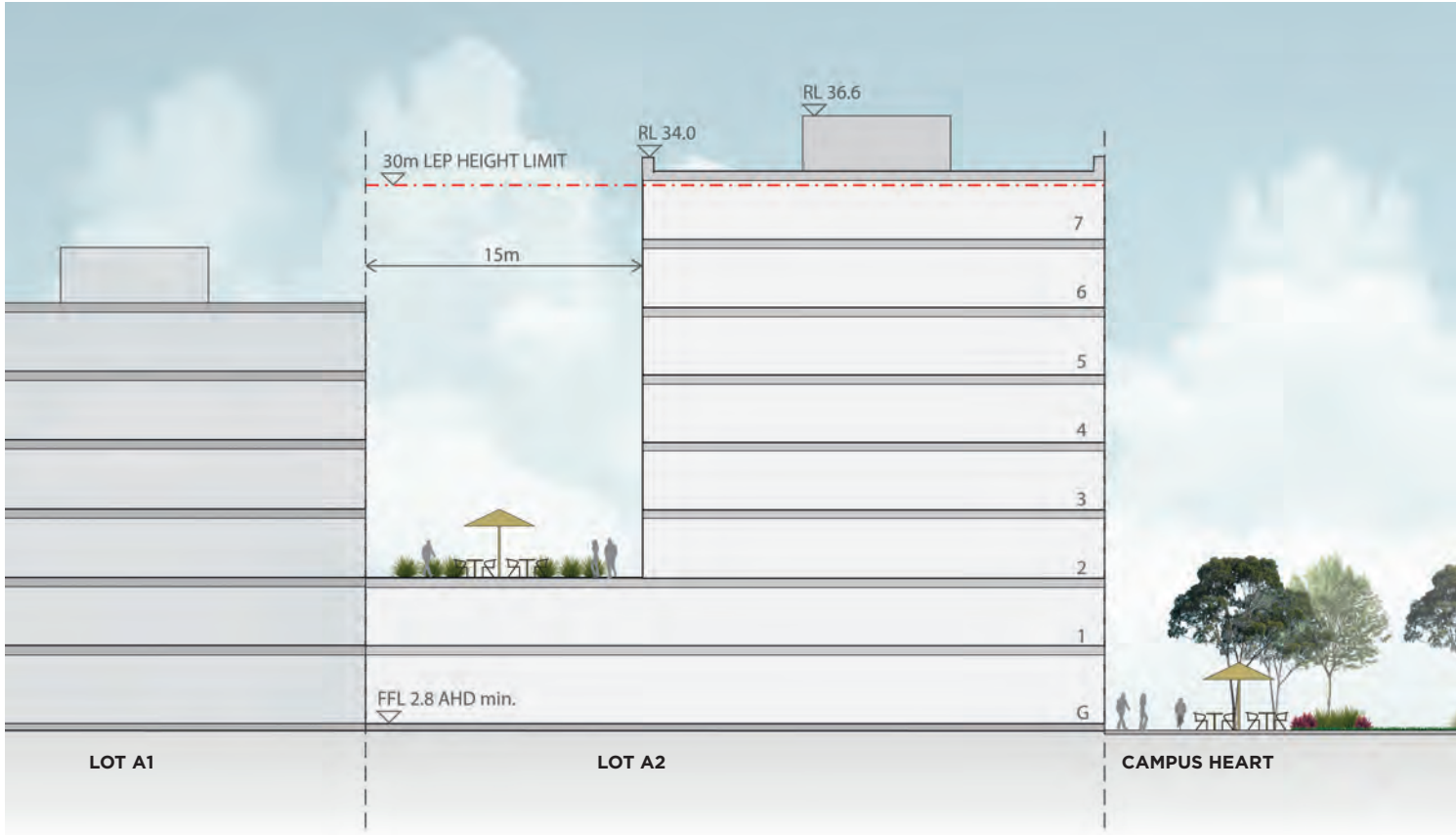
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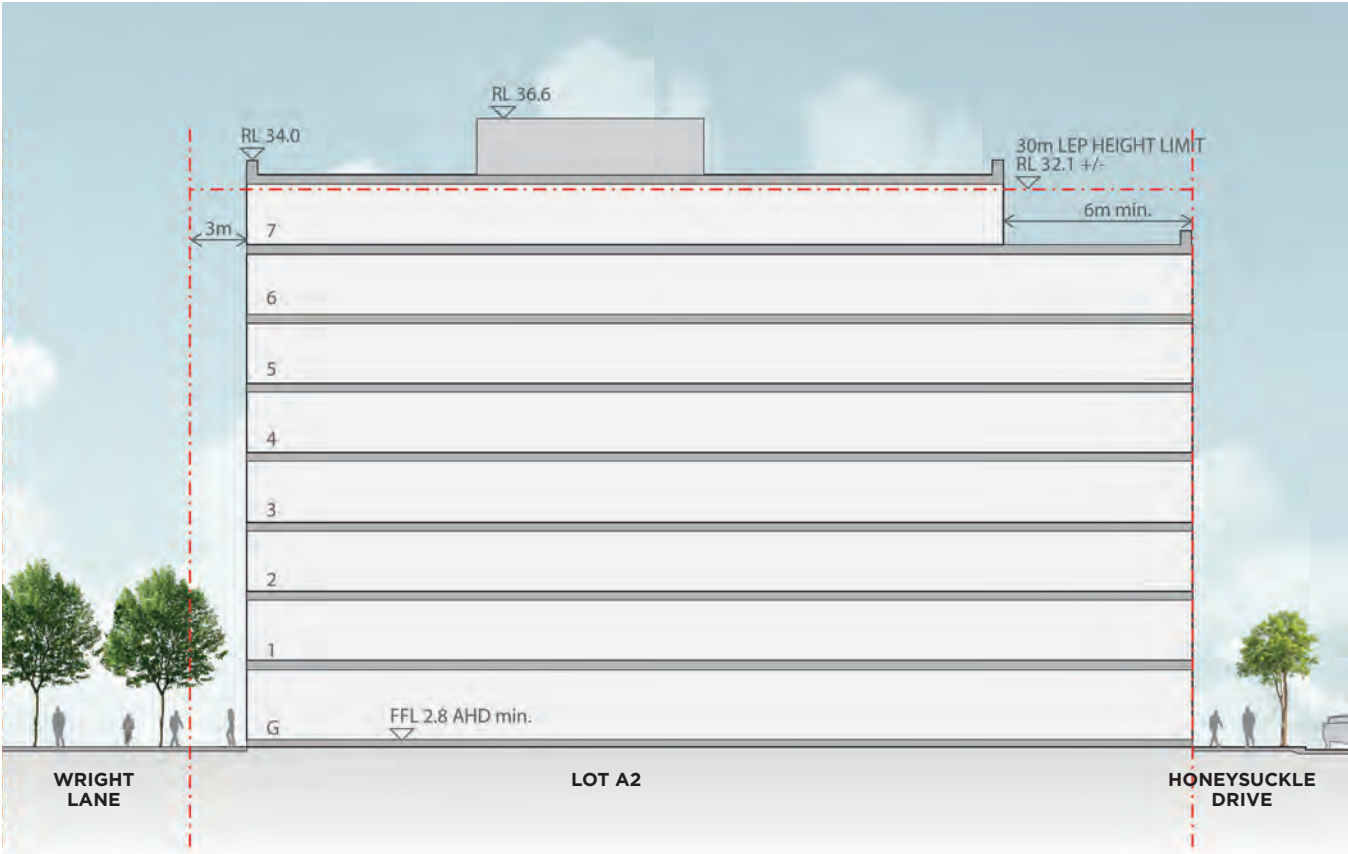
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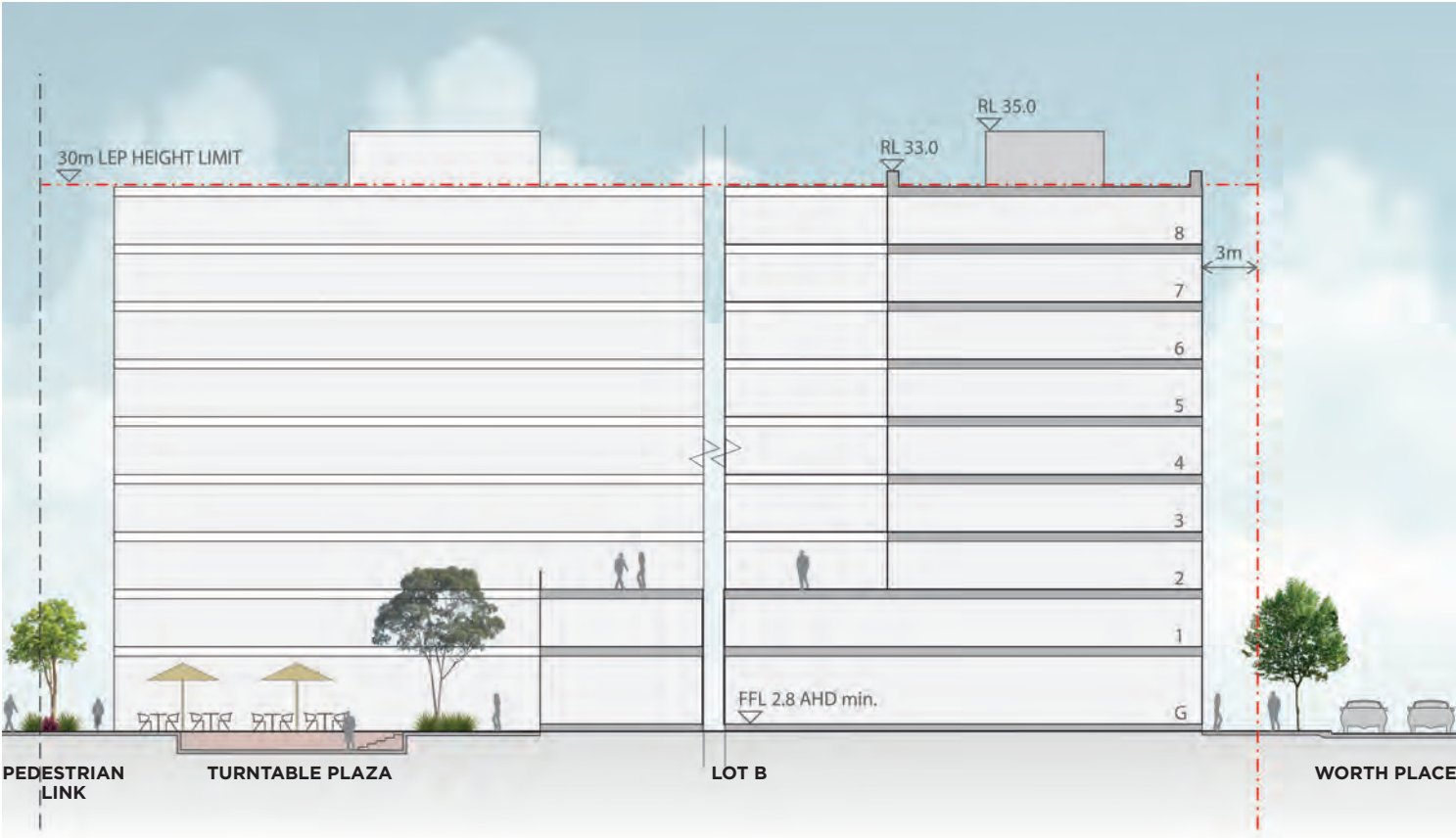
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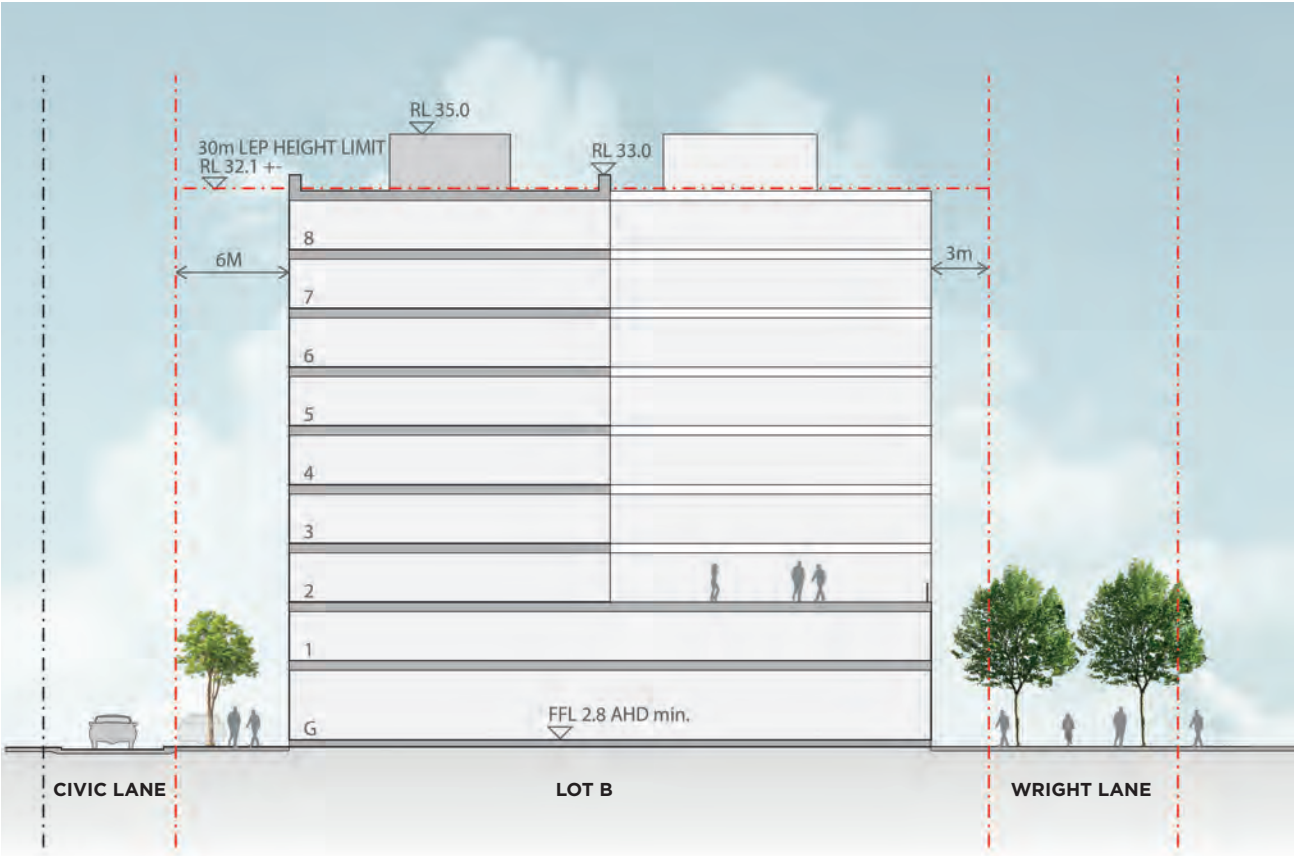
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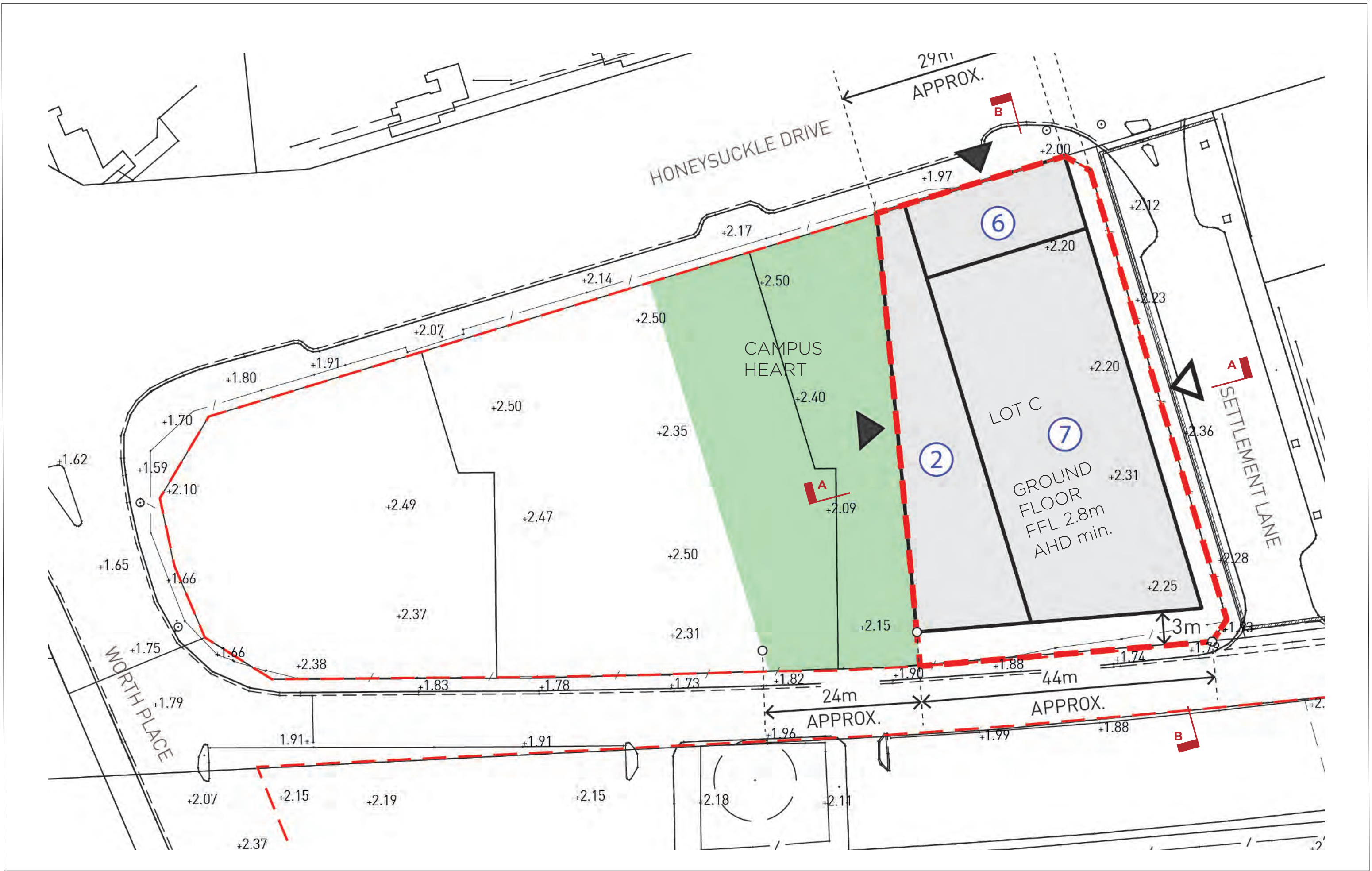
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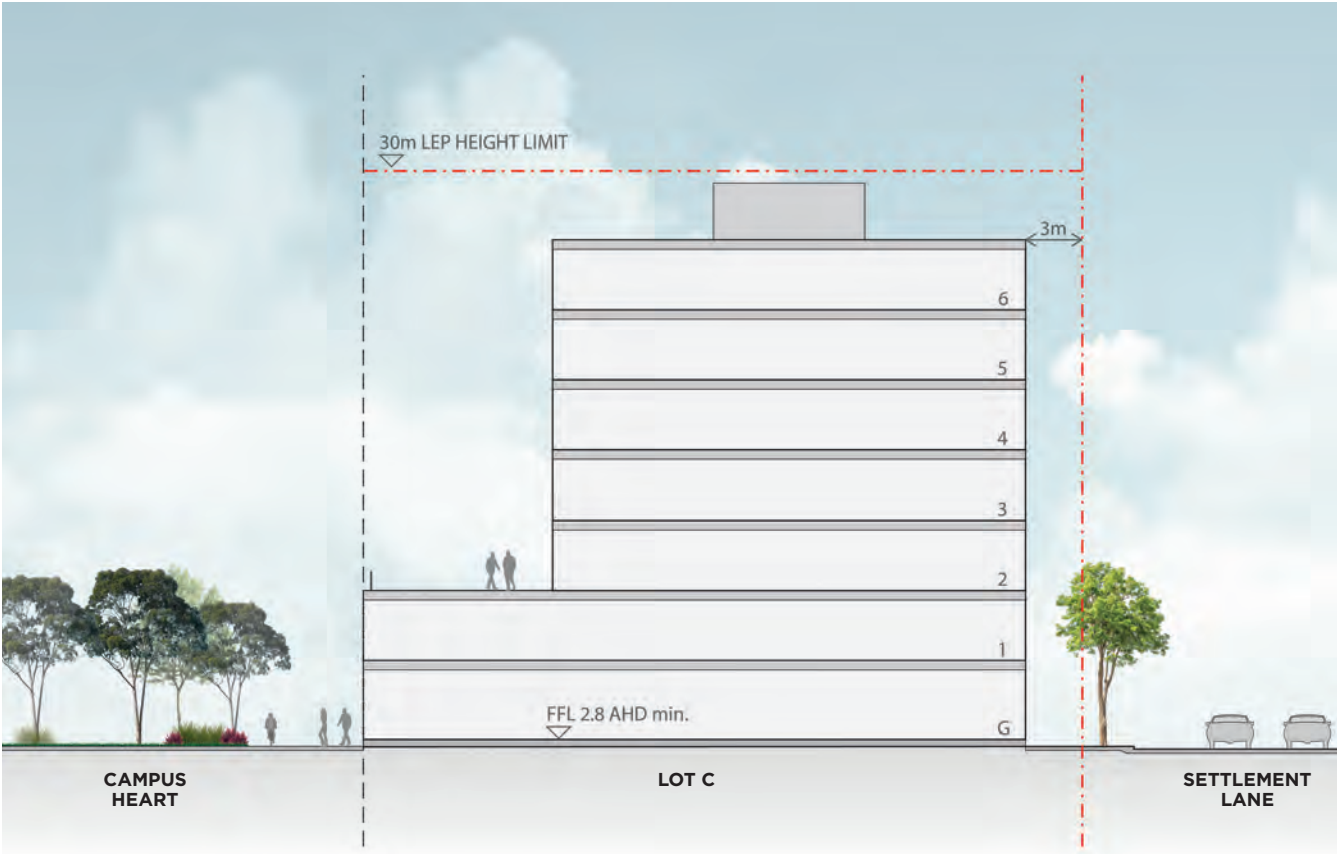
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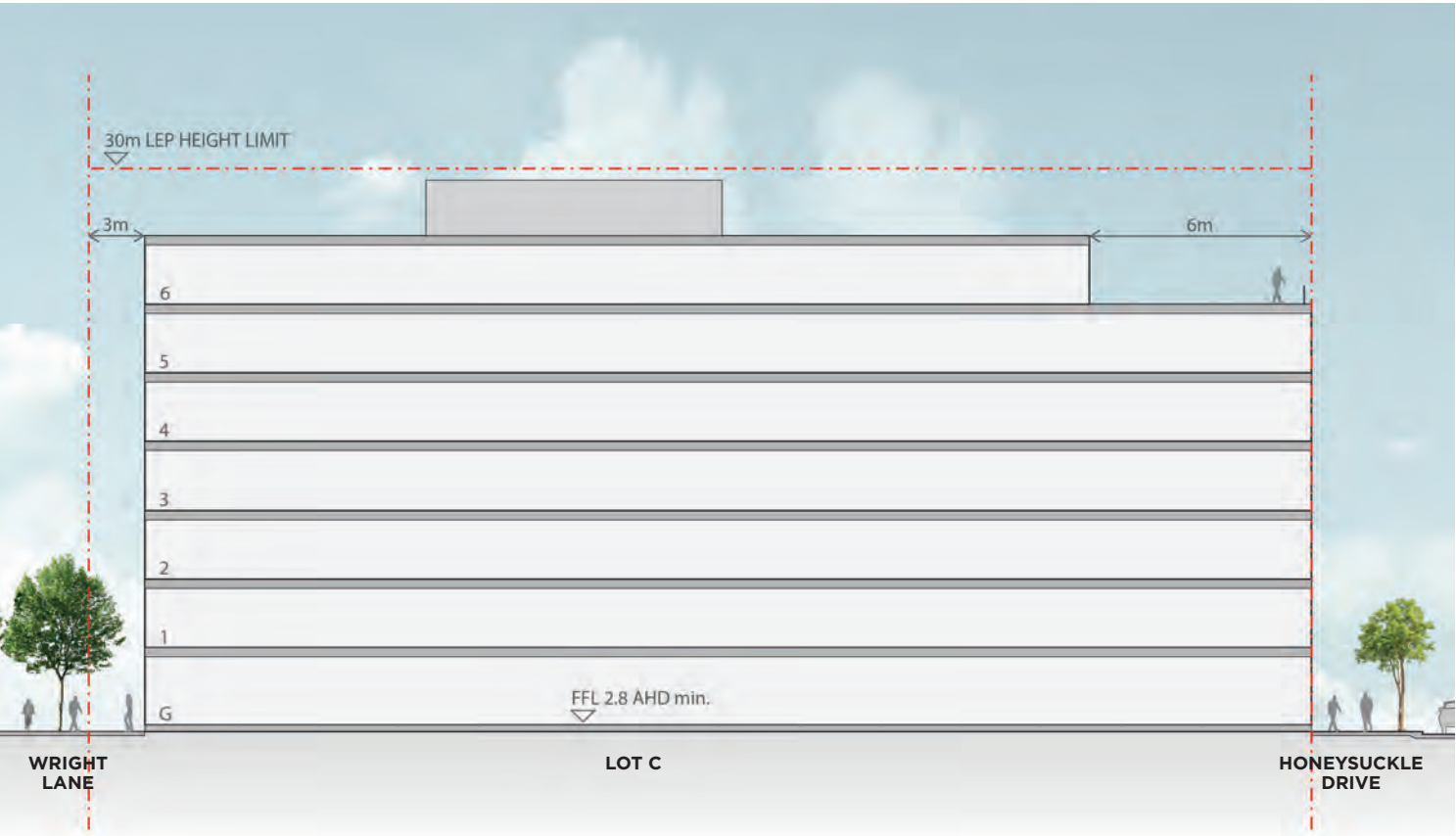
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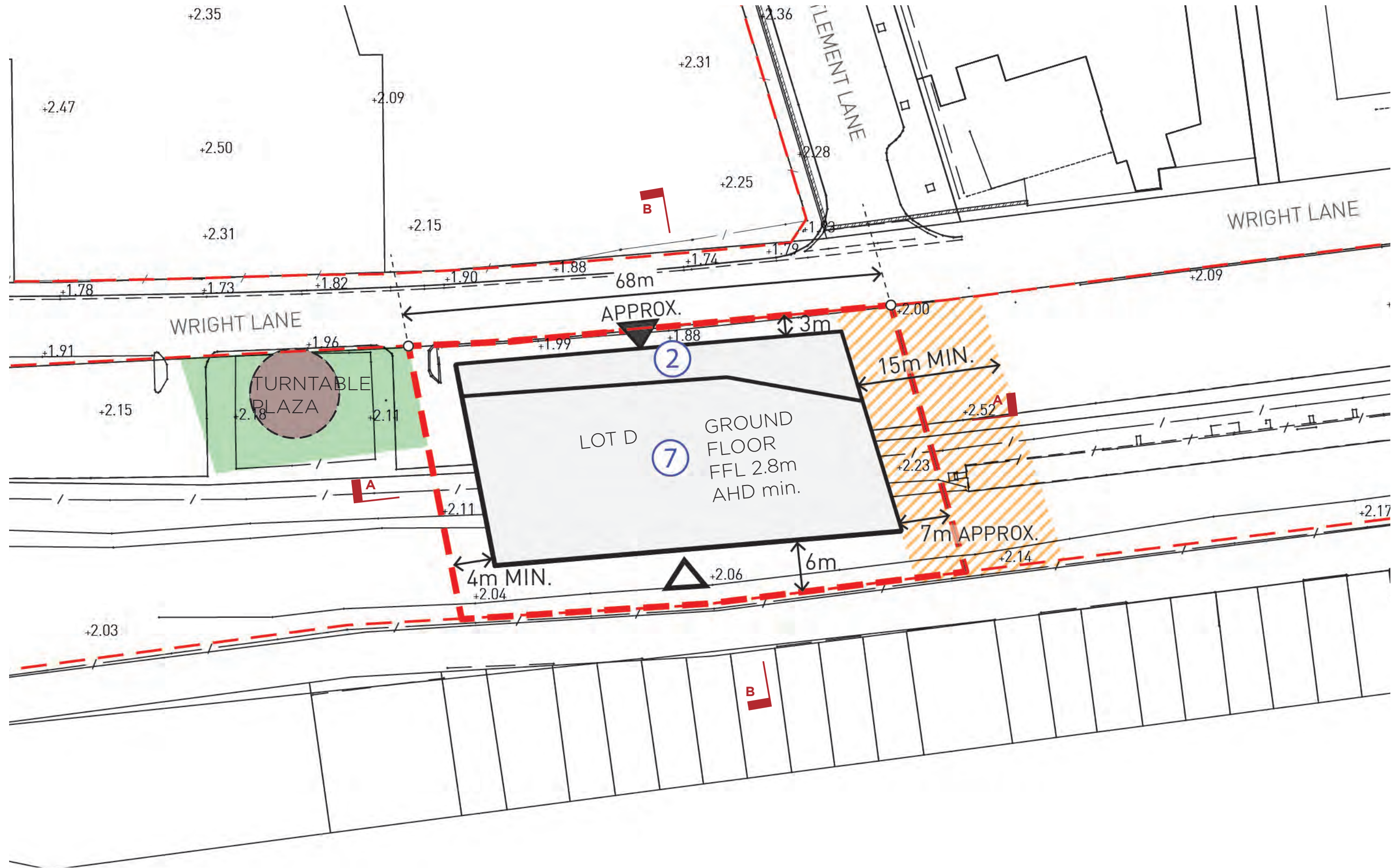
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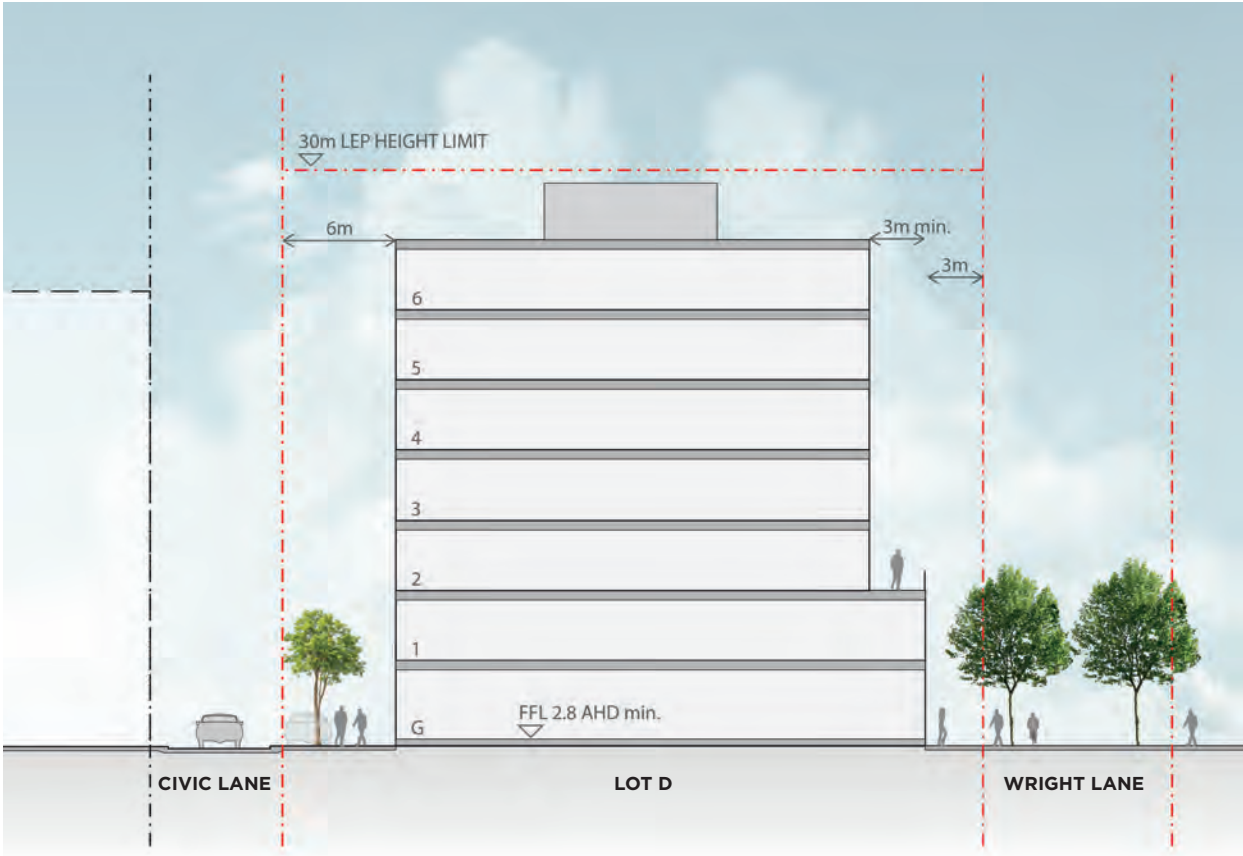
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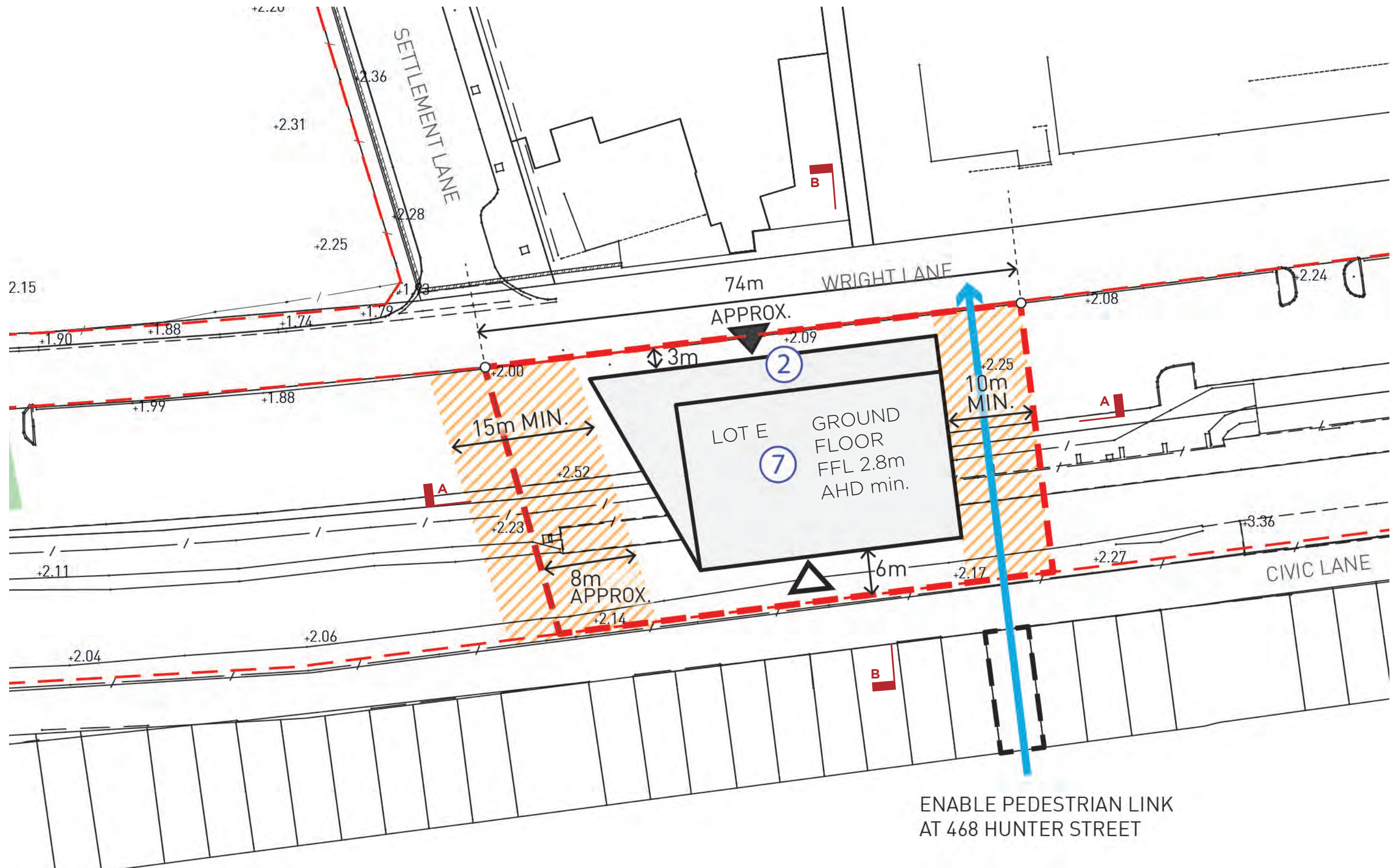
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ENABLE PEDESTRIAN LINK
AT 468 HUNTER STREET

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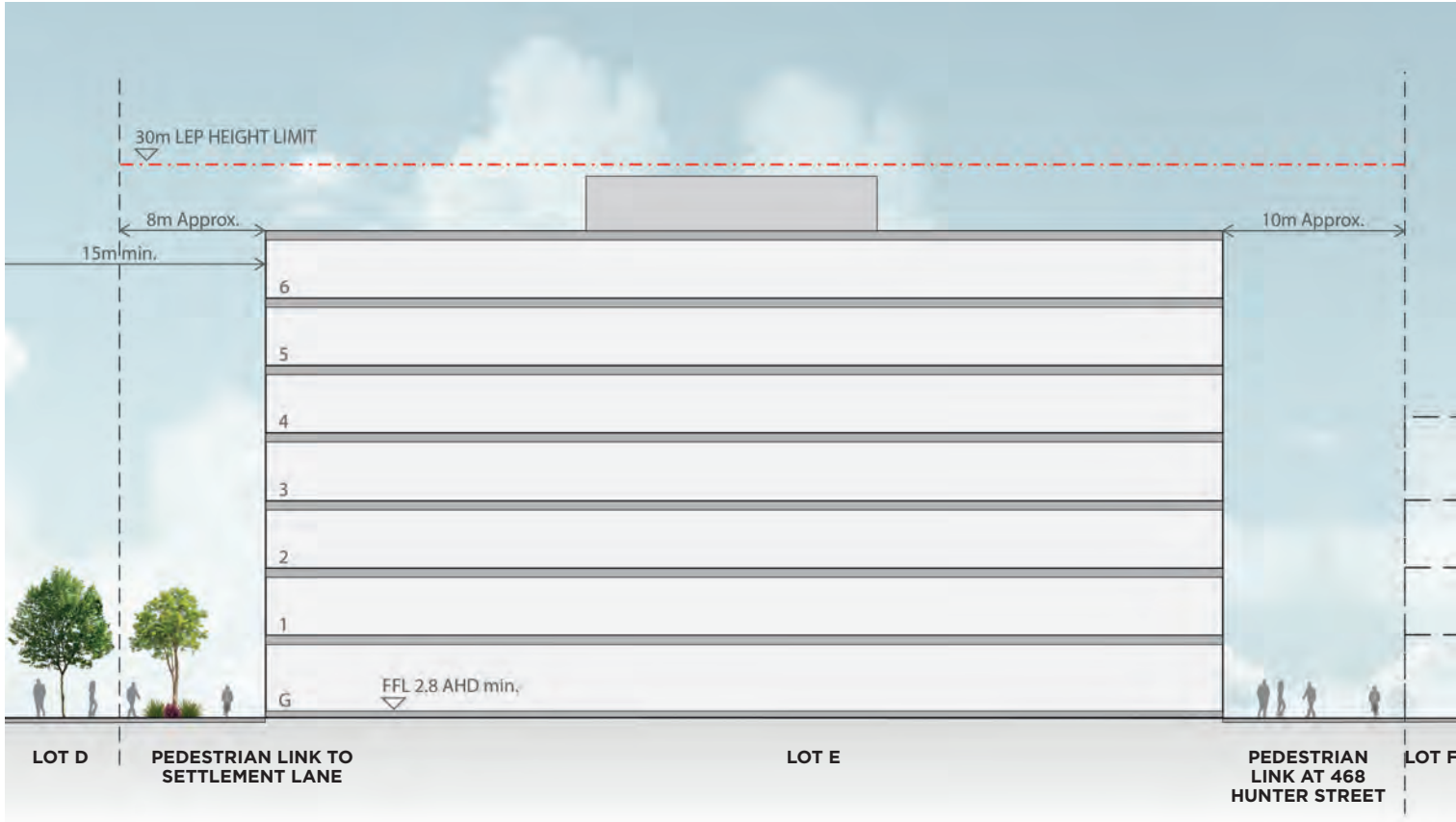
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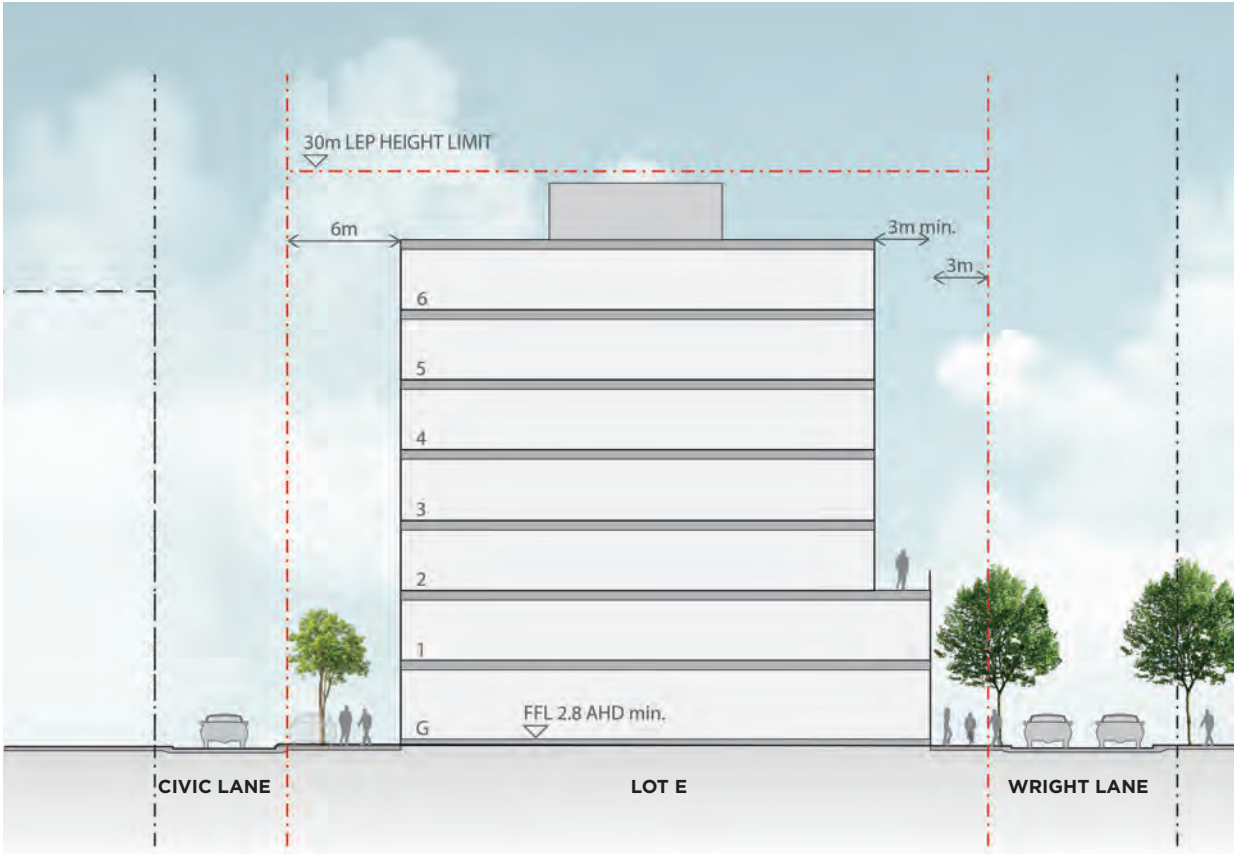
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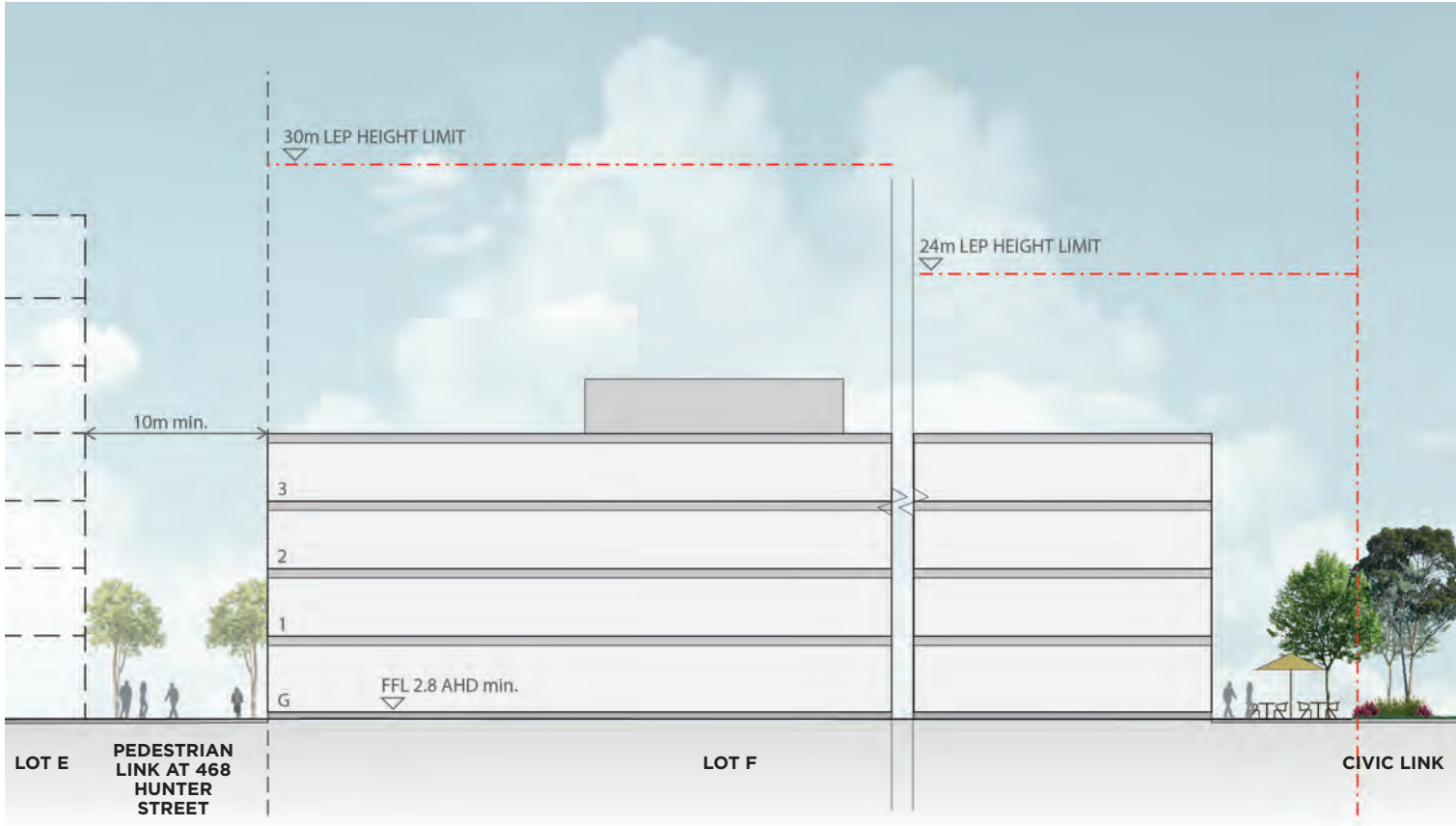
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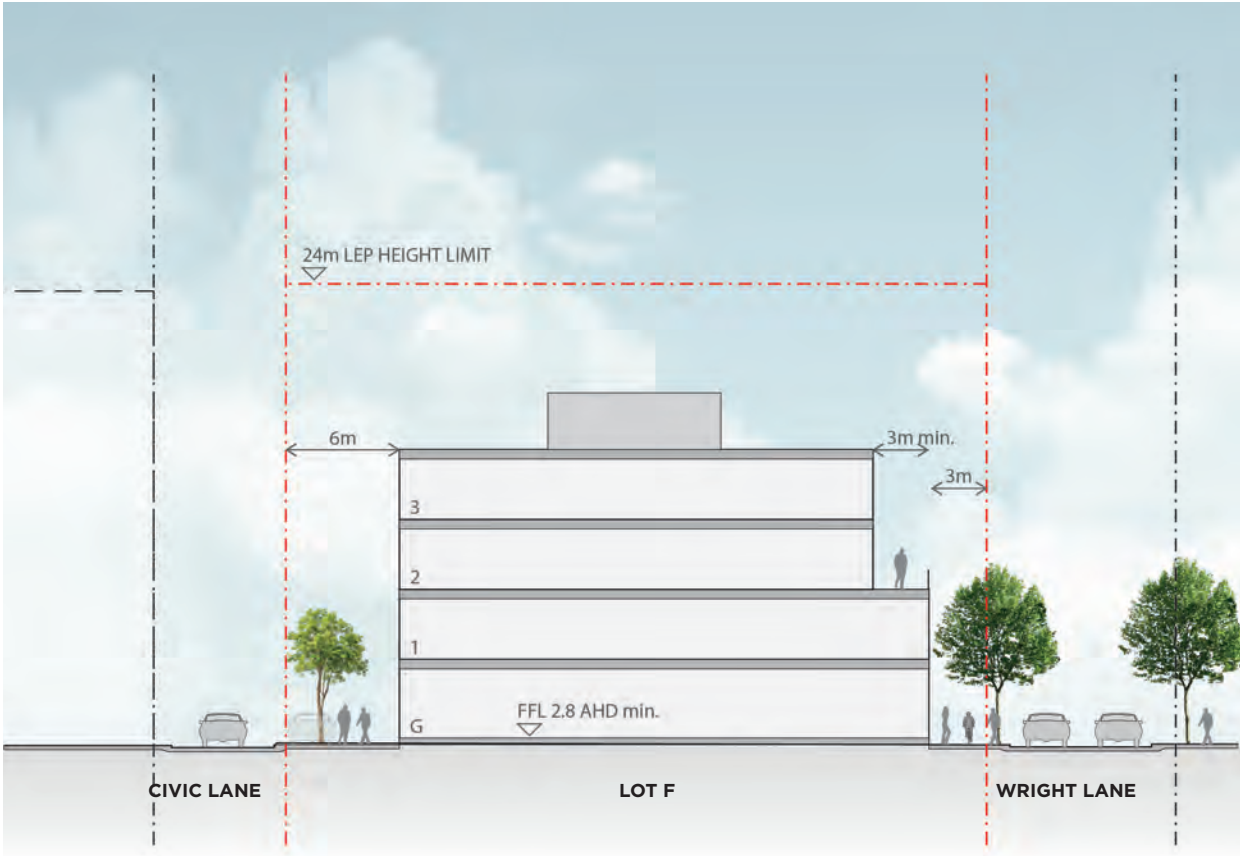
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Appendix 1A

Illustrative Floor Plans

Appendix 1B

Height Control Plans

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Appendix 2A

Site Survey

1. Introduction

1. Introduction

1.1 The Site

1.1.1 Site Description

The new Honeysuckle City Campus is located on a series of connected lots between Honeysuckle Drive and Civic Lane within the Honeysuckle redevelopment precinct.

The site is bounded by Honeysuckle Drive to the north, a private lot with Right of Public Access known as Settlement Lane to the east, Civic Lane to the south, Worth Place to the west and future Civic Link to the east. Wright Lane - a private lot with Right of Access / Right of Carriageway runs along the northern edge of Sites 2 and 3.

The total area made up of Sites 1, 2 and 3 is 20,412m².

The full site area is made up of the following parcels:

- Lots 1, 2 and 3 DP 1163346 (Site 1);
- Lot 21 DP 1165985 (part Sites 2 and 3); and
- Part Lot 2 DP 1226145 (part Sites 2 and 3, referred to as Rail Corridor within this report).

Site 1 is currently being acquired from the Hunter Development Corporation. There is an optional Purchase Agreement for two further adjacent sites, Sites 2 and 3, on rail corridor land north of Civic Lane.

Immediately to the south of Site 3 is 468 Hunter Street, a property already owned by UON. While not included in the site area, this Concept Plan considers this site as an important opportunity to create a future pedestrian connection between the Honeysuckle City Campus and NeW Space.

1.1.2 Site Capacity

The maximum floor space for the site is based on existed and planned zoning for the site. Planning controls for former rail corridor (Sites 2 and 3) are the subject of a current planning proposal being assessed by Newcastle City Council.

The calculations that have been used to formulate the Concept Plan are as follows:

Site	Site Area	FSR	GFA	Target GFA
1	8,546m ²	2.5:1	21,365m ²	23,502m ²
2	6,174m ²	3.0:1	18,522m ²	20,374m ²
3	5,692m ²	3.0:1	17,076m ²	18,784m ²
Total	20,412m ²		56,963m ²	62,659m ²

Floor space will be distributed across the precinct to ensure the best functional and urban design outcome.

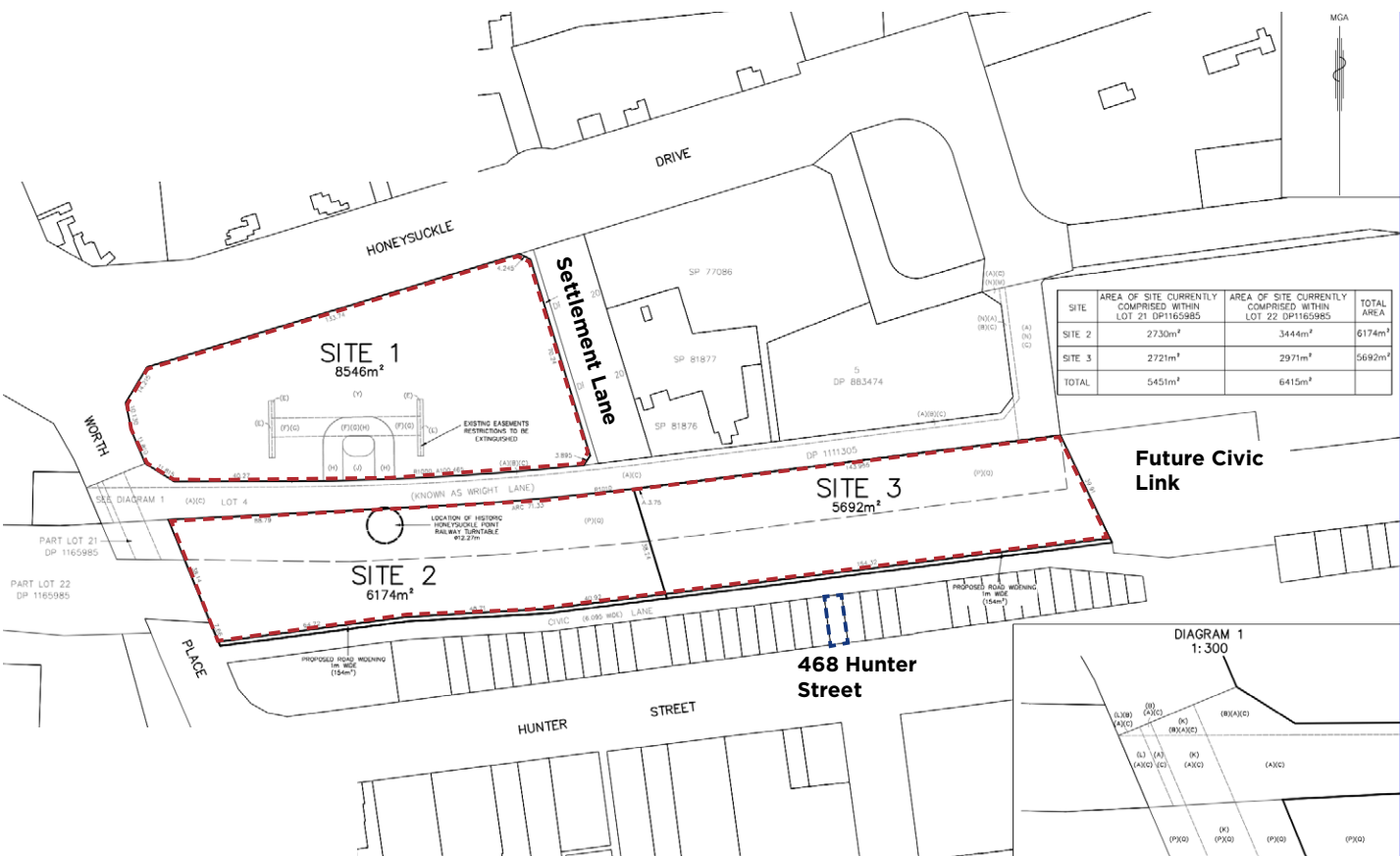




Figure 1.2 Location Plan

1. Introduction

1.2 Planning Context

1.2.1 Local Environment Plan

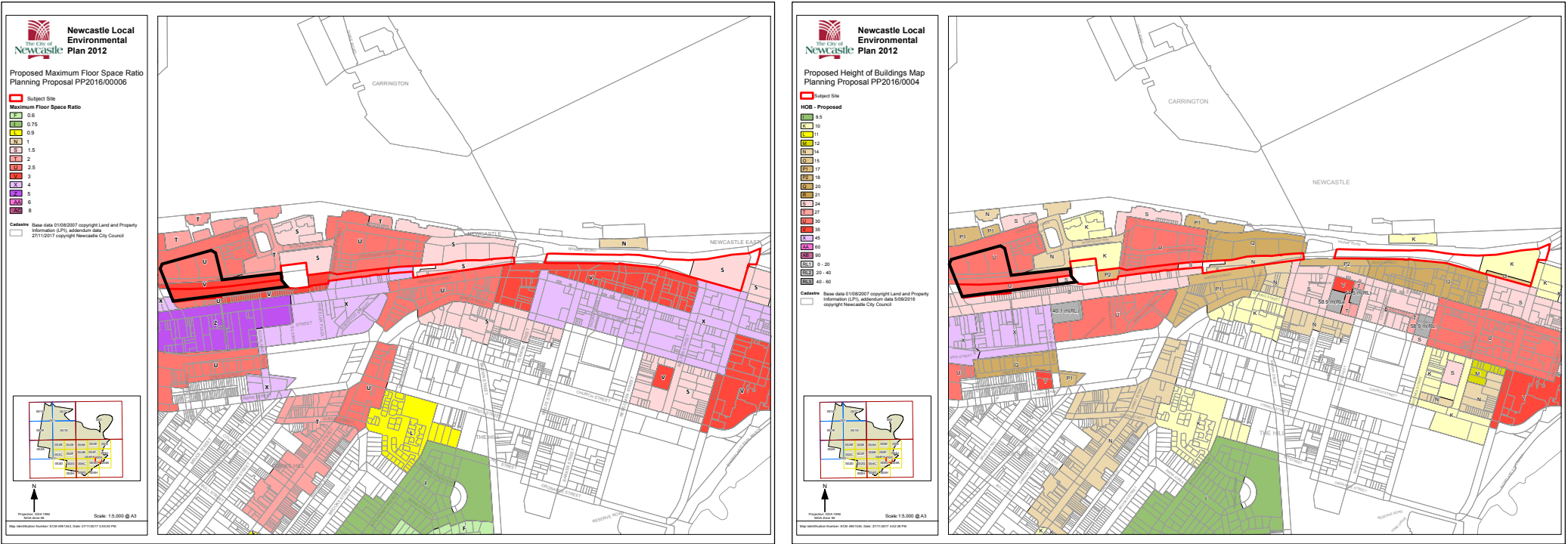
A planning proposal to amend the Newcastle LEP for the former rail corridor land was endorsed by Newcastle City Council on 12 December 2017. The amendments have now been gazetted.

The amended controls are shown in Table 1.1.

The Concept Plan is generally in compliance with these amended controls.

LEP Amendments	Master Plan Compliance
Land Zoning Site 2 (rail corridor) = B4 Mixed Use	Yes
Height of Buildings Site 1 = 30m (as existing) Site 2 (rail corridor) = 30m Site 3 (rail corridor) - partial = 30m Site 3 (rail corridor) - partial = 24m at eastern end adjacent Civic Link	
Floor Space Ratio Site 1 = 2.5:1 (as existing) Sites 2 and 3 (rail corridor) = 3:1	Yes, receipt of additional GFA possible through design excellence provisions

Table 1.1 LEP Requirements



Maximum Floor Space Ratio, Planning Proposal

Height of Buildings, Planning Proposal

Figure 1.3 Zoning Plans

1. Introduction

1.2.2 Development Control Plan

In December 2017, Newcastle City Council endorsed amendments to Section 6.01 Newcastle City Centre of the DCP following submission of the planning proposal for rezoning of the rail corridor land in December 2017.

The Concept Plan generally complies with the intent of the DCP, however there are some areas where the proposed design guidelines vary from the DCP.

The proposed variations from DCP controls are shown in Table 1.2.

DCP Requirement	Concept Plan Design Guidelines
A1 Street wall heights 16m street wall	Surrounding buildings do not have 16m street wall, are approx. 7-8 storeys with consistent setback. Master Plan proposes podium street walls of at least 2 storeys and up to 16m is acceptable.
A2 Building setbacks 0m setback	0m general setback to Honeysuckle Drive and Worth Place supported. A 3m setback is required to Settlement Lane to enable an infrastructure services corridor. A 3m setback is proposed to Wright Lane to enable generous landscaped public domain along this pedestrian spine
A9 Landscaping New developments to incorporate landscaping and communal open space. Landscaping at upper levels and roof tops encouraged through roof gardens and green walls.	This new provision is supported by the Concept Plan with proposed roof top landscaping and significant areas of communal open space.
B1 Access Network B1.4 Street and block network is permeable and accessible to promote pedestrian use	The Concept Plan allows for future connections between Hunter Street and Civic Lane. There is potential for the Master Plan to deliver a new link at 468 Hunter St.
B2 Views and Vistas <i>B2.1 Public views and sight lines to key public spaces, the waterfront, prominent heritage items and landmarks are protected.</i> New vista proposed to be retained along Settlement Lane from Civic Lane.	A new vista from Civic Lane along Settlement Lane is enabled by the Concept Plan. Proposed building setback to Settlement Lane will improve public domain, enhancing pedestrian connection to the waterfront.
B3 Active Street Frontages Active frontages map identifies required active frontage at Civic Link, and highly desired active frontage at Worth Place at former rail corridor	Supported by the Concept Plan
B7 Infrastructure <i>B7.1 Stormwater, water and sewerage infrastructure is integrated into each site and does not create negative off-site impacts.</i>	Supported by the Concept Plan
B8 Site Amalgamation <i>B8.1 Surplus rail corridor land is amalgamated with adjoining land to create useable sites that are consistent with the desired character of the area.</i>	Supported by the Concept Plan. Sites proposed to be amalgamated as per draft DCP.
E Civic Link <i>E1. Civic Lane provides an accessible, attractive link between Civic Link/Hunter Street and Wright Lane/Workshop Way. Vehicular and service access to the properties on the northern side of Hunter Street and the new developments between Civic Lane and Wright Lane is from Civic Lane.</i> 16m street wall along Wright Lane and at Civic Link 24m height limit.	Supported. Civic Lane to be used to service lots B, D, E, F. Setback on northern side of Civic Lane to enable servicing, footpath and adequate setback for any future residential development between Hunter Street and Civic Lane. Concept Plan proposes to transition height at Civic Link
7.03.02 Parking Provision (<i>Existing DCP</i>) Except for residential development, car parking for development in the Newcastle City Centre is provided at the rate of one space per 60m² gross floor area.	Not achieved by the Concept Plan. Refer Transport Assessment by ARUP

Table 1.2 DCP Requirements

2. Design Principles

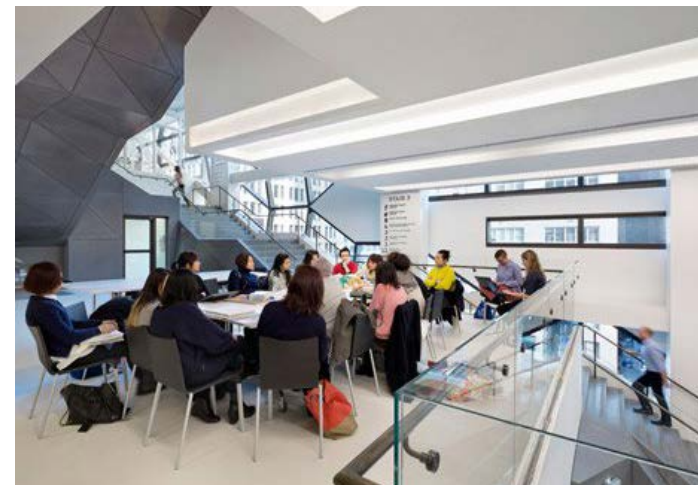
2. Design Principles

2.1 Master Plan Principles

A series of design principles for the Campus underpin the master plan response and have been prepared to guide future development.

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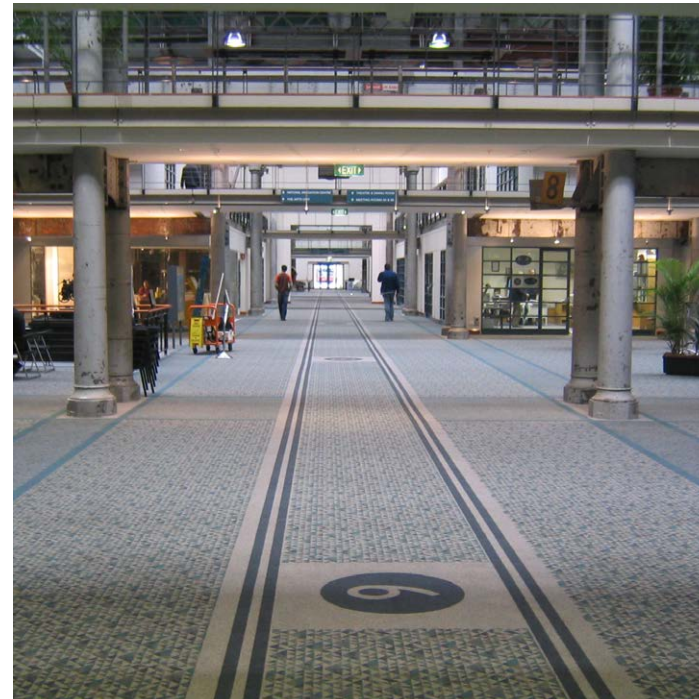
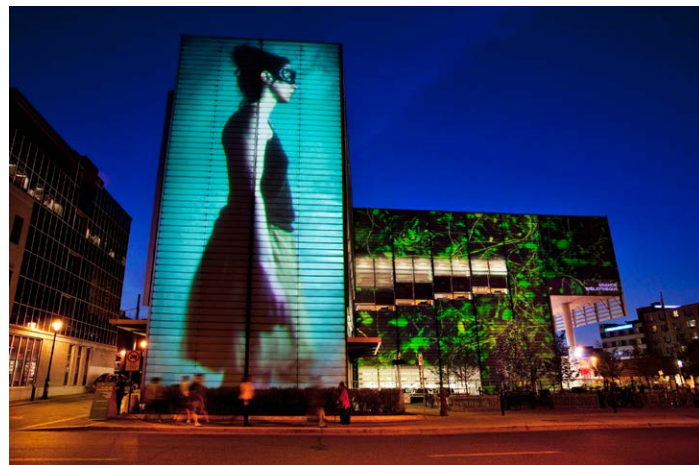
- Create a strong, **visible** UON presence in the Newcastle CBD that is welcoming to students, staff and visitors and contributes to a **sense of identity and place**.
- Contribute to the **vibrancy** of the Newcastle CBD during the **day and night** by designing the urban environment to be have **safe** and **open** connections, with ground level activation.
- Create an **urban campus** that is **integrated** with the CBD and enables boundaries between university and city to be **dissolved** through **physical and visual links** in the built form and public domain.



2. Design Principles

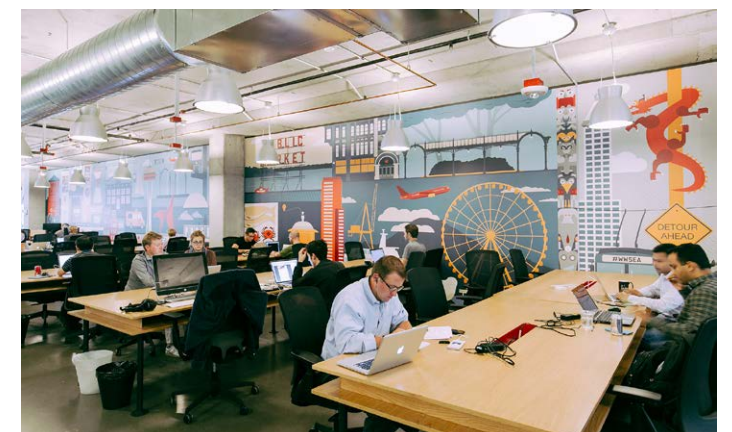
Unique

- Create a campus environment that is a **vibrant** and attractive **destination** offering a **variety** of spaces and experiences for UON students, staff and visitors, but that also **welcomes** the wider Newcastle community
- Respond to the unique **history** of the site by reinterpreting the **locomotive, industrial and indigenous heritage** of the place through opportunities in the design of public domain, landscape and building spaces
- Design the public domain as an **urban campus heart** that provides enjoyable places for people to meet and gather, and that maximises **solar access** and connections to its location between the **waterfront and city**.



Sustainable

- Create a **world class**, sustainable facility that demonstrates a commitment to **social environmental and economic leadership**
- Social: Reinforce UON's relationship with the wider **Newcastle community** and meet **social responsibilities** by dissolving the boundaries between university and city
- Environmental: Meet the challenges of a **low-carbon future** through energy efficient and environmentally sustainable design and operation of the Campus
- Economic: Design and develop accessible and engaging work/study environments that **attract leading academic talent**



3. Site Wide Guidelines

3. Site Wide Guidelines

3.1 Illustrative Plan

The Honeysuckle City Campus will be one of Newcastle CBD's most significant developments. The development will be a catalyst for the urban renewal of Newcastle and will have the opportunity to leverage investment committed by government supporting this renewal.

The mixed use, integrated education precinct will have 24 hour a day activation that is engaged with the community and integrated with uses across the CBD education precinct, as well as the Honeysuckle waterfront.



Figure 3.1 Illustrative Precinct Plan



Figure 3.2 Artists Impression, Aerial View

3. Site Wide Guidelines

3.2 Planning Principles

The illustrative plan presents a cohesive concept for the site and its relationship to the CBD.

Key planning principles are:

- Campus Heart located at the core of the campus with good solar access and amenity
- Respond to place and heritage through interpretation of heritage turntable in the Campus Heart
- Built form positioned to enable easy through site links from Worth Place to Civic Link, and from Hunter Street to the waterfront
- Ground level activation fronting major pedestrian links and Campus Heart
- Recognising NeW Space as the flagship UON building in the CBD with a secondary UON address at Honeysuckle Drive

All elements will be subject to further architectural and public domain design.



Figure 3.3 Planning Principles Diagram

3. Site Wide Guidelines

3.3 Development Parcels

Floor space will be distributed across the precinct to ensure the best functional and urban design outcome.

The table below outlines the GFA for each lot proposed in Concept Plan:

Lot	GFA	Site	Stage	Use
Lot A1	4,608m ²	Site 1	1a	Academic
Lot A2	10,299m ²	Site 1		Academic
Lot B	11,828m ² 394 beds	Site 2	1b	Student Accommodation
Lot C	12,217m ²	Site 2		Academic
Lot D	9,415m ²	Site 2		Academic
Lot E	7,158m ²	Site 3		Academic
Lot F	7,049m ²	Site 3		Academic
Total GFA	62,573m ²			
Target GFA	62,659m ²			

Gross floor area (GFA) refers to the Council definition of floor space which counts all internal floor space above ground excluding voids and plant areas. A factor is applied to the gross building envelope to calculate GFA. For Academic buildings, 95% is applied. For Student Accommodation, 80% is applied to allow for more complex floor plates that adjust for differing accommodation unit configurations.



Figure 3.4 Development Parcels Diagram

3. Site Wide Guidelines

3.4 Height

The revised LEP height controls apply over the precinct. The majority of the site has a 30m height limit. A small area adjacent to Civic Link at Civic Lane has a 24m height limit.

Key assumptions underpinning the height response are:

- A maximum height of 8 storeys for academic buildings (floor to floor height min. 3.65m)
- A maximum height of 9 storeys for accommodation (floor to floor height min. 3.1m)
- Floor to floor height at ground level should be greater than of the storeys above
- There may be minor intrusions of rooftop plant areas above the height limit

Building heights for the development may be flexible, however the following principles should be used to determine building heights:

- Buildings should be appropriately scaled and positioned to allow for good solar access to the Campus Heart and Turntable Plaza during winter as well as summer.
- Taller buildings should be located along Civic Lane, transitioning down in height at Civic Link
- Buildings along Honeysuckle Drive should take advantage of views to the north over the Hunter River
- Podiums are used throughout to create human scaled spaces.



Figure 3.5 Height Diagram

3. Site Wide Guidelines

3.5 Setbacks

The Concept Plan proposes a variety of setbacks to create suitably scaled public domain for the pedestrian environment of a university campus within a CBD.

Proposed setbacks:

Frontage	Setback
Honeysuckle Drive	0m Setback above 6/7 storeys
Worth Place	0-3m
Wright Lane	3m Setback above 2 storey podium
Civic Lane	6m to create an improved urban environment and to facilitate future residential development along Hunter Street
Settlement Lane	3m to enable underground services corridor within setback
Civic Link	0-12m landscape setback to transition to open space

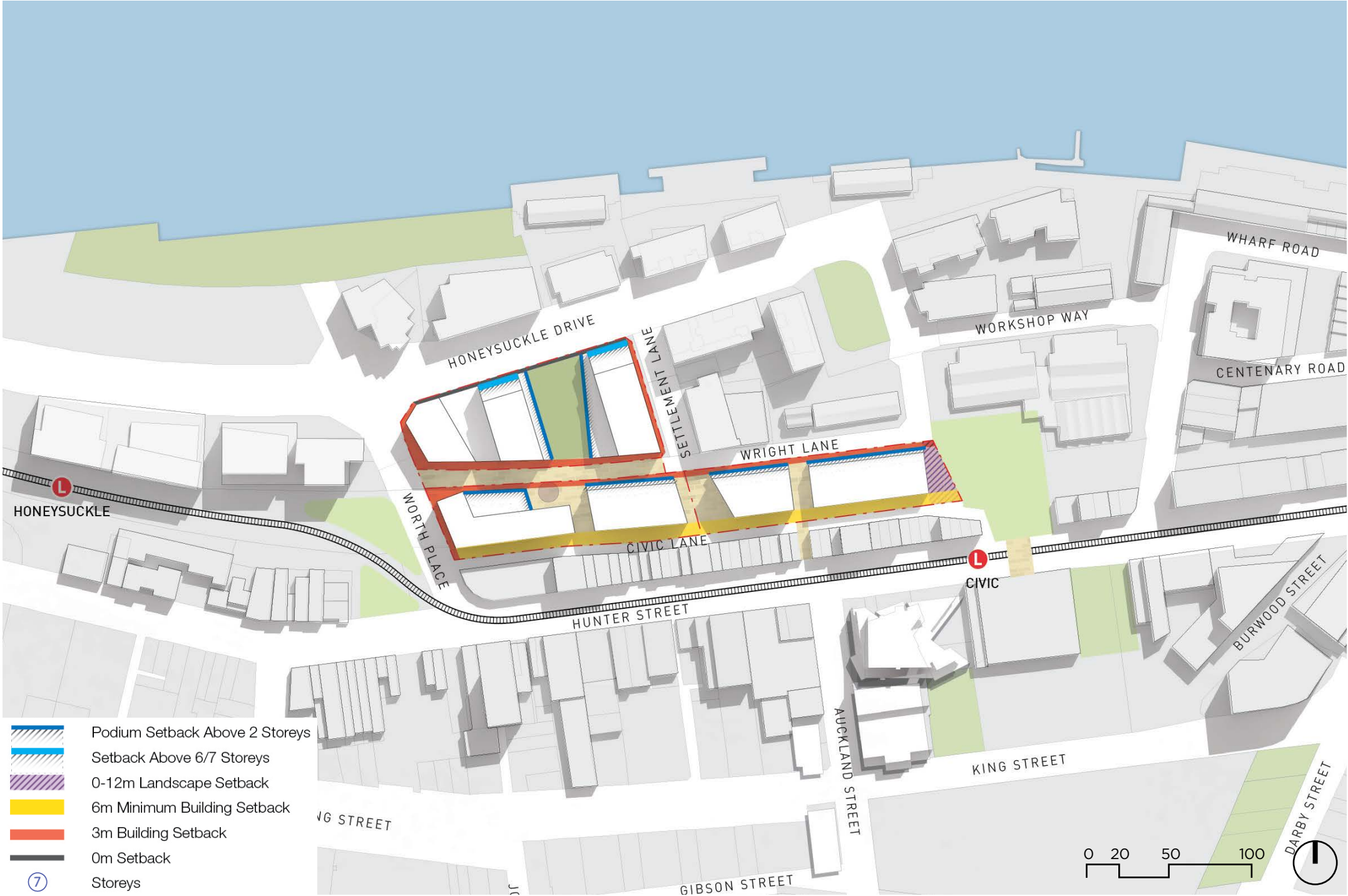


Figure 3.6 Setbacks Diagram

3. Site Wide Guidelines

3.6 Identity & Address

The design resolution of the buildings should respond to the importance of the Campus and where most students and visitors will access the site. Honeysuckle Drive on the northern edge of the site will be the formal address of the Campus.

Elements that will contribute to the identity and address of the Campus include:

- Formal address on Honeysuckle Drive
- Building form sculpted to create views into the Campus Heart from Worth Place and refurbished rail corridor
- Creation of active public spaces at ground level that engage with the city
- Opportunities to showcase UON's activity through building facades
- Feeling of porosity through the site, enabling new north-south and east-west pedestrian links
- Positioning of service access points along the secondary facades including Civic Lane and Settlement Lane. Service access should not be provided from Honeysuckle Drive or Wright Lane



Figure 3.7 Identity and Address Diagram

3. Site Wide Guidelines

3.7 Site Infrastructure

The enabling works investigations indicate that adequate infrastructure to service the site appears to be available.

The Concept Plan has been designed to respond to some key infrastructure requirements including:

- Provision for two new chamber substations on the Campus. One will be developed in each stage and will replace the existing substation located on Civic Lane in the south-west corner of the site
- Allowance for overland flow along Wright Lane.
- Setback along Settlement Lane to allow for underground services infrastructure due to the existence of a subterranean car park under Settlement Lane.

The following flood planning levels guide the design of structures on the site (from ADW Johnson):

Area	Level
Minimum Property and On-ground Garaging	2.28m AHD
Minimum Habitable Floor Level	2.58m AHD
Minimum Upper Floor Level Stairway Exit	3.38m AHD
Basement Parking Entry/Exit Crest/ Flood Barrier	3.38m AHD

The Flood Information Certificate from Newcastle City Council for Lot1 DP1163346 (western part of Site 1), indicates a minimum floor level for occupiable rooms of 2.51m AHD.



Figure 3.8 Site Infrastructure Diagram

4. Public Domain Strategies

4. Public Domain Strategies

4.1 Site Interfaces

Located in an urban CBD environment, the Campus has several key interfaces with the surrounding public realm including streets, open spaces and future development opportunities.

Key elements are:

- New links between Civic Lane, Wright Lane and Honeysuckle Drive create permeability across the precinct to the waterfront
- Widening Civic Lane will improve access, amenity and safety
- Potential closure of Wright Lane to traffic between Settlement Lane and Worth Place will enhance the experience of users at the Campus, reinforcing the east-west 'park to park' green connection and creating a safe Campus heart
- A setback along Settlement Lane will enable an enhanced landscape pedestrian zone and reinforce links to the waterfront.



4. Public Domain Strategies

Section A

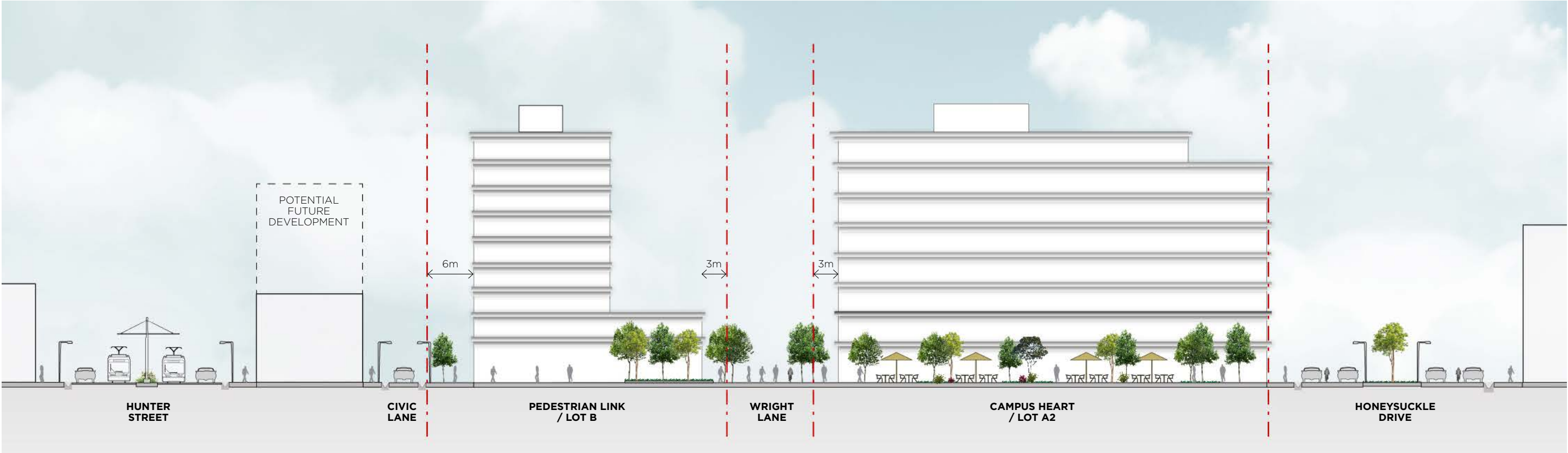


Figure 4.2 Section A

Civic Lane

Civic Lane sits outside the site, however a 6m setback is proposed for all development on Sites 2 and 3 along Civic Lane to enable future residential development between Civic Lane and Hunter Street.

This setback can also enable service parking for the Campus and a safer pedestrian environment along Civic Lane, contributing to a permeable campus.

Wright Lane

Wright Lane runs between Sites 1 and 2 and is not part of the UON site. Between Settlement Lane and Worth Place it is proposed that this part of the lane could be pedestrianised with vehicular access restricted to emergency vehicles only, subject to RMS approval. Wright Lane will remain open to traffic from Settlement Lane to the east.

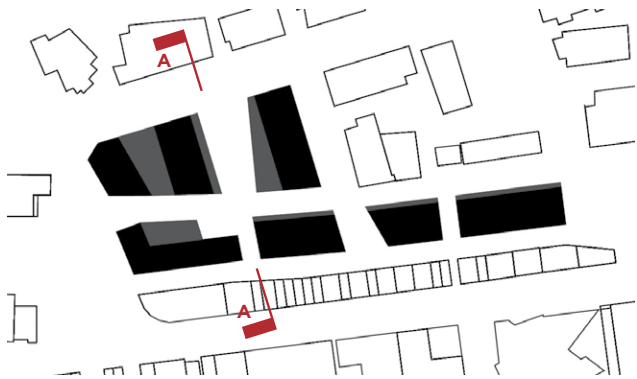
A 3m setback to buildings fronting Wright Lane is proposed to enable a generous public domain for a high pedestrian traffic area through the central spine of the Campus.

Campus Heart

The Campus Heart will span between the site boundaries from Honeysuckle Drive to Wright Lane and will act as a new public open space on the Campus.

The Campus Heart will enable a clear pedestrian link through to the Honeysuckle waterfront using established links on the northern side of Honeysuckle Drive.

The surrounding buildings of the Campus should provide active ground level uses fronting onto the Campus Heart to activate the space.



4. Public Domain Strategies

Section B

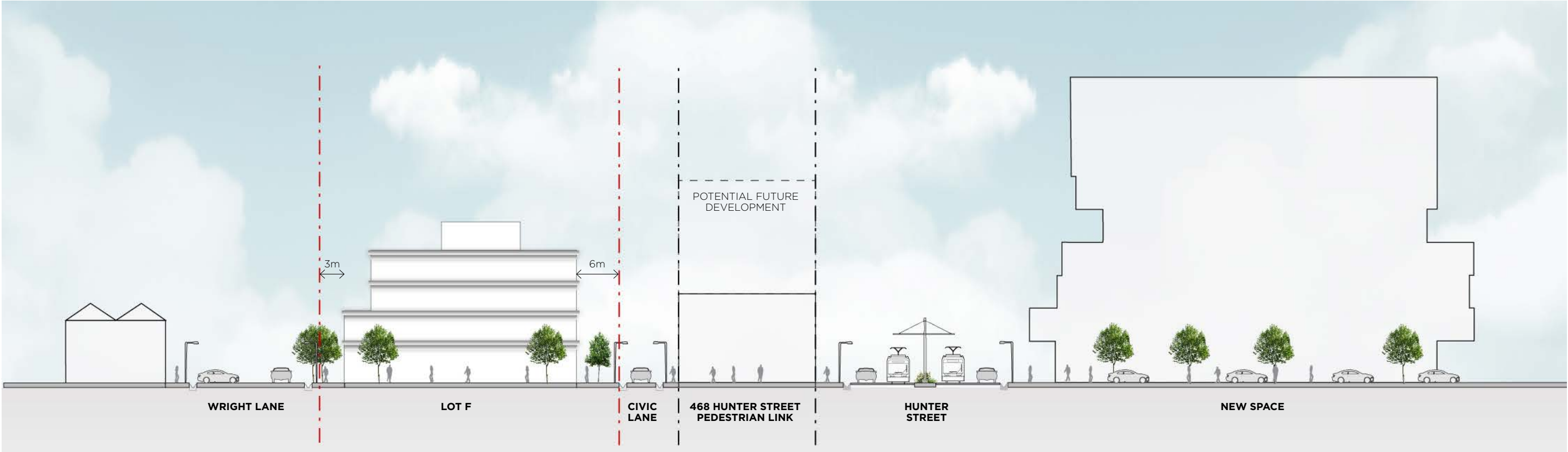


Figure 4.3 Section B

Wright Lane

Wright Lane between Settlement Lane and Workshop Way is proposed to remain open to vehicular traffic and sits outside the site.

A 3m setback to buildings fronting Wright Lane is proposed to enable a generous public domain and a high level of pedestrian amenity outside Campus buildings within this high pedestrian traffic area. Wright Lane connects into the planned Civic Link open space.

Civic Lane

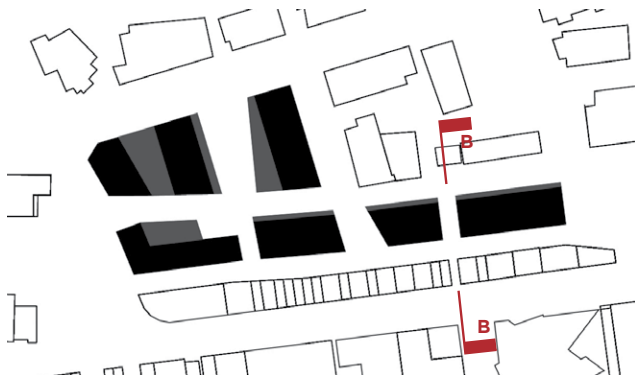
Civic Lane continues along the southern edge of the UON development and sits outside the site.

A 6m setback is proposed for all development on Sites 2 and 3 along Civic Lane to enable future residential development between Civic Lane and Hunter Street. This setback can also enable service parking for the Campus and a safer pedestrian environment along Civic Lane, contributing to a permeable campus.

468 Hunter Street

The property at 468 Hunter Street is currently owned by UON and could be used as a future pedestrian link between the Honeysuckle City Campus and NeW Space.

Works to 468 Hunter Street are not included within this project, however site planning for the Honeysuckle City Campus responds to a potential future link.



4. Public Domain Strategies

Section C

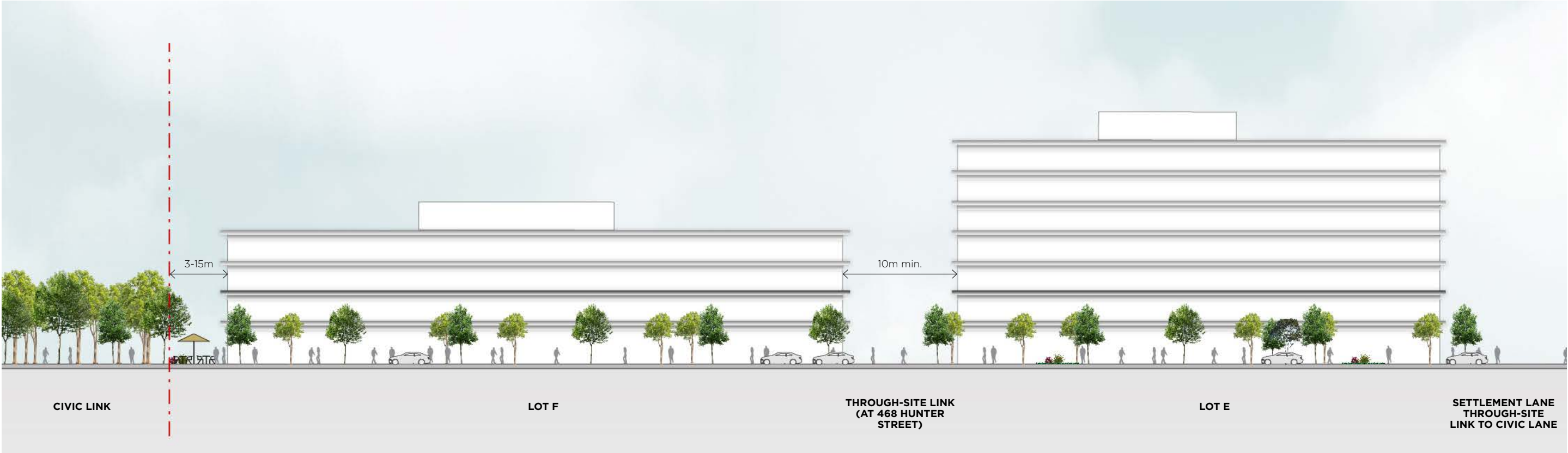


Figure 4.4 Section C

Civic Link

Lot F addresses the planned Civic Link open space. The building height transitions down at Civic Link to respond to the low scale of surrounding buildings including the Newcastle Museum located within State heritage listed former railway workshops.

Through-Site Links

Built form has been positioned to enable clear through-site links between Wright Lane and Civic Lane, with potential connections continuing through to Hunter Street. Links through to Hunter Street are not included within the scope of this project however the project enables links to be created by UON or by others in the future.

The through-site link between Lots E and F should have a minimum width of 10m.



4. Public Domain Strategies

4.2 Public Domain

Fundamental to the design of the UON Honeysuckle City Campus, will be the vision achieved through the public domain within the site.

A clear visual identity created by a public domain structure of links, open spaces and civic spaces, and a strong palette of colours, textures and plants will create a network of integrated spaces.

Sustainable landscape principles underpin all aspects of the public domain, in particular the consideration of climate and microclimate, soil and water regimes, recycling, endemic planting and provision of ecological and habitat areas.

The landscape will be managed to evolve and develop over time, providing parklands and natural habitats that are acclimatised, and integrated into a diverse urban ecology.

In developing the open space response for the Honeysuckle City Campus, a series of landscape objectives have been identified:

- To establish a structured hierarchy of open space defined and reinforced by the urban form;
- To create a comprehensive landscape setting and distinctive visual identity; and
- To create an environment that are in harmony with local environmental conditions;
- To ensure that climate and microclimate defines the landscape response;

- To plan for an evolving and gradually maturing natural and urban ecology;
- To ensure the efficient use of resources and natural systems in the creation of sustainable soils and irrigation methods;
- To instil user awareness of coexistence with natural systems and environments; and
- To establish endemic ecologies where appropriate;

Connectivity

The plan seeks to create a high level of connectivity across the precinct that is integrated through the open spaces and the network of cycleways and footpaths. Buildings address streets, footpaths and open spaces, helping to make places feel safer and more legible.

Extension of the green network will be achieved through improved landscaped pedestrian and visual linkages with surrounding developments, open spaces and topographical features.

The public domain of the Campus will remain open and accessible to the public at all hours of the day and night.

Activity

Open spaces will have a degree of flexibility and versatility so that can be used for a variety of uses over time and to enable people to enjoy different activities in the same space.

Legibility

Creating views and vistas assists with legibility across the precinct and helps integrate the new development into the Newcastle CBD, opening up key north-south visual and physical links between the waterfront and Hunter Street.

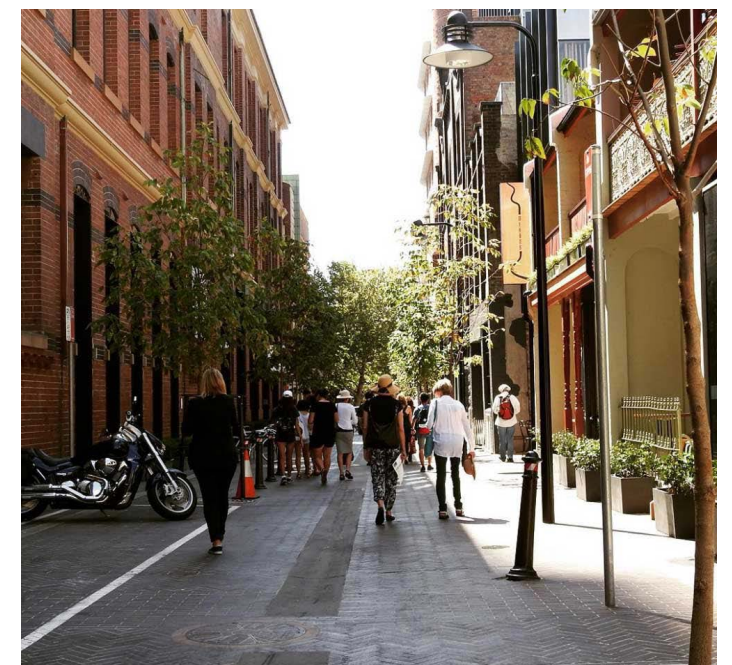
The definition of these links with themed planting and detailing will help with wayfinding across the campus.

Environmental Sustainability

The landscape and public domain must showcase environmentally sustainable design through environmental initiatives such as introducing water management elements, managing and controlling the runoff from roadways and construction sites and encouraging the return of aerial and terrestrial wildlife through improved landscape linkages.

Maintenance

The Plan reinforces a robust landscape infrastructure that is easily managed and reduces extensive maintenance requirements.



4. Public Domain Strategies



Figure 4.5 Public Domain Diagram

5. Public Domain Elements

5. Public Domain Elements

5.1 Planting

The Honeysuckle City Campus precinct will be defined by streets, laneways and tree lined avenues that soften and scale the built areas of the public domain. The streetscapes have been designed to prioritise pedestrians, then cyclists, public transport and lastly private vehicles.

There is an opportunity to reflect some of the forest planting of the Callaghan campus to the site through the use of appropriate species. Coastal forest trees such as spotted gum (*Corymbia maculata*) and smooth barked apple (*Angophora costata*) endemic to Callaghan may be appropriate at Honeysuckle.

The area is outside Newcastle City Council's City Centre precinct however some elements of the City Centre Public Domain Technical Manual may be brought through into the campus.

All planting should consider the principles outlined in the Callaghan Campus – Landscape Management Plan.

5.1.1 Wright Lane

Wright Lane is the main east-west pedestrian spine through the Campus and into the wider precinct. The rhythm and structure of the landscape framework will be set by a double avenue of large street trees that will define and frame the pedestrian mall.

The canopy will create a green corridor and provide shade and seasonal variation. Species should be chosen for their height, habit and feature bark and presence within the Newcastle CBD.

Areas of soft planting will punctuate the space, defining areas for building entries, outdoor dining or retail uses that open out onto the spine.



Figure 5.1 Wright Lane Key Plan



5. Public Domain Elements

5.1.2 Campus Heart

This new space within the wider Honeysuckle precinct is conceived as a large meeting space that can be used for gatherings, events and market days for the University and wider community. The evenly spaced street trees are smaller in height, have fine foliage characteristics with a dense crown that will provide a strong visual feature.

The pedestrian zone that transitions through the space will be framed by intermittent landscape segments or 'outdoor rooms', suitable for passive recreation and building break out spaces.

These rooms will be defined by the rhythm of the street trees, will give way to building entrances retail and cafes and be mixture of hard and soft landscape surfaces.

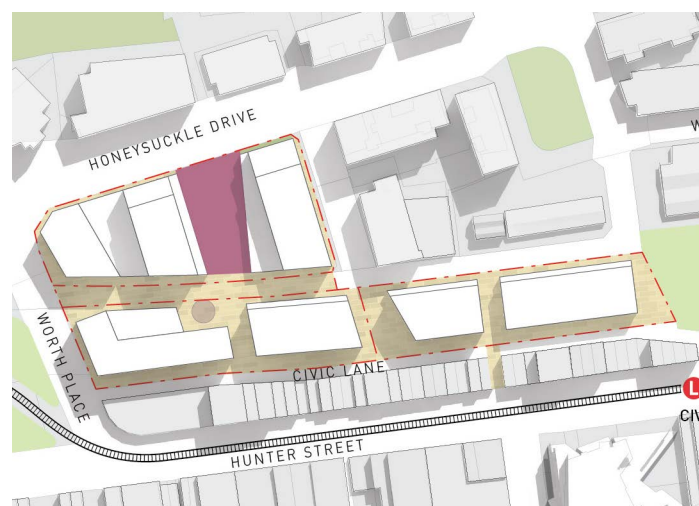
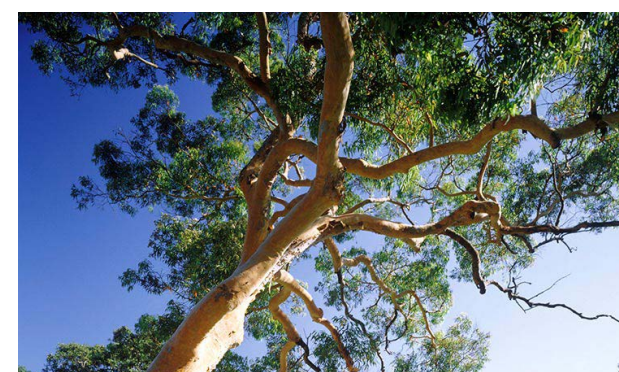


Figure 5.2 Campus Heart Key Plan



Coastal Banksia 'honeysuckle'



Smoothe Barked Apple



Spotted Gum

5. Public Domain Elements

5.1.3 Turntable Plaza

This largely hard paved space is located around the site of the heritage turntable. This space expresses heritage interpretation of the former rail yard uses through surface treatment and materiality, and will reveal and interpret the heritage turntable currently located below ground level.

The space is designed as a more intimate passive recreation space, connected to ground level cafes and building frontages. Pedestrians circulate around the plaza along Wright Lane and through the mid-block link to the east of the plaza.

Soft landscaping along Wright Lane around the turntable will provide shade, without detracting from the heritage significance of the site.

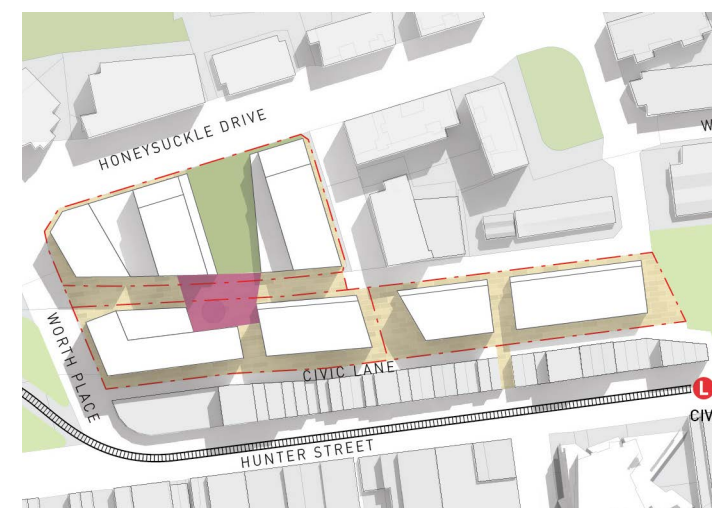


Figure 5.3 Turntable Plaza Key Plan

5.1.4 Civic Link Interface

The landscaped setback at Civic Link enables outdoor activity at the ground floor of the building on lot F fronting Civic Link.

The space will incorporate both soft and hard paved space to enable activity while responding to the landscaped character of the adjacent public space.



Figure 5.4 Civic Link Interface Key Plan

5. Public Domain
Elements

5.1.5 Civic Lane

Civic Lane is a one-way service lane and connects with a series of north-south through-site pedestrian links. Civic Lane will primarily be hard paved, with a change in ground material where it becomes a shared zone at Civic Link and at pedestrian crossing points. The Civic Lane carriageway is outside of the Campus boundaries.

Some soft landscaping may mark the primary pedestrian access points between buildings.

A footpath should be provided to enable safe pedestrian movement along the Lane at the rear of the Campus buildings.

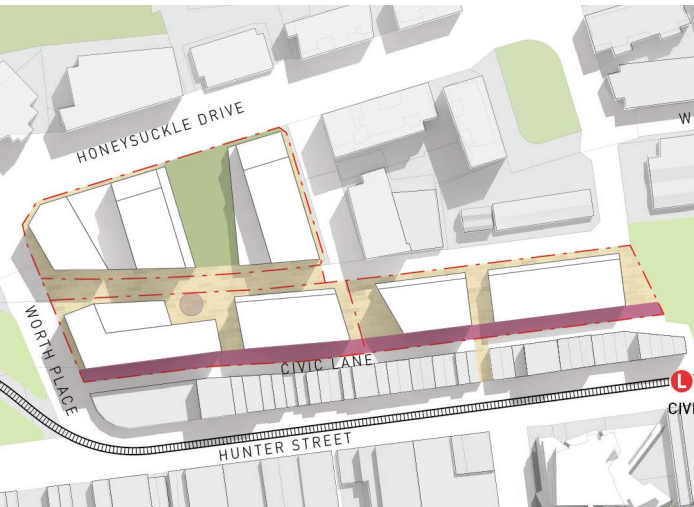
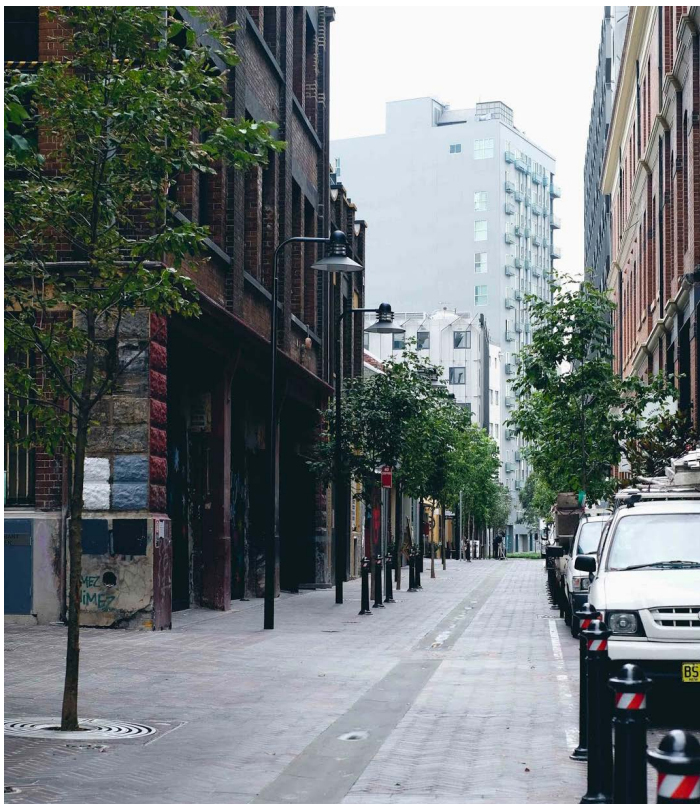


Figure 5.5 Civic Lane Key Plan

5.1.6 Mid-Block Pedestrian Links

Mid-block pedestrian links between lots B, D, E and F will be primarily hard paved to enable clear and safe pedestrian movement in a north-south direction. Soft planting will be provided where it does not impede pedestrian movement, to indicate areas for people to gather or pause.

Where the mid-block link meets Civic Lane, the landscape treatment should indicate to pedestrians that they are entering a shared zone with vehicles.



Figure 5.5 Mid-Block Pedestrian Links Key Plan

5. Public Domain Elements

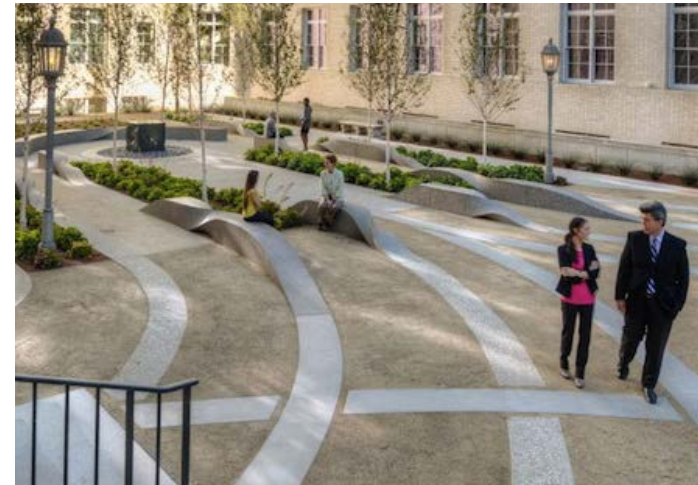
5.2 Paving

Paving materials in the Honeysuckle City Campus are to meet City of Newcastle standards at interfaces and delineate the different character and use of areas within the campus and public domain. The palette will be a mix of honed concrete pavers, insitu concrete paths and granite paving.

Other surface treatments within the campus will take a softer organic approach and will consist of timber, sandstone and decomposed granite as a juxtaposition to the CBD environment and to indicate passive recreation or more intimate gathering places. The softer materials palette aims to provide an urban response to the 'bush' identity of the Callaghan Campus.



Directional feature paving, Times Square



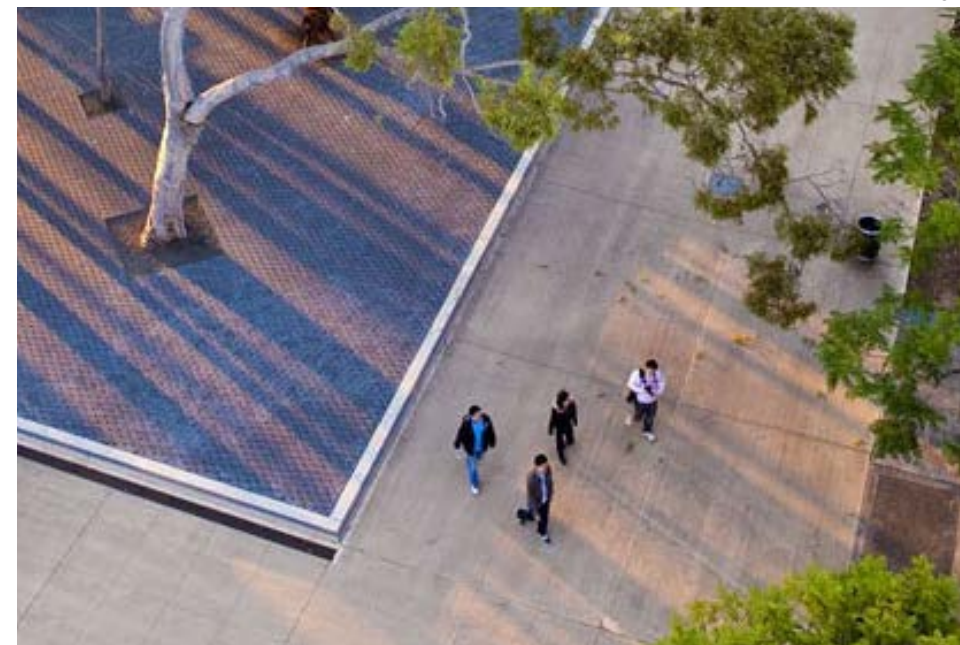
Decomposed granite with paved concrete ribbons, Civic Centre Plaza, San Francisco



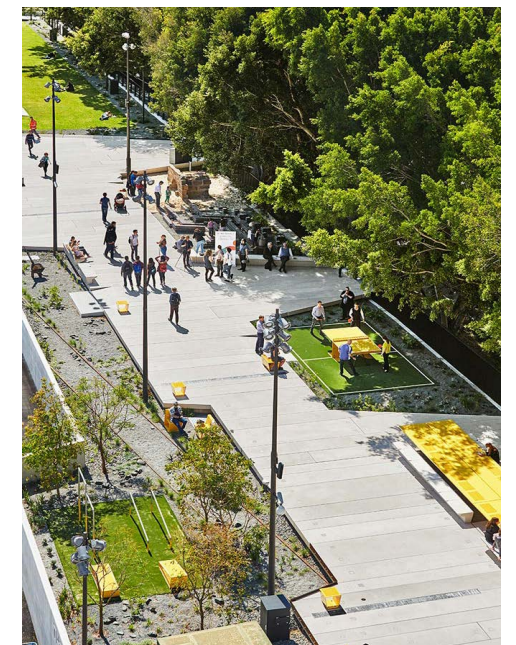
Paving types delineate between movement and passive zones. Rice University, Houston



Heritage rail line expression and directional paving, Highline New York



Paving differentiation between movement active and passive zones, Macquarie University



The Goods Line with paved movement zone and more intimate passive recreation zones marked by a change in materials

5. Public Domain Elements

5.3 Public Domain Lighting

Successful precincts work both during the day and at night with lighting a crucial element that both attracts people and helps navigate precincts. Very often, the highest usage of the Honeysuckle City Campus will be after hours and it is essential that lighting is functional and inviting.

There are three areas where lighting plays a role:

Identity

Lighting can reinforce the identity and character of an area or precinct at night. Through effects, lighting can highlight key elements or simply unify a precinct through a common approach. Lighting can be used to create various emotions that could range from fantasy to reverence.

Safety

Security lighting is essential. If people do not feel safe, they will stay away. Lighting main circulation paths and adjoining areas so that there are no dark spots or shadows that could harbour threats will add to the enjoyment of users.

Variety

Lighting can be used to change the character and mood of a place on a seasonal or special event purpose. The lighting of elements to reflect a holiday or season is an effect and popular device to add variety or interest to a place.

A number of principles have been identified. These include:

Precinct Lighting

In order to unify the precinct, a common lighting colour is proposed. The adoption of a warm white light as a standard is intended to unify the precinct and improve colour rendering.

Iconic Building Lighting

The lighting of the key facades reinforces the precinct's identity and creates landmarks within the precinct. These will be dramatic and exciting elements of the campus precinct. Illuminated advertising and signage will be limited (refer to Signage section).

Gateway Lighting

The introduction of specialised lighting at key entry points reinforces the sense of the precinct as a unique place. This sense of identity and anticipation will enhance the experience and perception of the Honeysuckle City Campus.

Open Space Lighting

Each space will have its own character and identity. Lighting of these spaces at night is important whether they are in use or not. Animated or moving projections over horizontal (and some vertical) planes may be used. Selected buildings can be lit with variable coloured lighting to emphasise entry points.

Provision should be made for temporary lighting that can be installed for events and

used before and during special occasions. Each space will have the minimum level of security lighting needed through the later night hours.

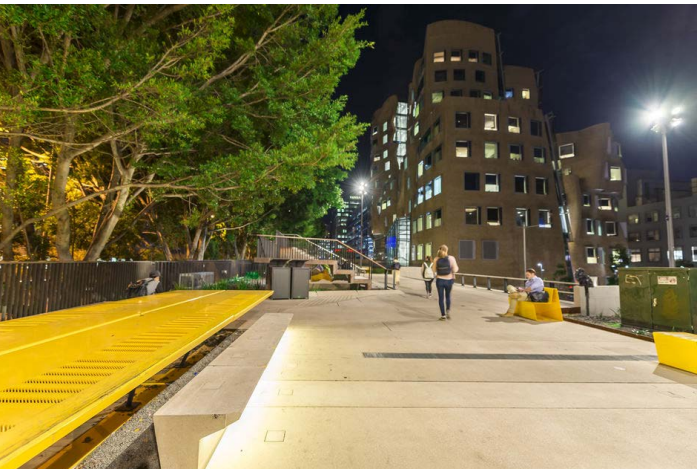
Solar lighting to be investigated.

Street Lighting

Street lighting shall be provided to at least City of Newcastle standards. Metal halide lamps that provide a white light that better renders flesh tones are to be used across the precinct.

Public lighting divided into smart poles and pedestrian poles. Smart poles may be used along Civic Lane in conjunction with City of Newcastle plans to upgrade the laneway.

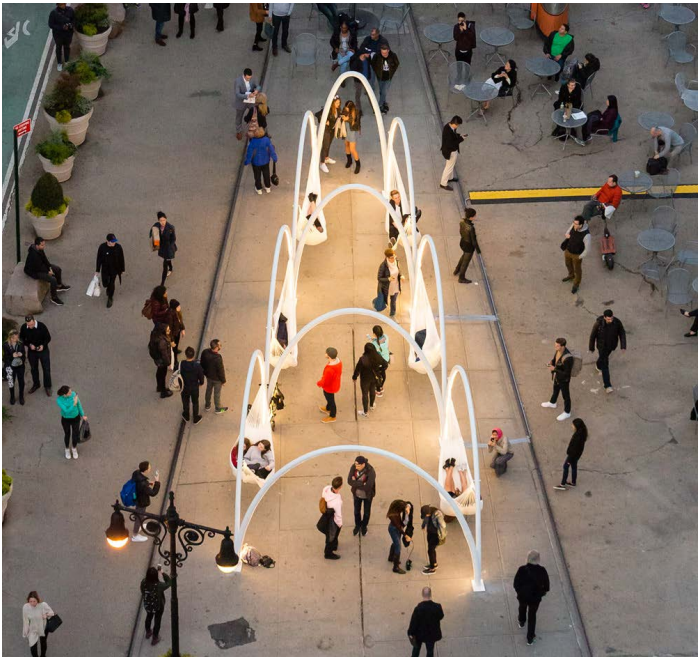
Adequate lighting should be provided at any shuttle bus stop location for the Campus to provide a safe and visible environment for people to wait.



Precinct lighting creates safe pedestrian environments at night, Goods Line



Iconic building lighting and unique open space lighting, Buchanan St, Glasgow



Public art can incorporate lighting to create an iconic place at night. Temporary installation by LOT, Flatiron Plaza, NY

5. Public Domain Elements

5.4 Street Furniture

A uniform suite of street furniture is to be used through the Campus to ensure that the various zones of the Campus are integrated with a discrete background language. The selected suite will be high quality manufactured street furniture that will be able to sustain both heavy use and exposure to the marine environment.

The final suite will be selected in detailed design of the public domain.

A palette of benches, bus stops, bicycle racks, area lighting, bollards (with lights), bins, tree guards and tree rings will make up the selection. The chosen group of products will provide a fresh and contemporary appearance appropriate to the environmental requirements of the development.

The elements are to include:

- street lights
- benches
- bicycle racks
- bus shelters
- area lighting
- bollards
- bins
- tree guards



City of Sydney contemporary street furniture palette



Bicycle parking at Barangaroo

5. Public Domain Elements

5.5 Public Art

The provision of public art within open space is an important step in contributing to a sense of 'place' on the Campus and within the precinct and to the creation of a truly public domain.

These installations will provide visitors with an intellectual aspect to the environment to complete the cultural enrichment that can be gained by enjoying what the open space has to offer.

Several principles underpin the strategy:

- Public artworks are to be integrated into the public domain
- Artwork should provide interest, create engagement and be the expression of contemporary UON culture
- A description of each work and its concept will accompany the artwork as a story of its installation.
- All artworks within the public domain shall be first approved by UON.
- Heritage interpretation can be achieved through public art (refer to Heritage Interpretation section).



Public art may engage people at night through installations incorporating video, light or projections.
Quartier des Spectacles, Montreal



Public art may engage with the history or concealed layers of the site within the public domain.
'Subway Map Floating on a NY Sidwalk' by Francoise Schein.

5. Public Domain Elements

5.6 Heritage Interpretation

The site has a rich history including indigenous heritage, and the transformation associated with the construction of the rail line and workshops, the evolution of Hunter Street and the transformation of the harbour.

The remnants of the locomotive turntable are an important artefact remaining on the site.

There is an opportunity to integrate heritage interpretation of significant elements into the design based on the advice of specialist heritage consultants.

Interpretation of the turntable within the open space of the Campus Heart is a key opportunity to express the history of the site and create a memorable and pleasant place for the UON community to gather.



Heritage interpretation, Australian Technology Park



Heritage interpretation, Ballast Point Park



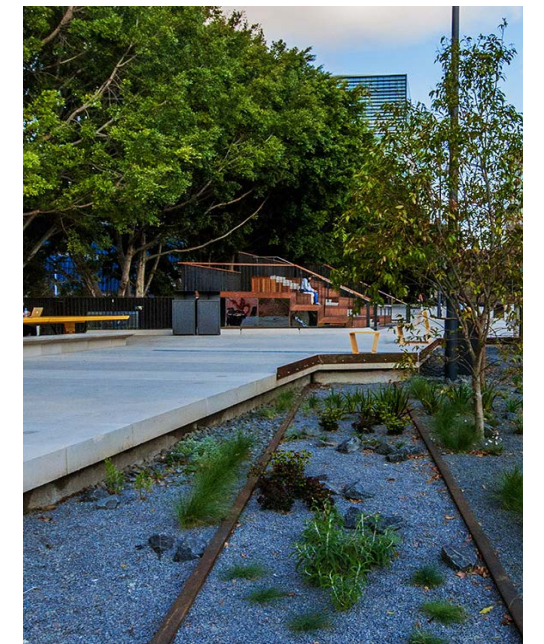
Boilerhouse heritage adaptation, WSU Rydalmere



Heritage rail line expression, Highline New York



Heritage interpretation of former turntable, Roundhouse Turntable Plaza Vancouver



Historic rail line remnants within landscape, Goods Line

**5. Public Domain
Elements**

6. Built Form Elements

6. Built Form Elements

6.1 Articulation

The key architectural objective of the Master Plan is the development of a high quality architecture that responds appropriately to its environmental and site context. The development of a rich and interesting architecture on sites is dependent on both the massing of buildings and their detailing and articulation.

Building articulation is to be generated through the expression of overall massing as well as separate parts of a building, such as entries, access stairs, walkways, sun shading and balconies. Elements that are required to moderate environmental conditions, such as sunlight, breezes and screening, are to be designed to enliven a building's facade.

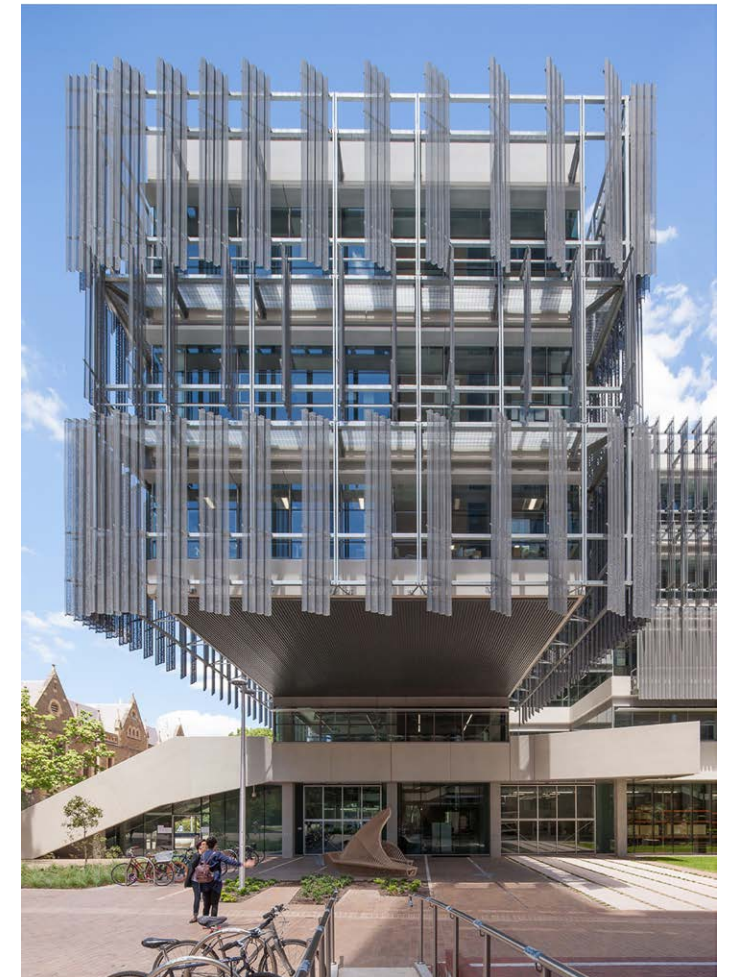
- Buildings must demonstrate contemporary expression and environmental responsiveness and function must respond to place, environment and the urban character of the Honeysuckle City Campus precinct.
- Historical styles are not permitted.
- Building entries must be clearly articulated and be visible from the public domain.
- The use of fixed awnings at a consistent height between buildings is encouraged to provide weather protection and articulation of entries.
- Elements such as balconies and sun shading that create a sense of scale or rhythm on the facades are to be employed to add to the richness of the architectural expression.



Colonnade distinguishes the building's ground floor
University of Birmingham Library, UK



Facade transparency shows internal vertical circulation.
The New School University Centre, NY



Vertical screens provide shading and facade articulation,
Melbourne School of Design, University of Melbourne

6. Built Form Elements

6.2 Materials

The Master Plan seeks to apply a common palette of materials appropriate to place and environment that will unify the buildings within the campus precinct. While not overly proscriptive, these seek to create a common language and reinforce the contemporary and modern expression of buildings in the precinct.

- A common materials palette is required for the precinct, with a clear distinction between low rise and high rise elements to be expressed.
- Materials should be light in colour, and predominantly neutral in tone along with glazing. Natural materials including timber and concrete are encouraged. Accent colours may emphasise key locations including important corners and vistas.
- The podium of each should include brickwork as a unifying design element throughout the campus with unique material and design expression provided at building entries and around areas of glazing.
- Western facades should be predominantly solid or they must include sun shading devices.
- Northern facades should be predominantly glazed with sun shading.
- Reflective glass is not permitted
- Low glare roof materials must be used.
- Develop a contemporary architectural expression that creates a human scale to the public domain enlivened by smaller scale articulation elements such as louvres, balconies, roof overhangs.
- Use a range of materials that are appropriate to function, maintenance, and scale.
 - low rise podium facades that can easily be seen by the pedestrian should comprise high quality durable materials with developed architectural details.
 - Materials for higher elements that are more difficult to service and maintain should be low maintenance, while less detail may be required.



Glazing with sun shading screening provided to exposed facades
Sir Samuel Griffith Centre



Neutral materials palette with differentiation between podium and upper levels
Newcastle Courthouse

6. Built Form Elements

6.3 Building Lighting

Successful developments work both during the day and at night. Lighting is a crucial element that both attracts visitors and assists them in navigating sites.

The careful illumination of buildings and open spaces for access, accents and building identification within private lots will contribute to the success and night time experience of the Honeysuckle City Campus.

Internal illumination should be allowed to shine through the glazing, thereby offering a 'glowing jewel' effect. Such lighting is to be carefully controlled to avoid excess energy use.

- Lighting should integrate fixture style with the building's architectural character.
- Investigate opportunities to utilise solar (photovoltaic) technology, high efficiency fixtures or alternative energy sources as energy saving measures.
- Buildings must have a strong night-time building presence and entries be visible from their primary vehicular and pedestrian access points.
- Building lighting should be integrated with access, wayfinding, signage and public art strategies for the Campus
- Across the site, white metal halide light must be used for external lighting rather than yellow sodium vapour lamps.
- Visible point sources of building illumination must be minimised with appropriate consideration of glare and lighting positioning.



Building lighting is integrated with signage and has a strong night-time presence
The New School, New York

6. Built Form Elements

6.4 Building Signage

The adoption of signage controls is aimed at creating a cohesive, attractive and informative signage package that allows identification of buildings but does not impact the character and quality of the new campus:

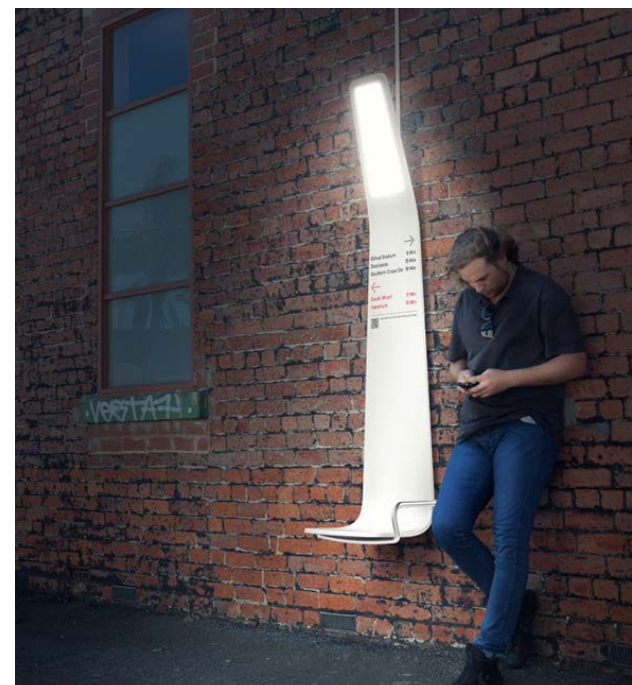
- Building identification signage must relate only to UON.
- Building identification signage is to be a maximum size of 25m².
- Signage lighting is to be arranged and maintained so that the light source is not directly visible from a public right-of-way or adjacent property.
- As part of the detailed proposal submission, a plan is to be submitted for approval by UON showing the location of the proposed signage and detailing dimensions, proposed colour, material, copy, and method of illumination.
- Building Approval must be obtained prior to erecting, altering, displaying or relocating a temporary or permanent signage.
- Buildings must have street numbers prominently displayed on the main street elevation. Numbers must be 500 millimetres in height, non- illuminated and mounted 3 metres above the ground floor level.

The University has adopted a unified signage strategy across both the Callaghan and Ourimbah campuses. The strategy aims to present a cohesive and defined presence both on campus and in the local community as a university of distinction, with outstanding teaching and research and to be a responsive, dynamic and strong organisation.

All signage at Honeysuckle should be consistent with this strategy.



Callaghan Campus signage



Fixed building identification signage, The New School, New York

Illuminated wayfinding integrated with a rest seat. 'tranSIT' by Troy Turner

6. Built Form Elements

6.5 Sustainability

The University of Newcastle is committed to incorporating sustainability into its actions and practices as part of its responsibility to the community and the environment, as well as promoting a healthy workplace and campus for staff and students. This means promoting connections to the global community and environment through knowledge gained from research, utilising creative approaches to learning and teaching and modelling sustainability in its campus operations.

New development within the Honeysuckle Campus precinct is required to:

- maintain, respect and restore biodiversity
- create quality, comfortable, healthy and safe environments
- ensure responsible resource use (especially non-renewable resources)
- explore energy collection, energy conservation and waste re-use
- consider adaptation, recycling, and deconstruction of buildings and materials
- minimise pollution and environmental impacts
- balance capital, efficiency and building lifecycle costs.
- development on the site shall be capable of achieving the following targets:
 - Buildings should achieve a minimum 5-star Green Star rating.
 - Buildings should achieve a minimum 5-star NABHERS rating.



Photovoltaic cells are integrated with the roof form to enable energy collection
Sustainable Buildings Research Centre, University of Wollongong, photographer: Richard Glover



Building screening creates comfortable internal spaces, while ground level planting enhances biodiversity and regulates the microclimate.
Melbourne School of Design, University of Melbourne

**6. Built Form
Elements**

7. Lot Guidelines

7. Lot Guidelines

7.1 Lot A1

Site	1
GFA	4,608m ²
Indicative Max. Height	6 storeys + rooftop plant / lift motor rooms

Setbacks

Honeysuckle Drive	0m
Worth Place	0-3m
Wright Lane	3m

Guidelines

The primary address for Building A1 is on Honeysuckle Drive. This prominent corner site will also be viewed along Worth Place from Hunter Street.

The ground level should have a more generous floor to floor height than storeys above.

Servicing of the building will be from Worth Place, however should not compromise the amenity of this highly visible building frontage.

Building A1 should plan for a physical connection to Building A2 at ground and first floor.

The Flood Information Certificate for this site indicates that the minimum floor level for occupiable rooms on the site is 2.51m AHD. The lowest basement level is -3.38m AHD.

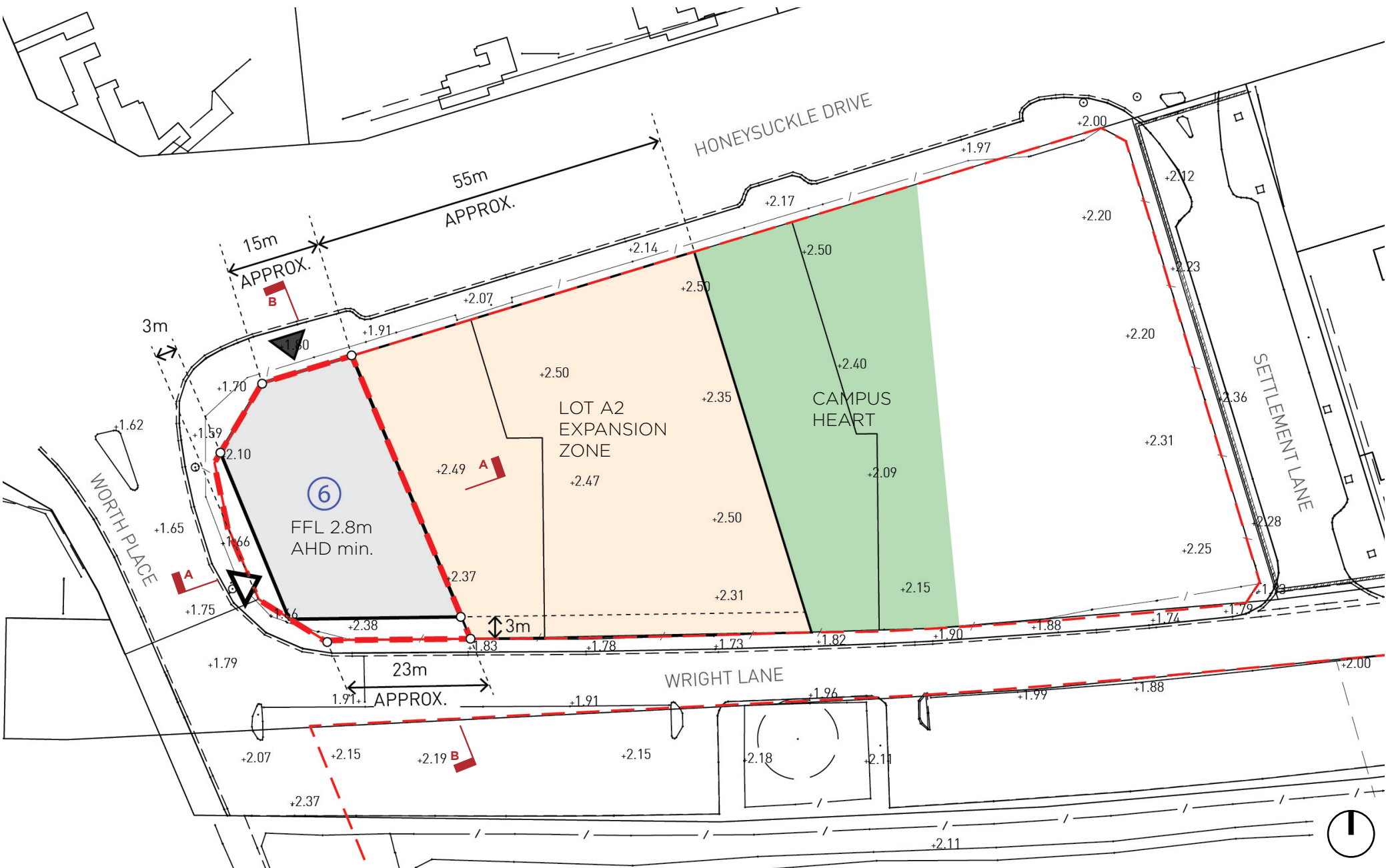
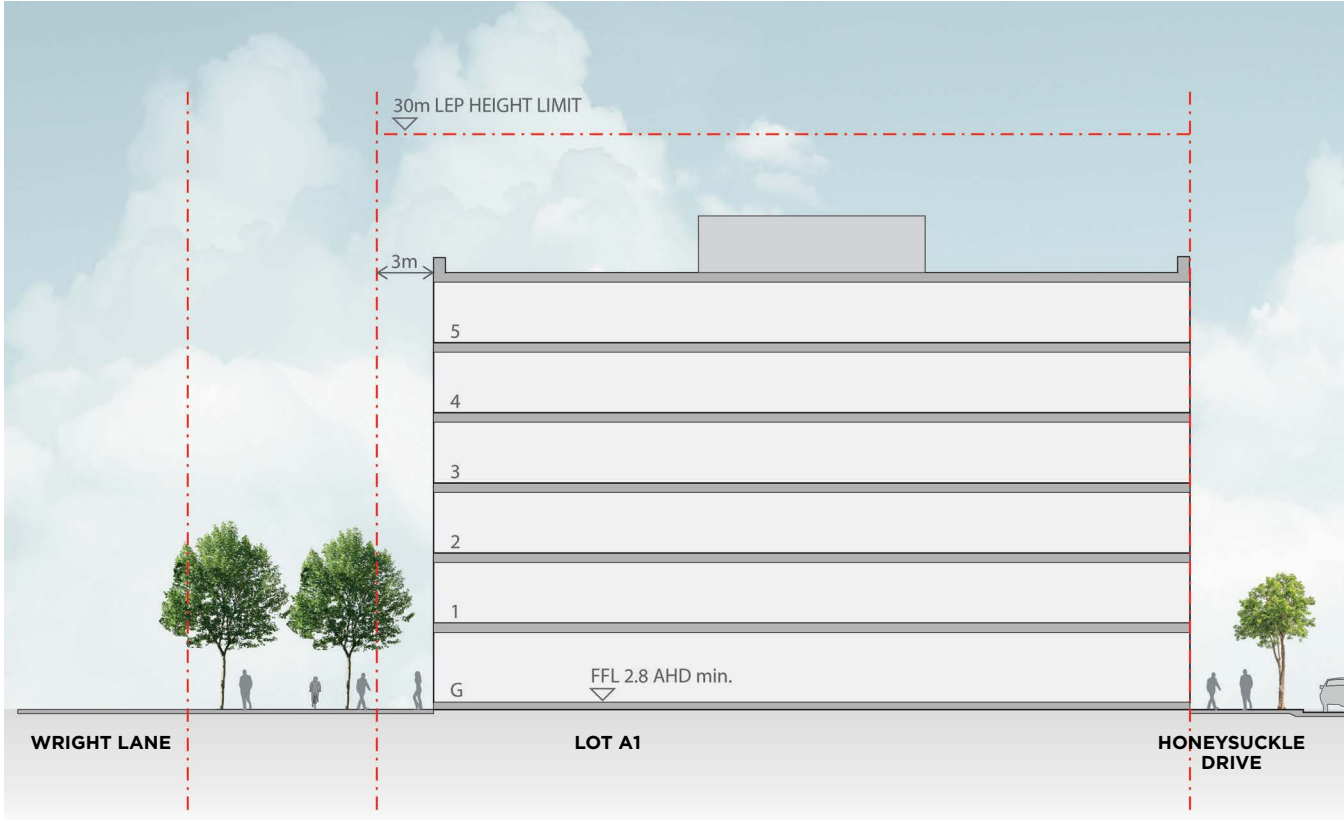
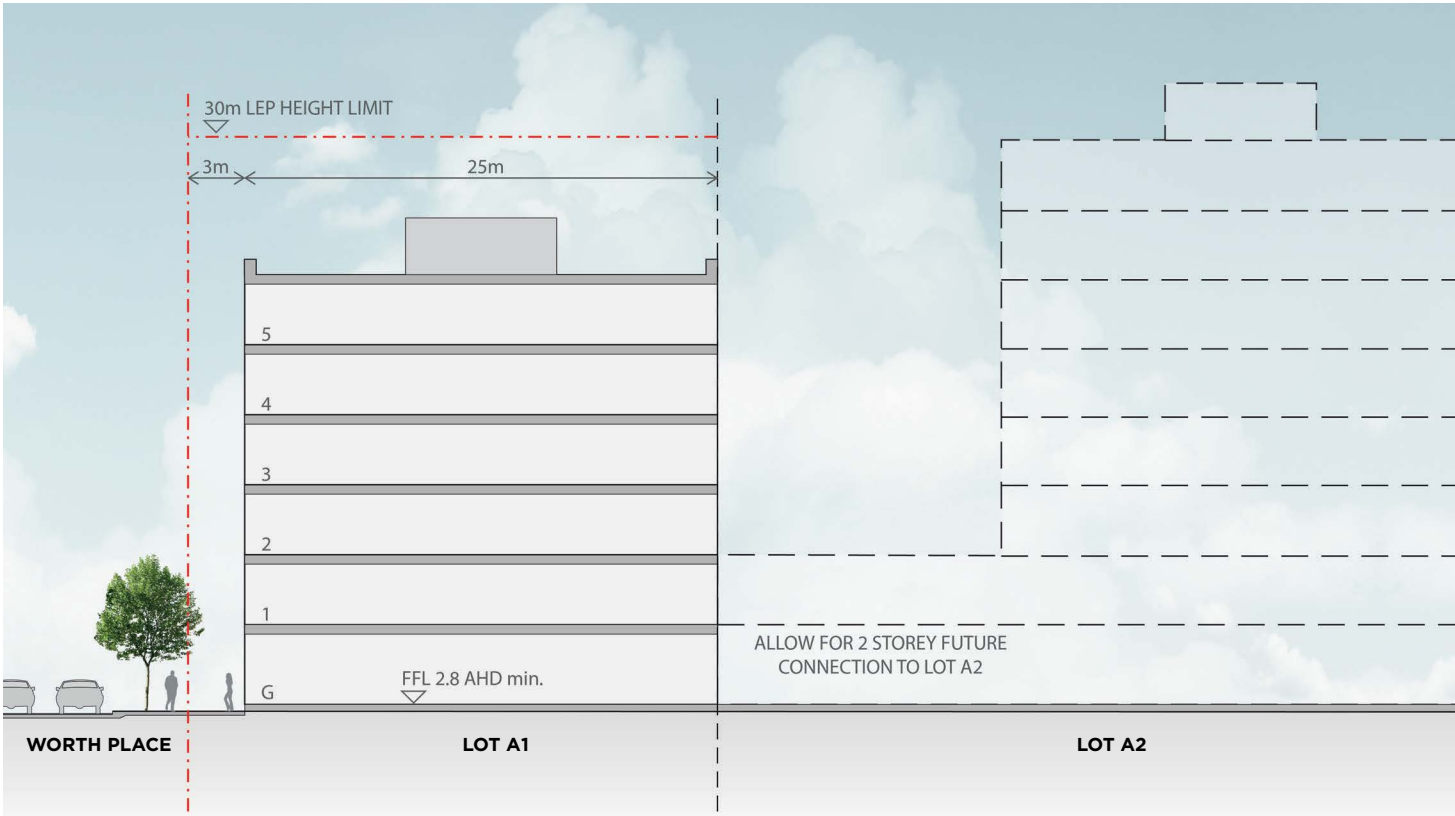


Figure 7.1 Lot A1 Detail Plan

7. Lot Guidelines



Section A



Section B

Figure 7.2 Lot A1 Sections

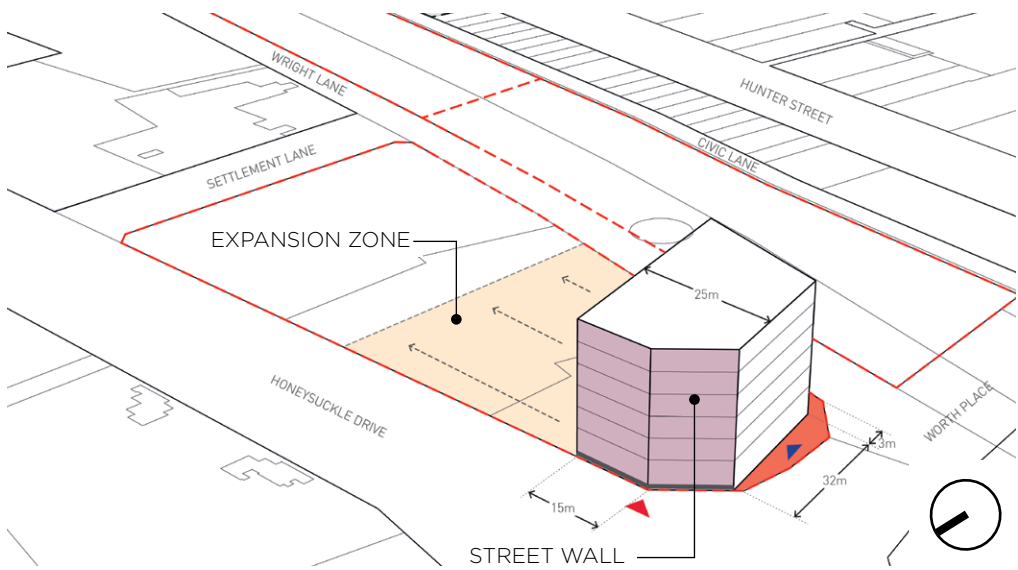


Figure 7.3 Lot A1 3D Massing

7. Lot Guidelines

7.2 Lot A2

Site	1
GFA	10,299m ²
Indicative Max. Height	8 storeys rooftop plant / lift motor rooms

Setbacks

Honeysuckle Drive	0m Minimum 6m setback above 7 storeys
Wright Lane	3m
Campus Heart	3m setback above podium

Guidelines

The primary address for Building A2 is on Honeysuckle Drive. Additional access points should be provided from the Campus Heart.

The ground level should have a more generous floor to floor height than the storeys above.

Servicing of the building will be from Worth Place through Building A1. Servicing may be provided from Wright Lane if pedestrian priority and amenity can be demonstrated.

Building A2 should have a 2 storey podium connection to Building A1 with the podium providing street wall definition to Honeysuckle Drive.

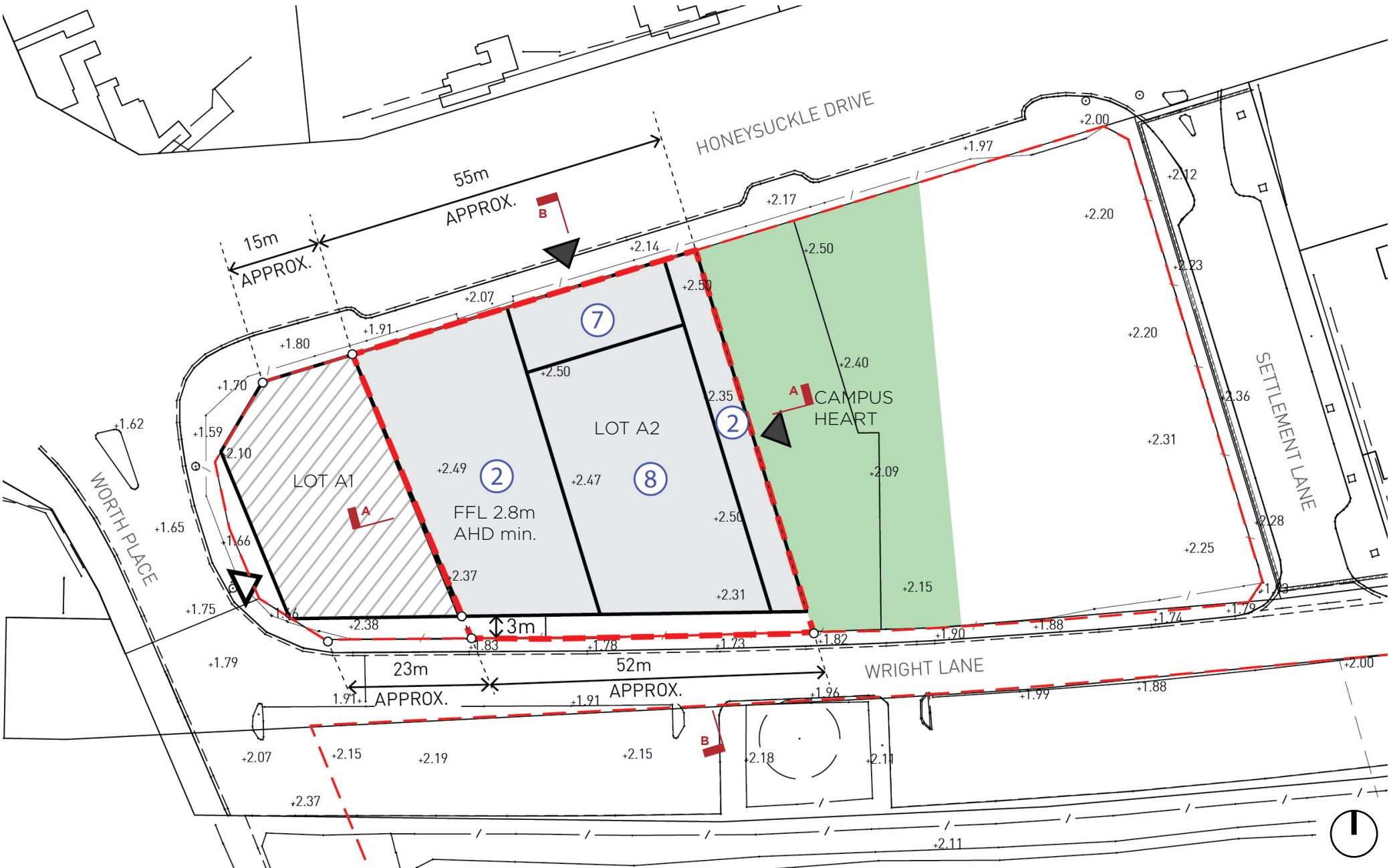


Figure 7.4 Lot A2 Detail Plan

7. Lot Guidelines

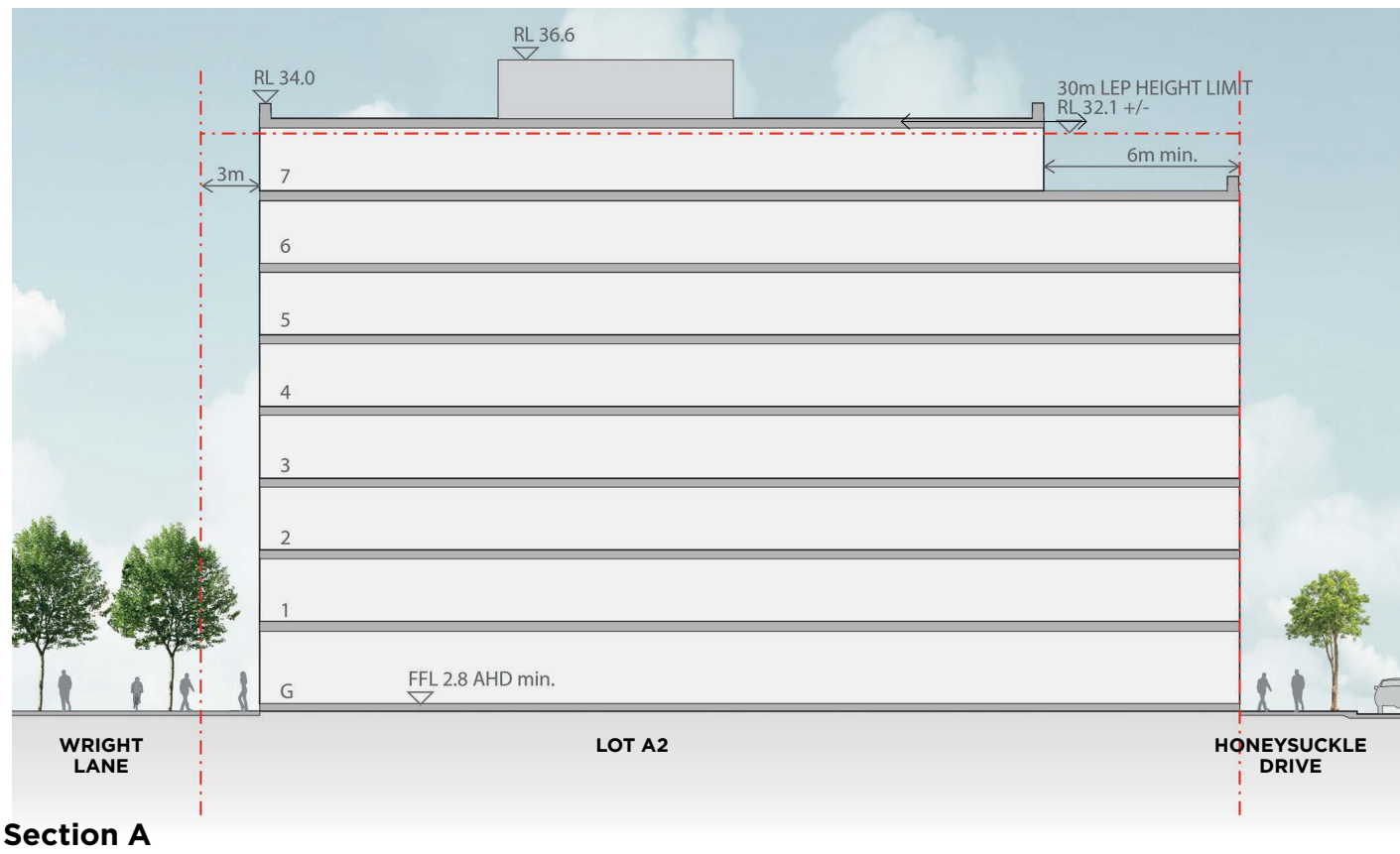
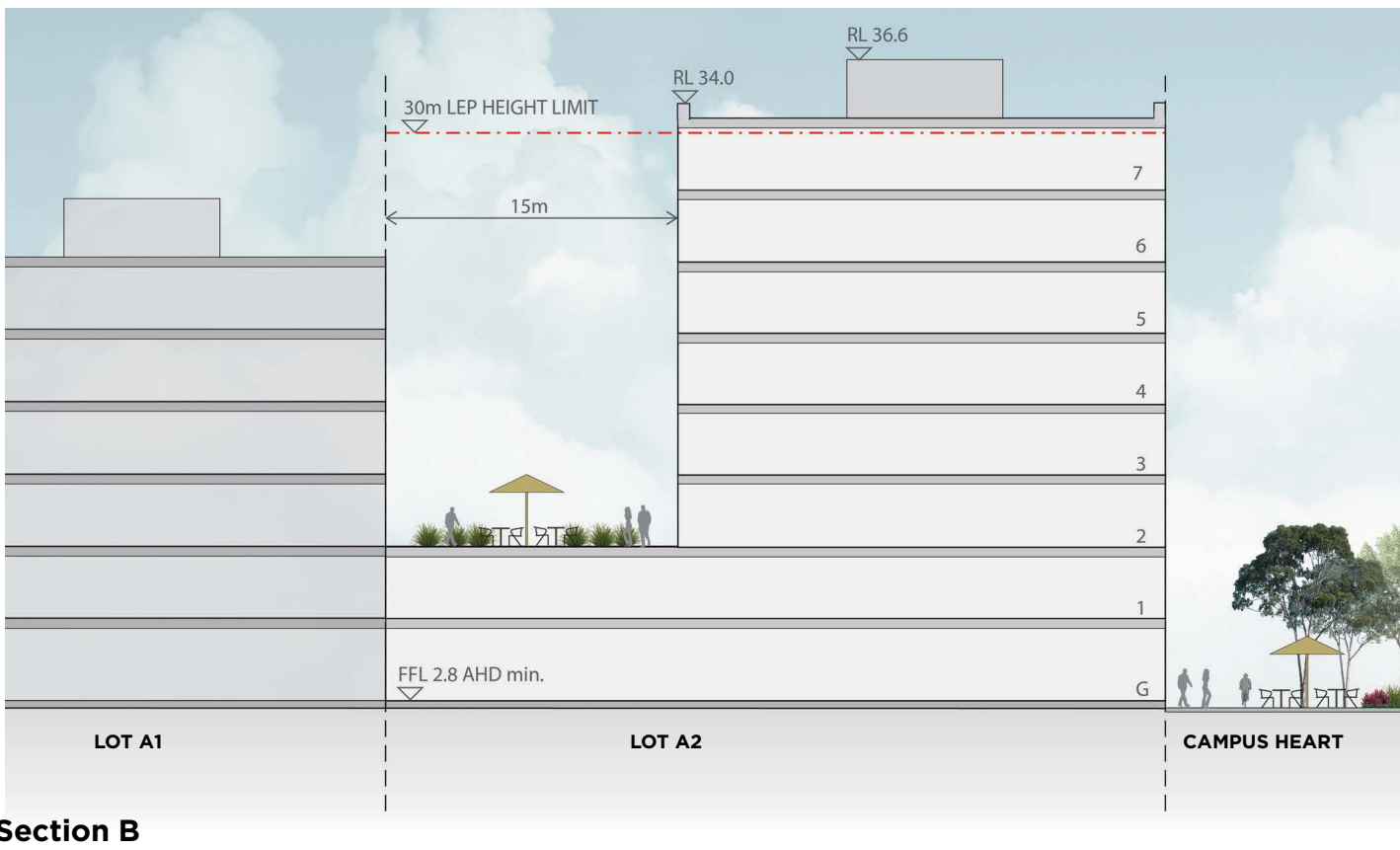


Figure 7.5 Lot A2 Sections



Section B

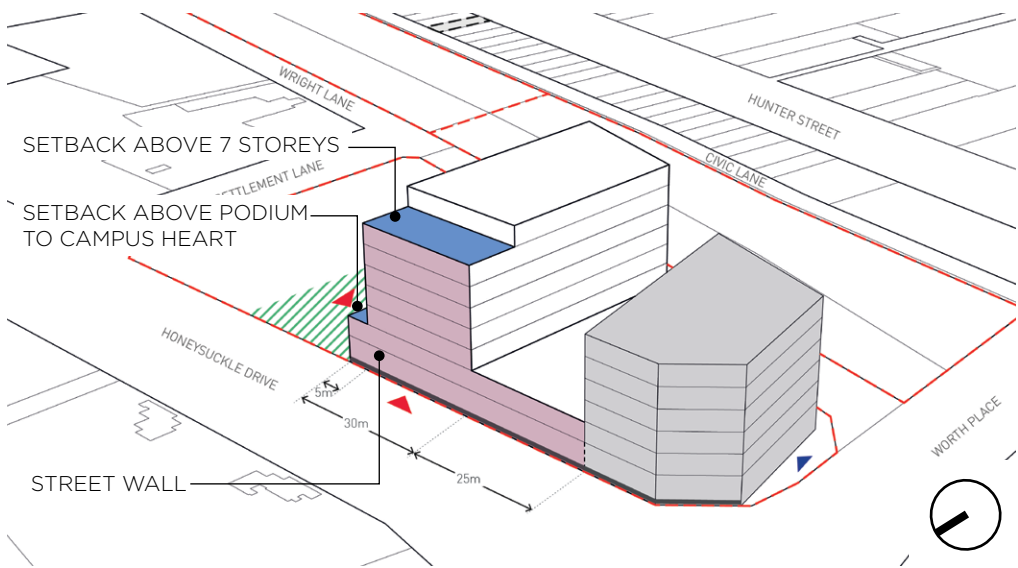


Figure 7.6 Lot A2 3D Massing

7. Lot Guidelines

7.3 Lot B

Site	2
GFA	11,828m ²
Indicative Max. Height	9 storeys + rooftop plant / lift motor rooms

Setbacks

Worth Place	3m
Wright Lane	3m Setback above podium around Turntable
Civic Lane	6m

Guidelines

The primary address is on Worth Place with additional frontage to Wright Lane. This is a prominent site with a high level of visibility from Hunter Street along Worth Place, as well as from Honeysuckle Drive.

Servicing of the building will be from Civic Lane.

Adequate setbacks should be provided around the heritage turntable. While indicative setbacks have been shown, these should be agreed with the heritage architect for the project.

The building on Lot B may be expanded towards the east, however pedestrian permeability should be retained between Lots B and D with a minimum building separation of 8m.

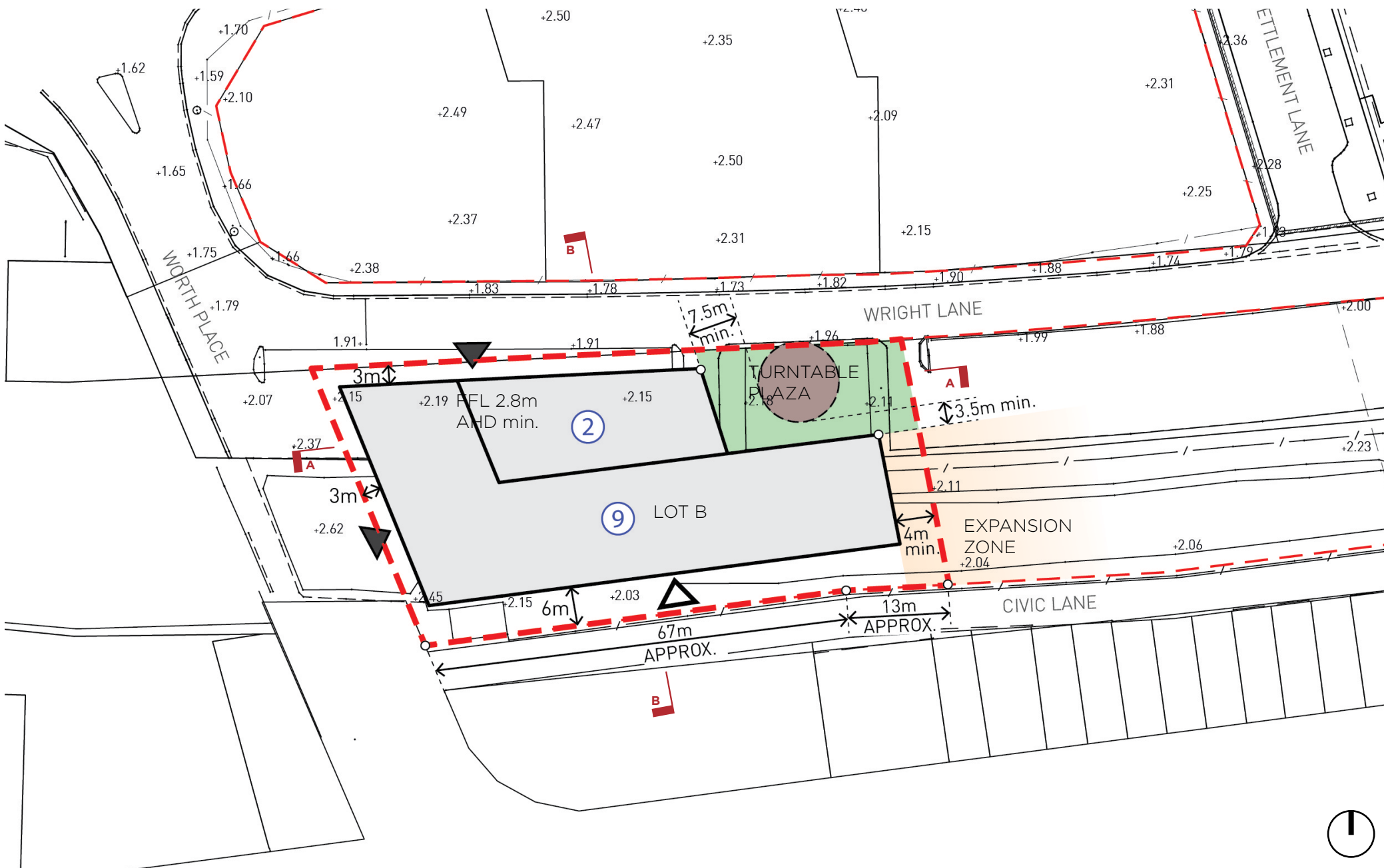
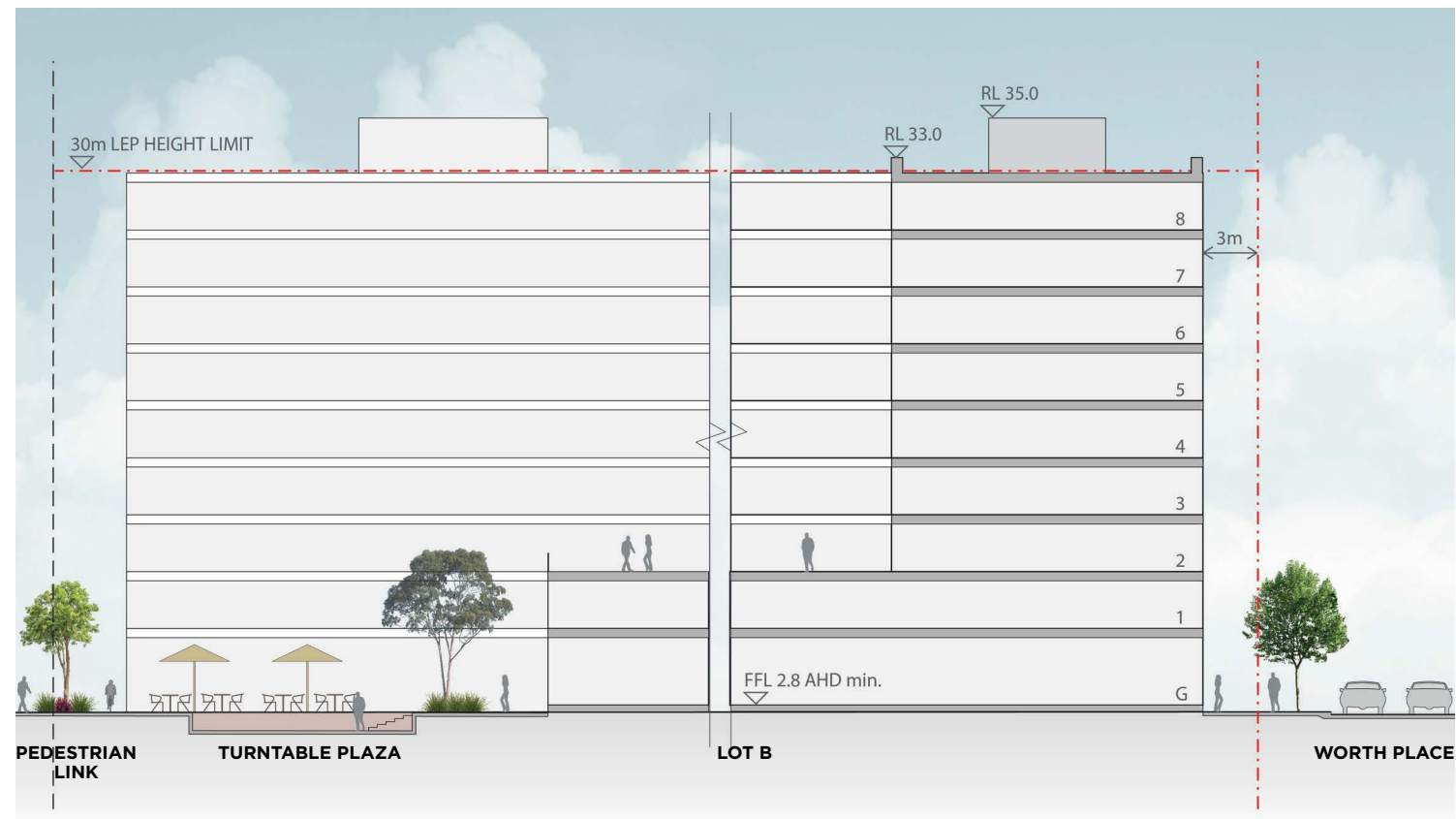


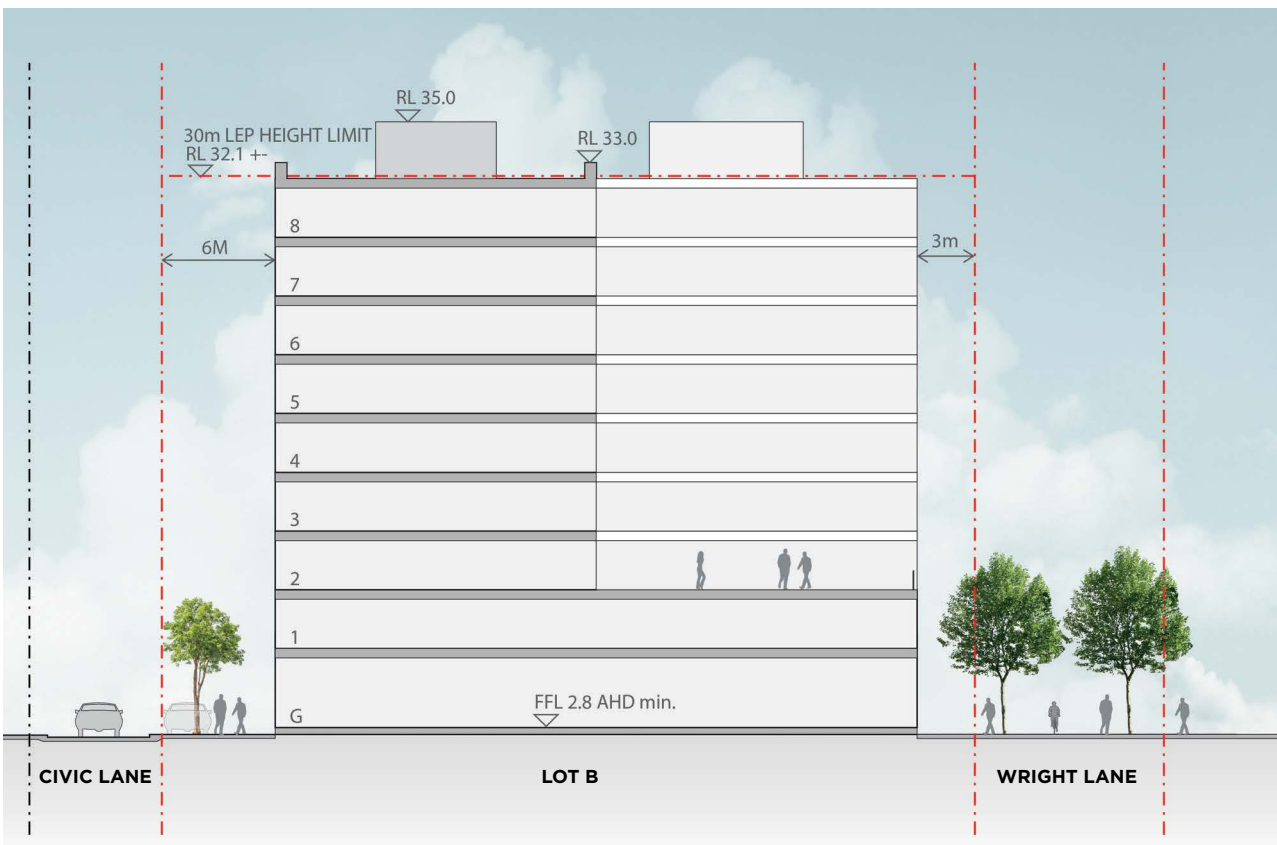
Figure 7.7 Lot B Detail Plan

7. Lot Guidelines



Section A

Figure 7.8 Lot B Sections



Section B

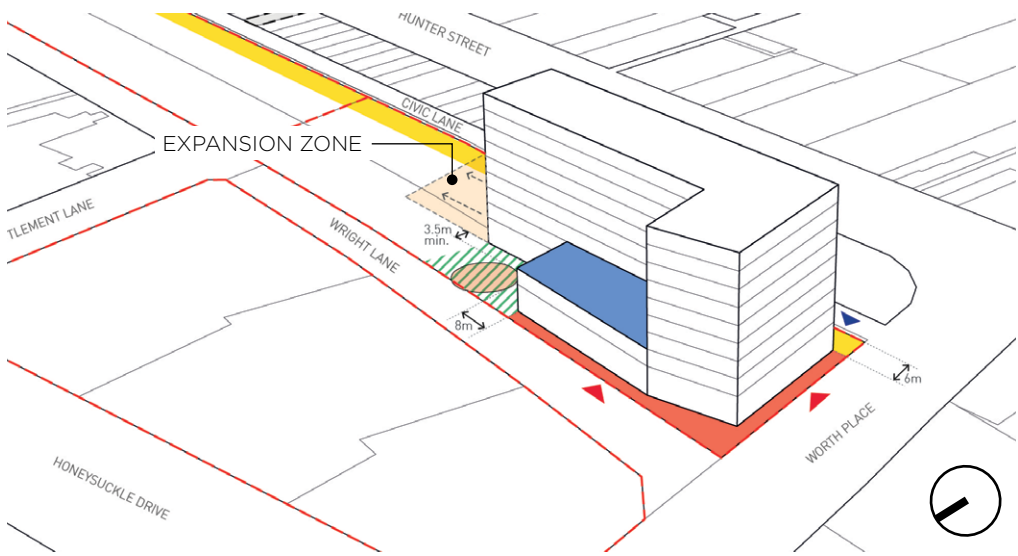


Figure 7.9 Lot B 3D Massing

7. Lot Guidelines

7.4 Lot C

Site	1
GFA	12,217m ²
Indicative Max. Height	7 storeys + rooftop plant / lift motor rooms

Setbacks	
Honeysuckle Drive	0m Minimum 6m setback above 6 storeys
Wright Lane	3m
Settlement Lane	3m

Guidelines
The primary address is on Honeysuckle Drive with additional frontage to the Campus Heart. This site has a high level of visibility from Honeysuckle Drive.

Servicing of the building will be from Settlement Lane.

A setback must be provided to Settlement Lane to enable new underground services due to the subterranean carpark under Settlement Lane.

The building on Lot C should not overshadow the Campus Heart.

Lot C may have elevated pedestrian links to Lot D across Wright Lane if required and permitted.

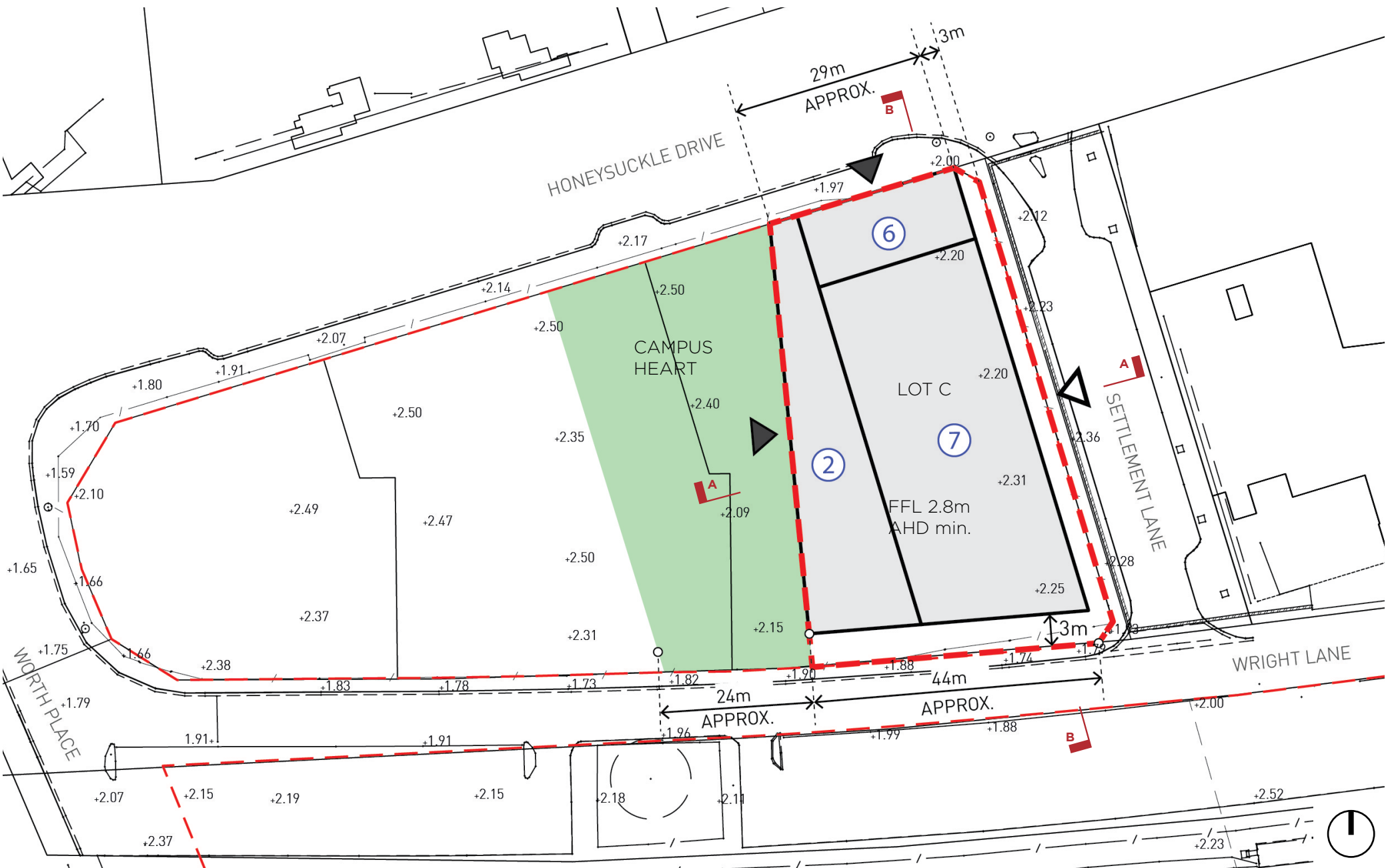
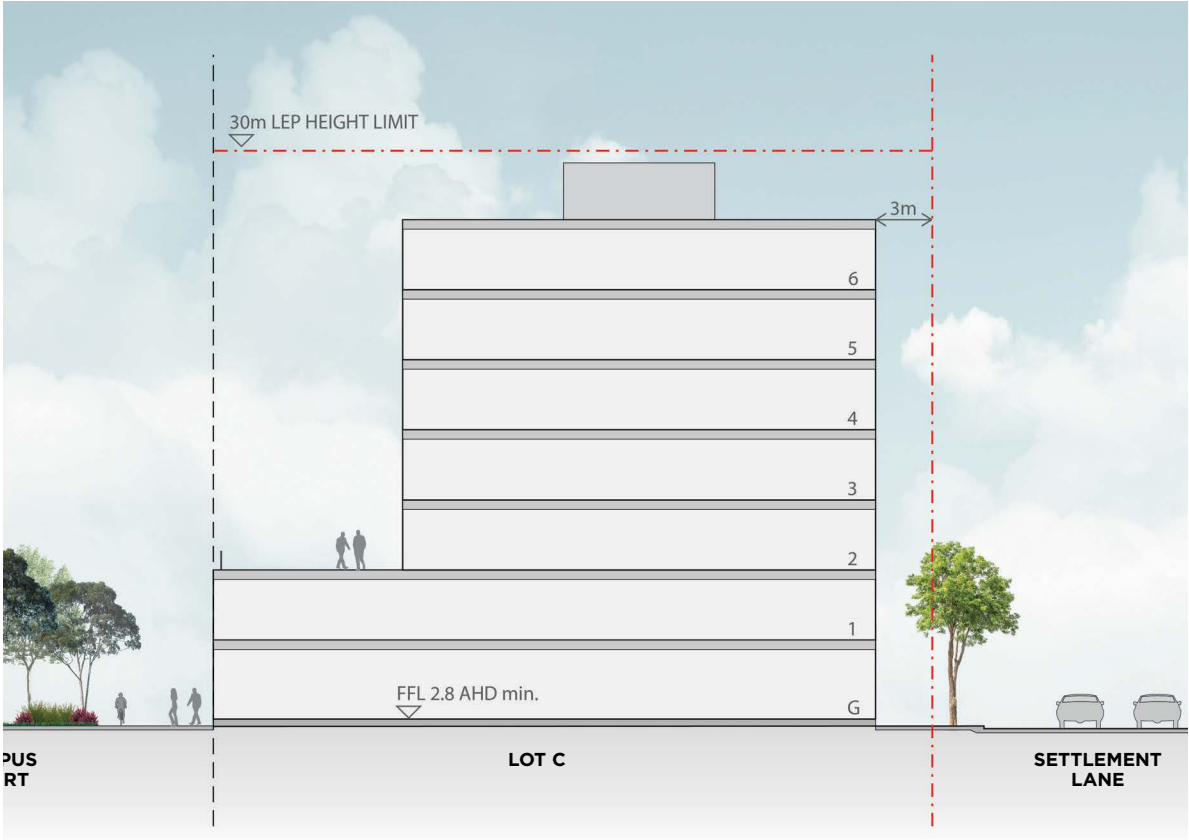
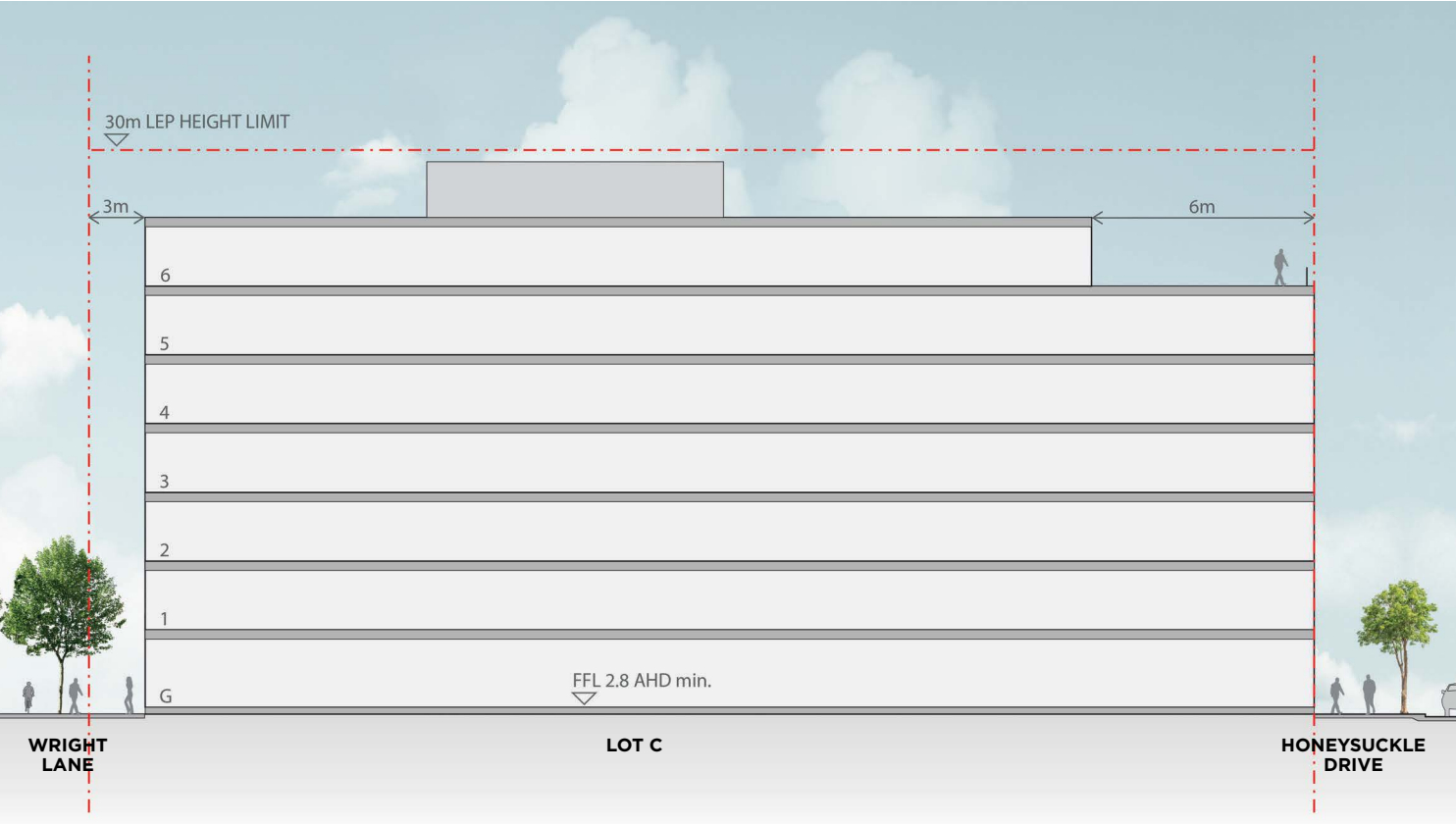


Figure 7.10 Lot C Detail Plan

7. Lot Guidelines



Section A
Figure 7.11 Lot C Sections



Section B

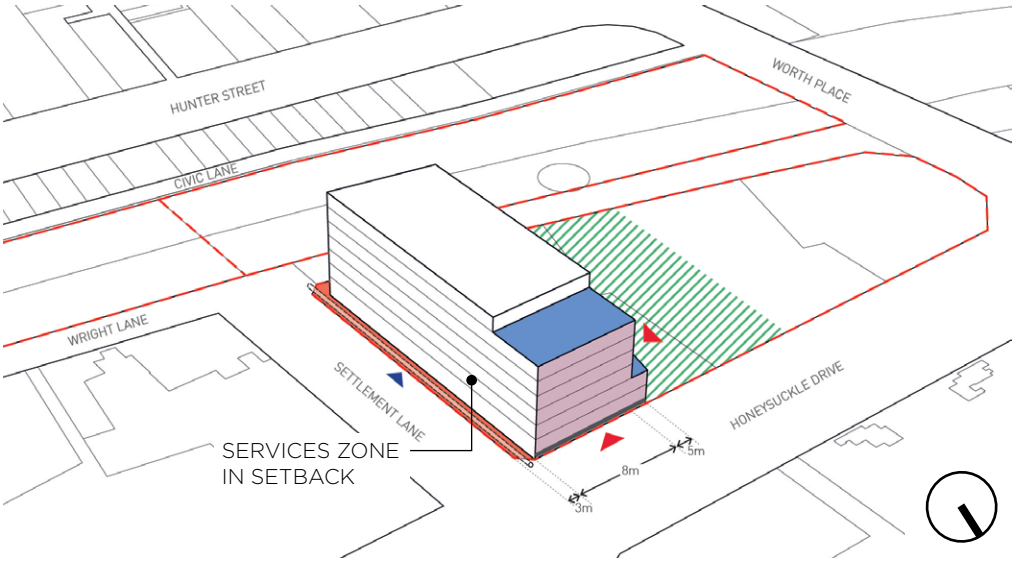


Figure 7.12 Lot C 3D Massing

7. Lot Guidelines

7.5 Lot D

Site	2
GFA	9,415m ²
Indicative Max. Height	7 storeys + rooftop plant / lift motor rooms
Setbacks	
Wright Lane	3m 3m Setback above podium
Civic Lane	6m

Guidelines
The primary address is on Wright Lane. Servicing of the building will be from Civic Lane.

A through-site visual and pedestrian connection should be maintained to the east of the building from Civic Lane along Settlement Lane to the waterfront.

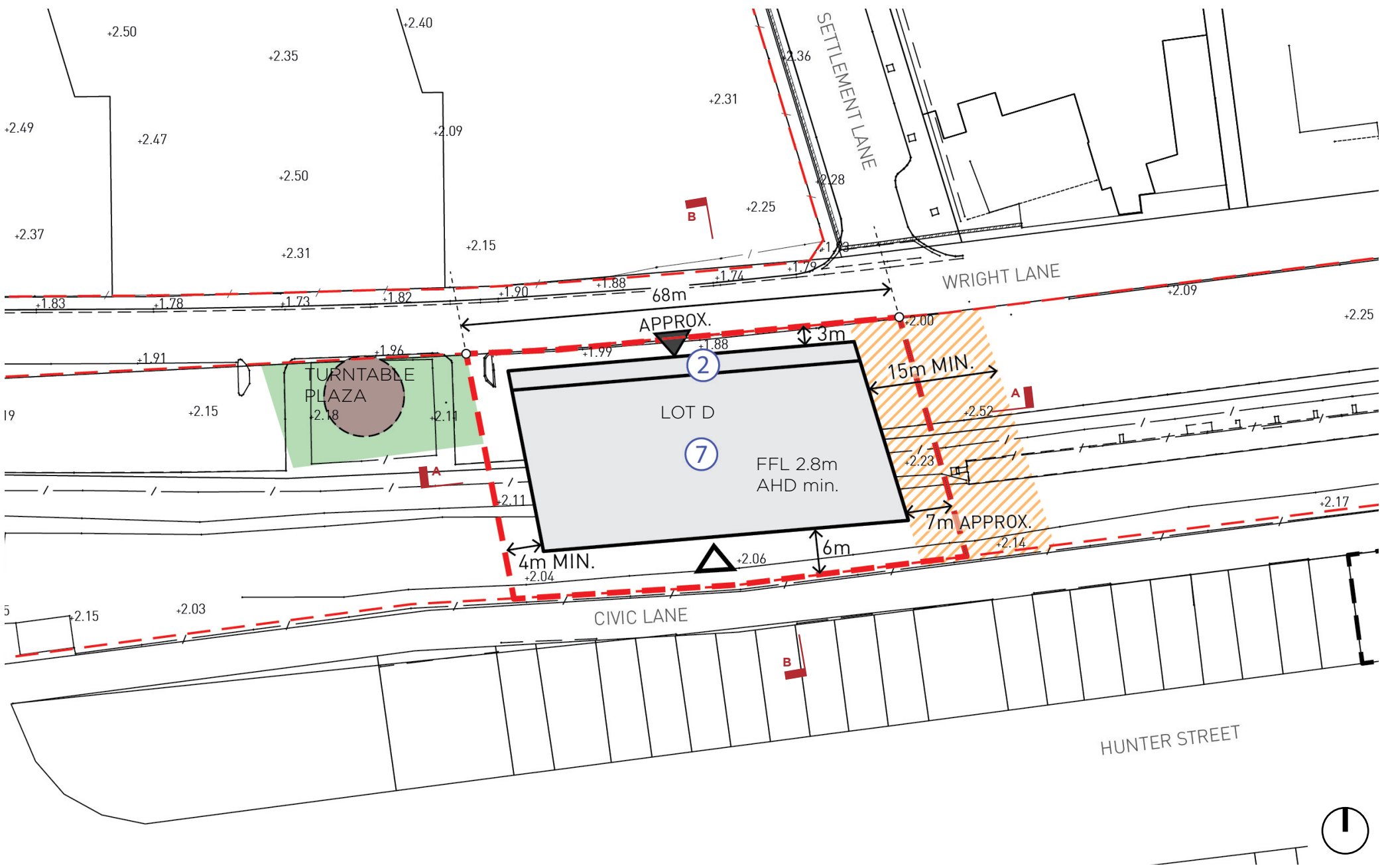
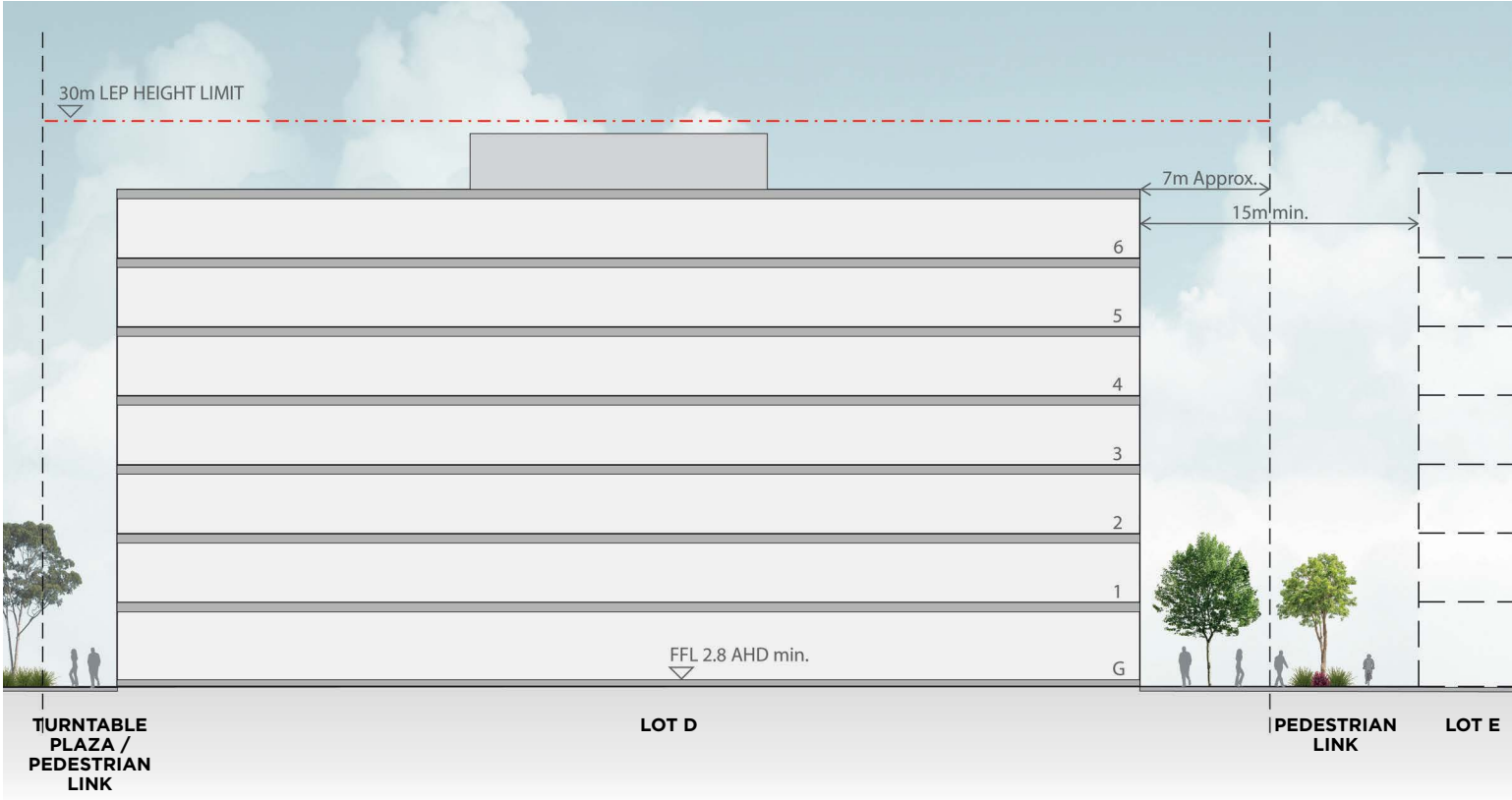


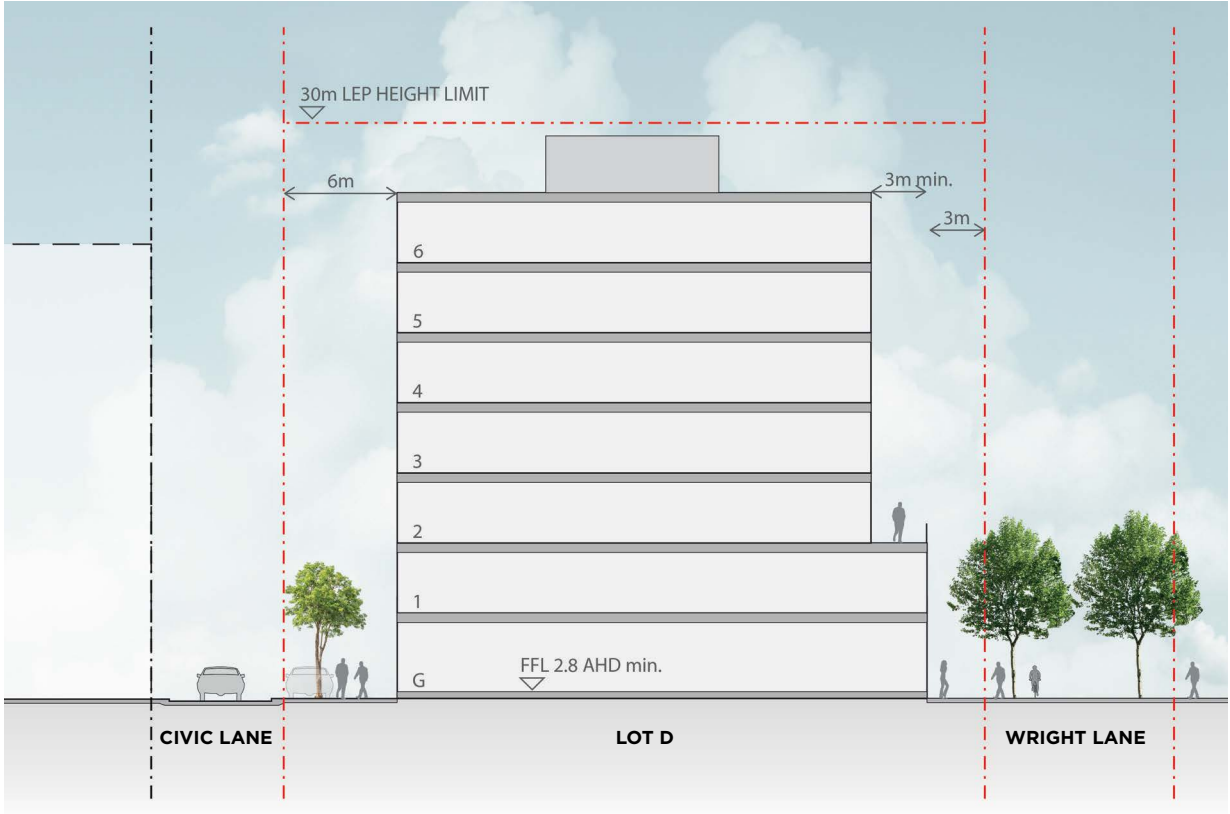
Figure 7.13 Lot D Detail Plan

7. Lot Guidelines



Section A

Figure 7.14 Lot D Sections



Section B

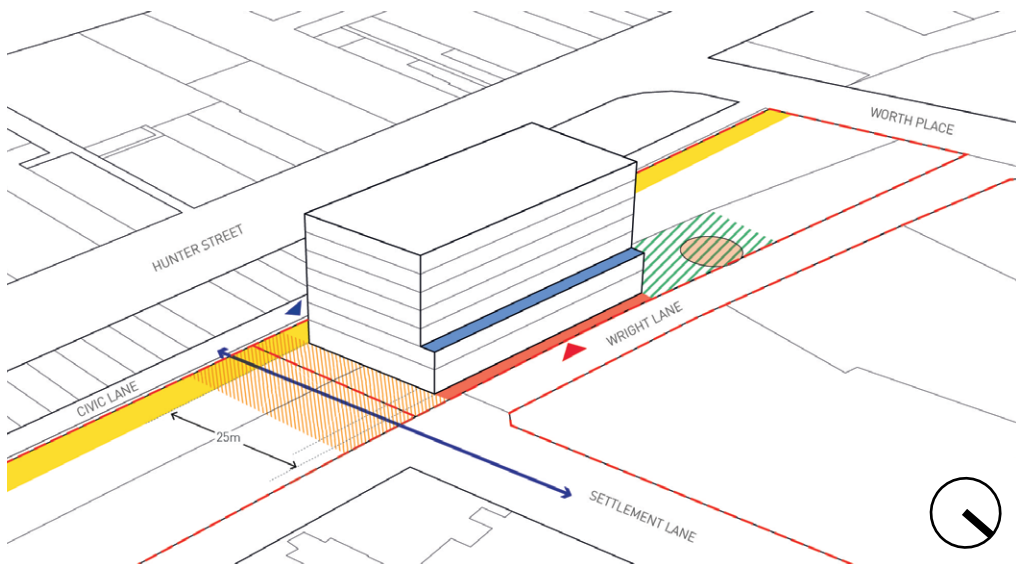


Figure 7.15 Lot D 3D Massing

7. Lot Guidelines

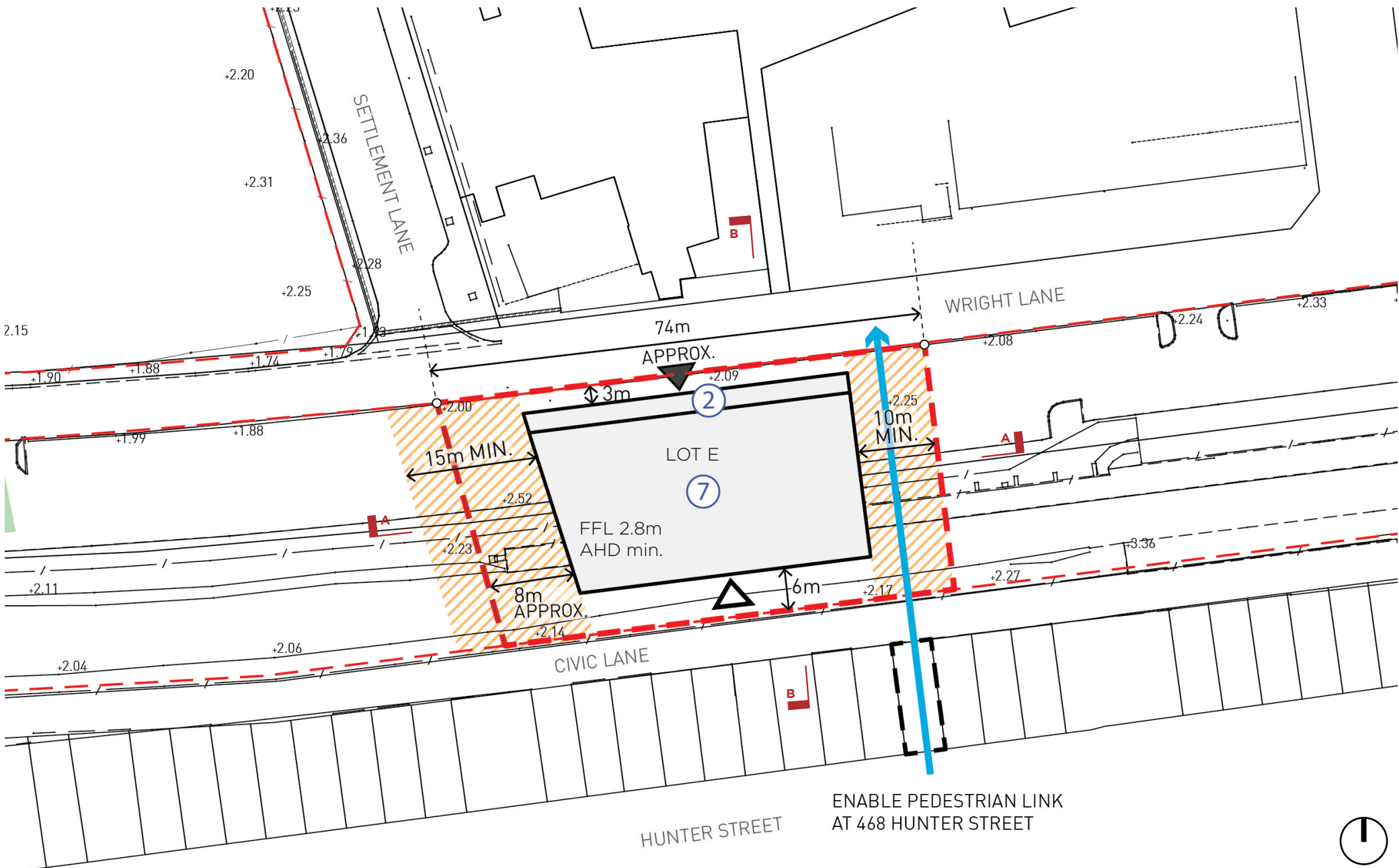
7.6 Lot E

Site	3
GFA	7,158m ²
Indicative Max. Height	7 storeys + rooftop plant / lift motor rooms
Setbacks	
Wright Lane	3m 3m Setback above podium
Civic Lane	6m

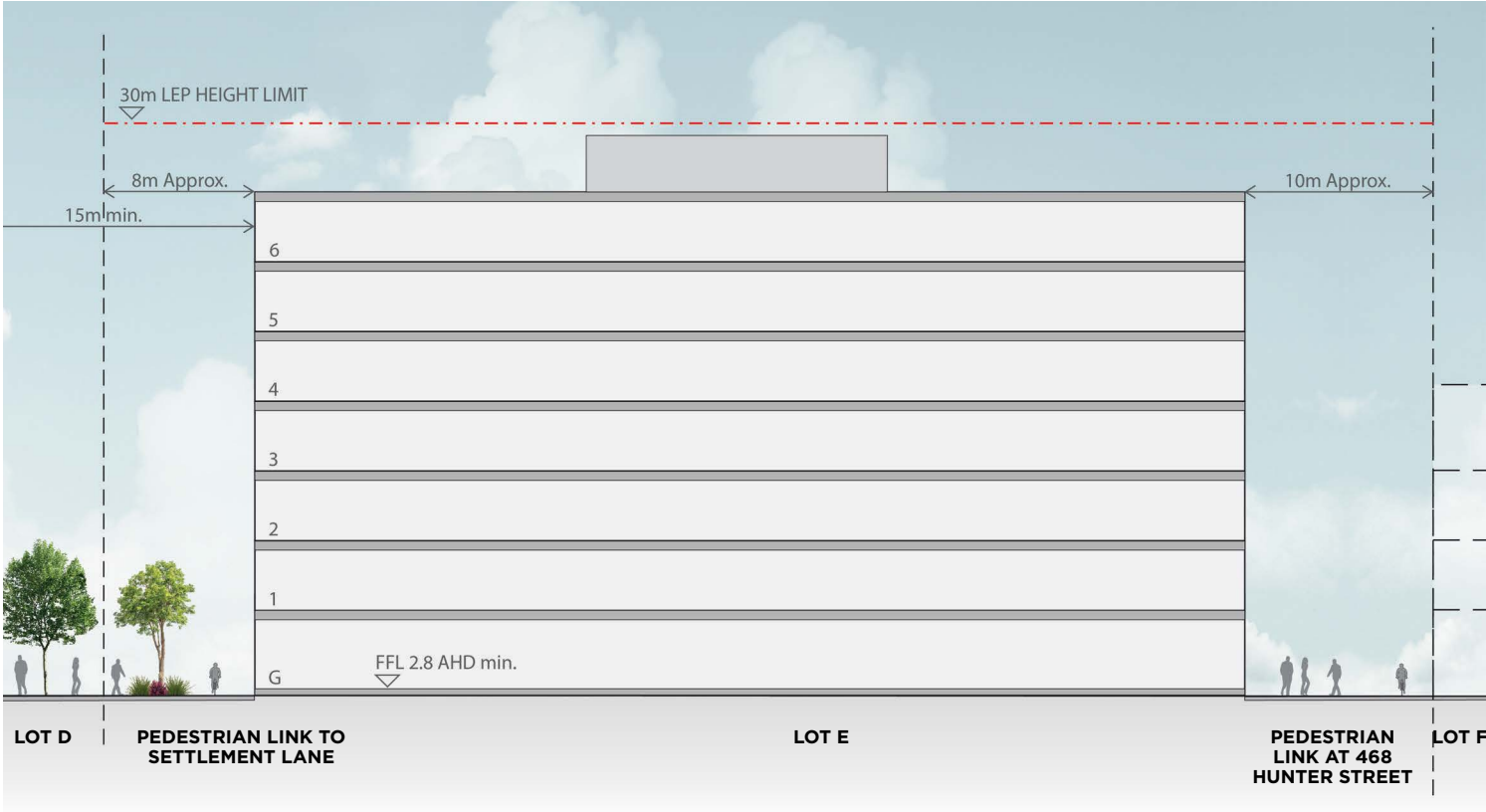
Guidelines
The primary address is on Wright Lane. Servicing of the building will be from Civic Lane.

The building should enable a future pedestrian link through 468 Hunter Street and between Civic Lane and Wright Lane.

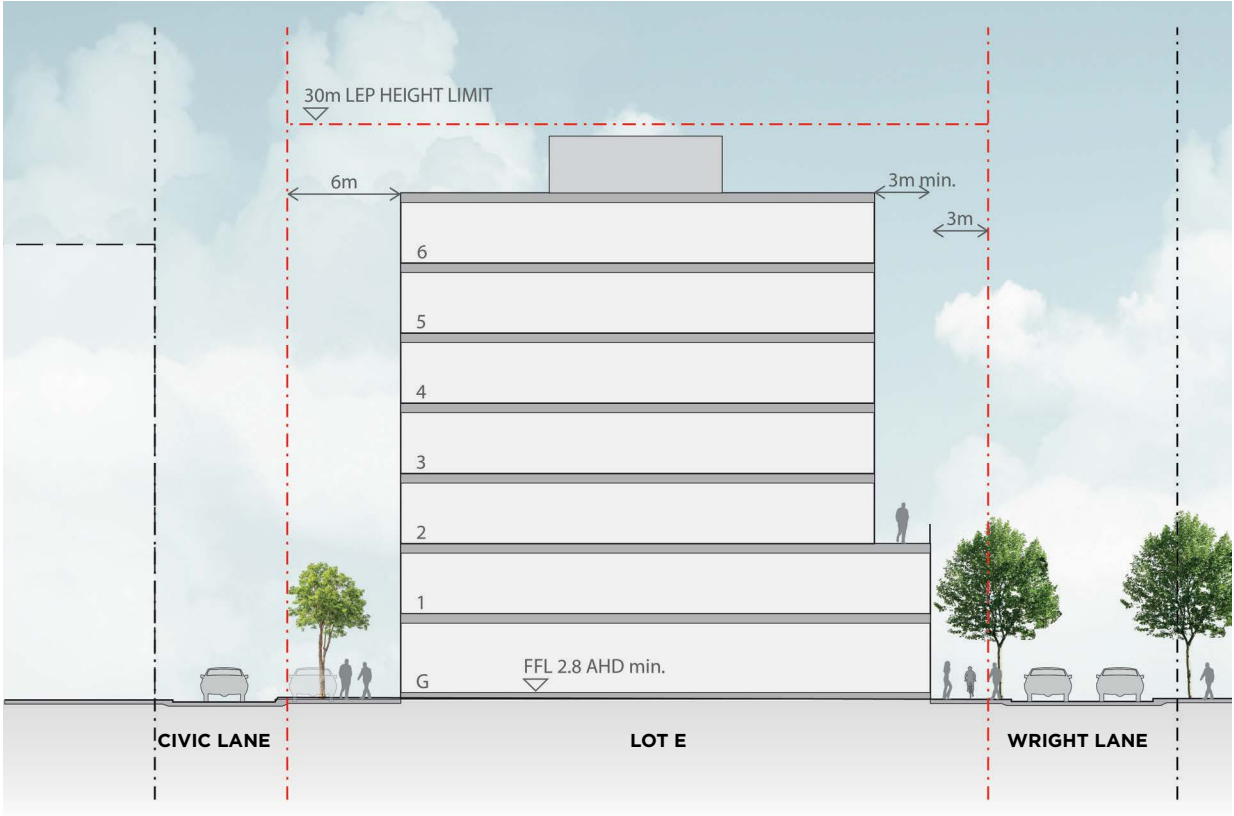
A through-site visual and pedestrian connection should also be maintained to the west of the building from Civic Lane along Settlement Lane to the waterfront.



7. Lot Guidelines



Section A
Figure 7.17 Lot E Sections



Section B

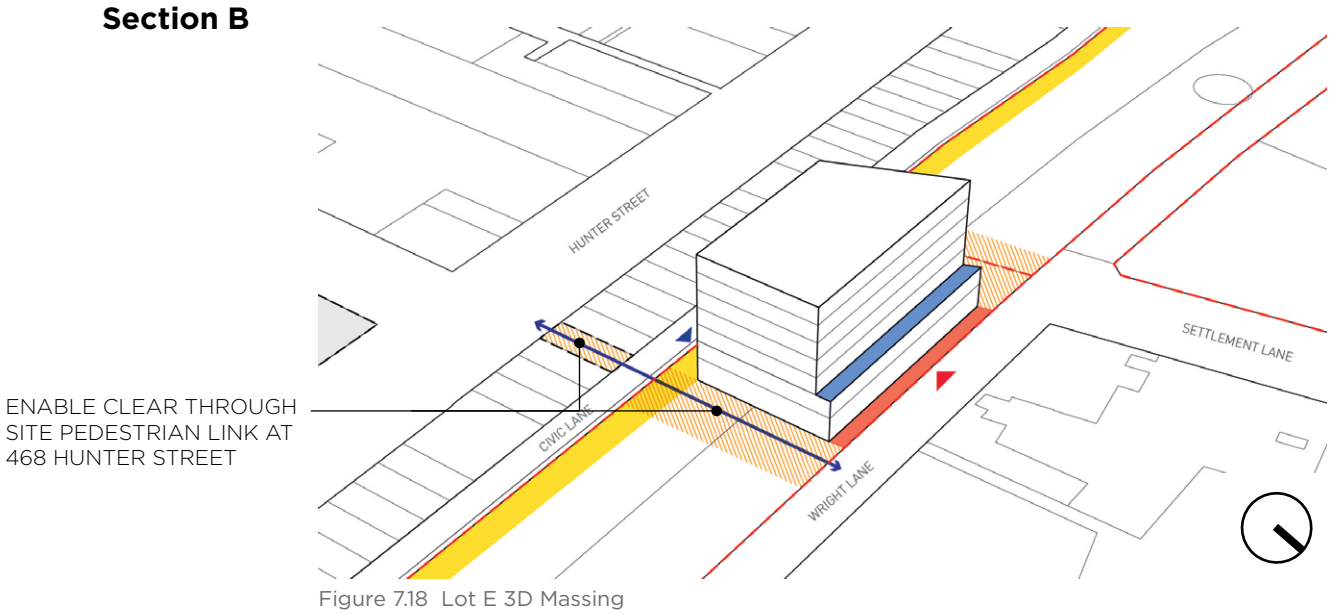


Figure 7.18 Lot E 3D Massing

7. Lot Guidelines

7.7 Lot F

Site	3
GFA	7,049m ²
Indicative Max. Height	4 storeys + rooftop plant / lift motor rooms
Setbacks	
Wright Lane	3m 3m Setback above podium
Civic Lane	6m
Civic Link	3-15m

Guidelines
The primary address is on Wright Lane. Servicing of the building will be from Civic Lane.

The building should enable a future pedestrian link through 468 Hunter Street and between Civic Lane and Wright Lane.

The building's height should be lower than Building E to transition down in scale towards Civic Link. The building should be set back to Civic Link to enable ground level outdoor activation and include a landscaped setback.

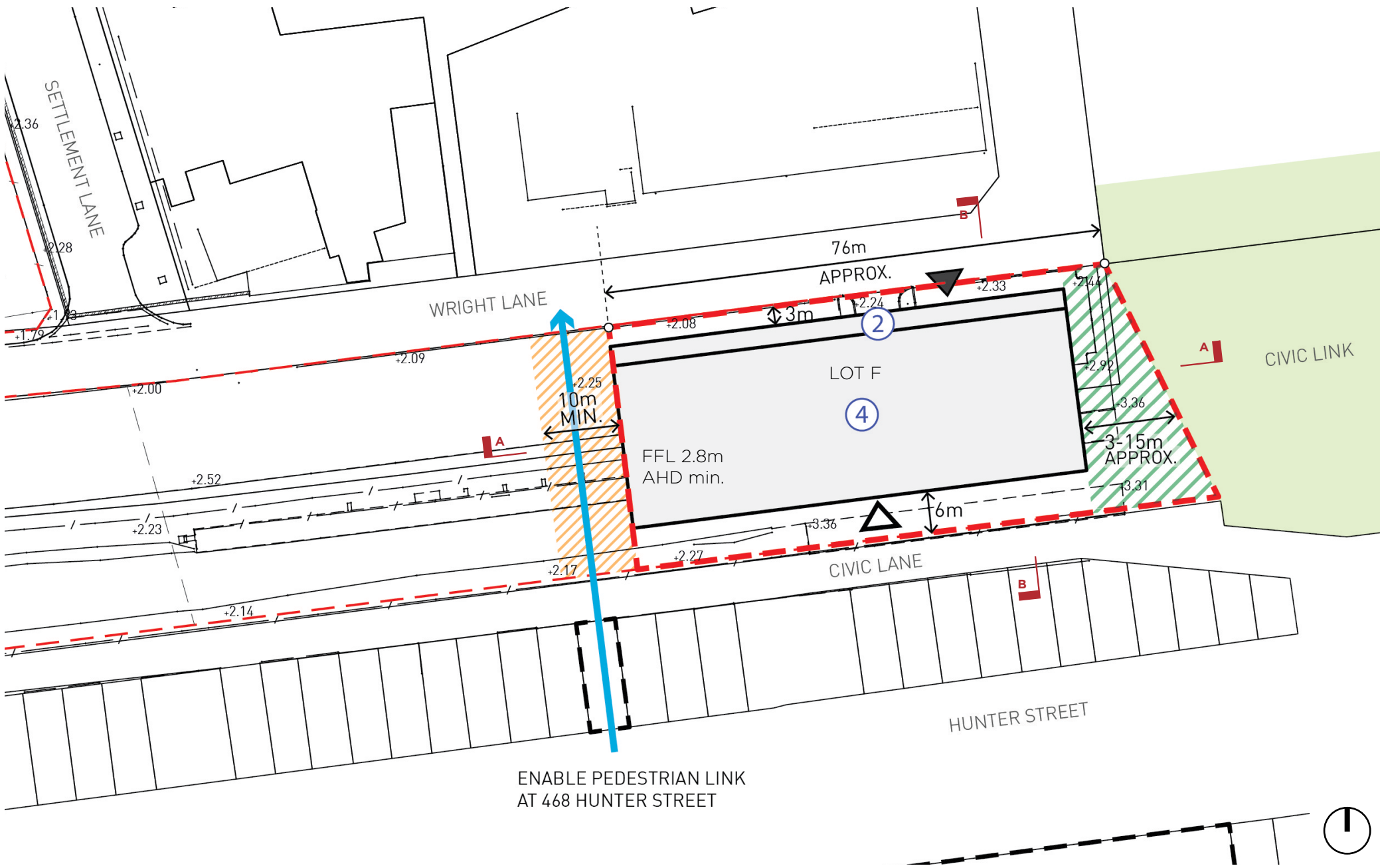
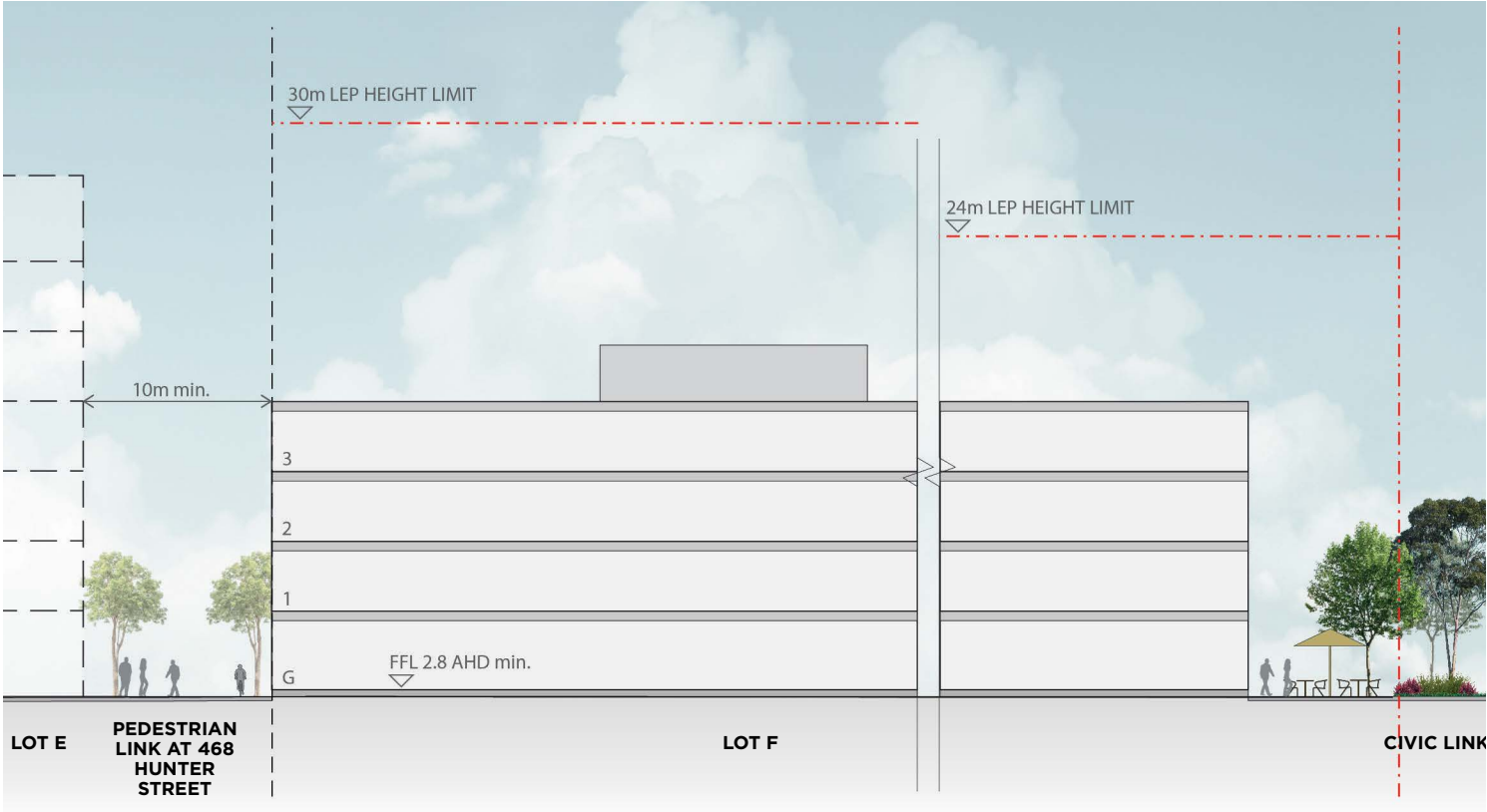


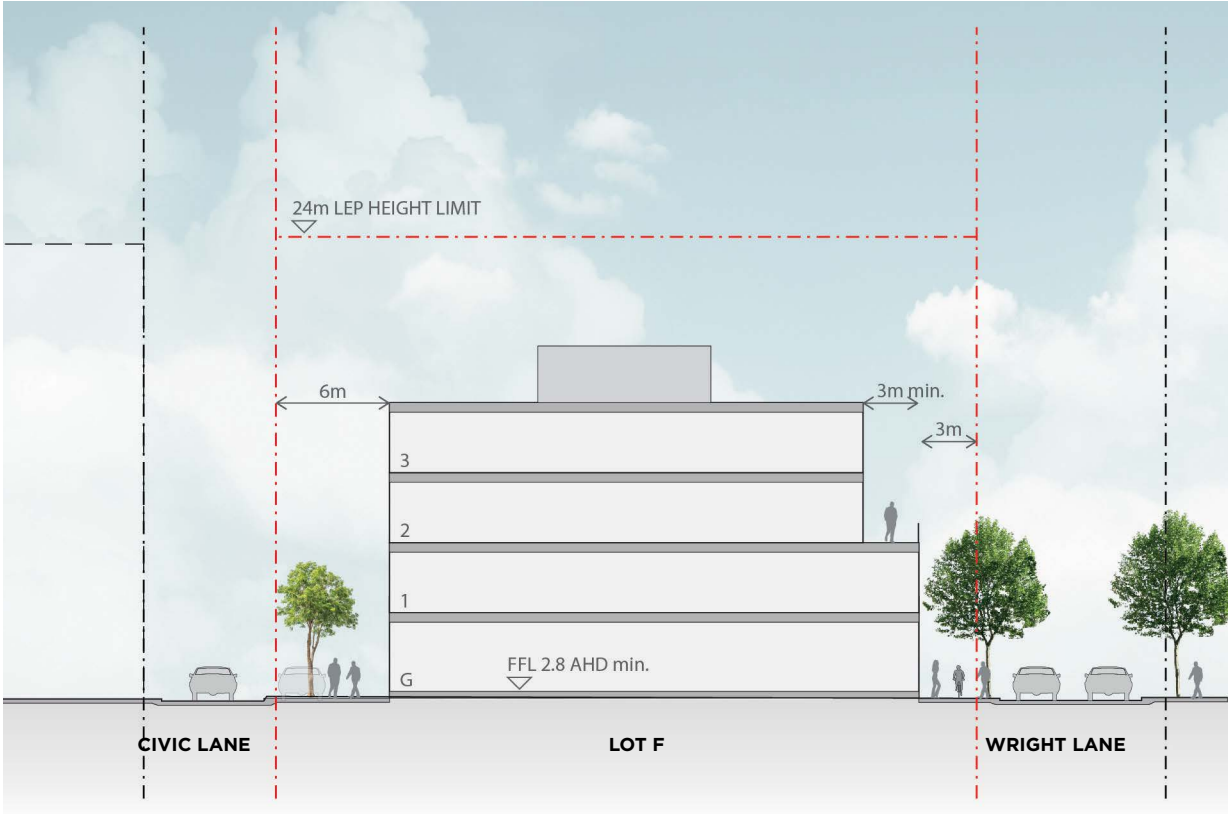
Figure 7.19 Lot F Detail Plan

7. Lot Guidelines



Section A

Figure 7.20 Lot F Sections



Section B

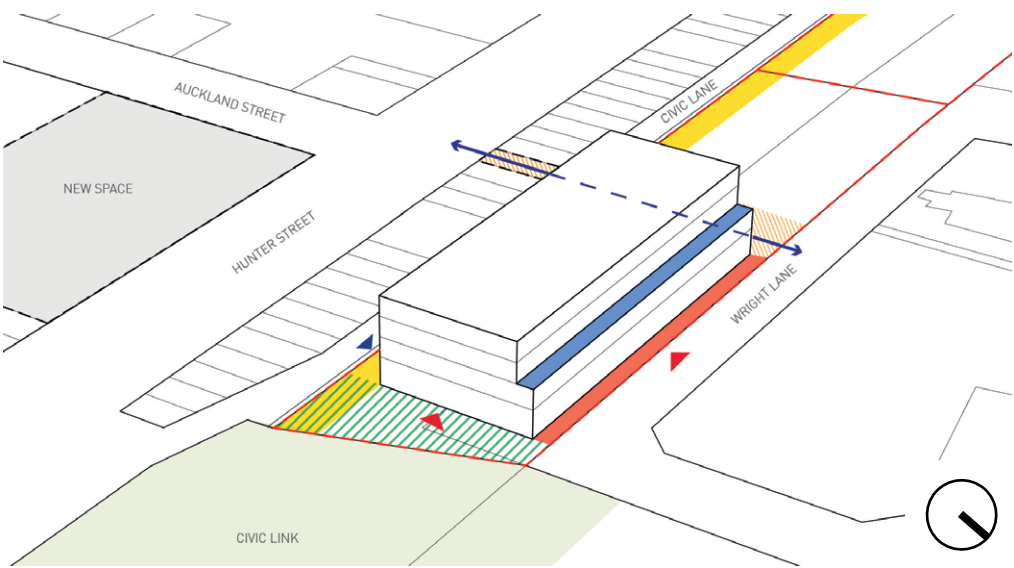
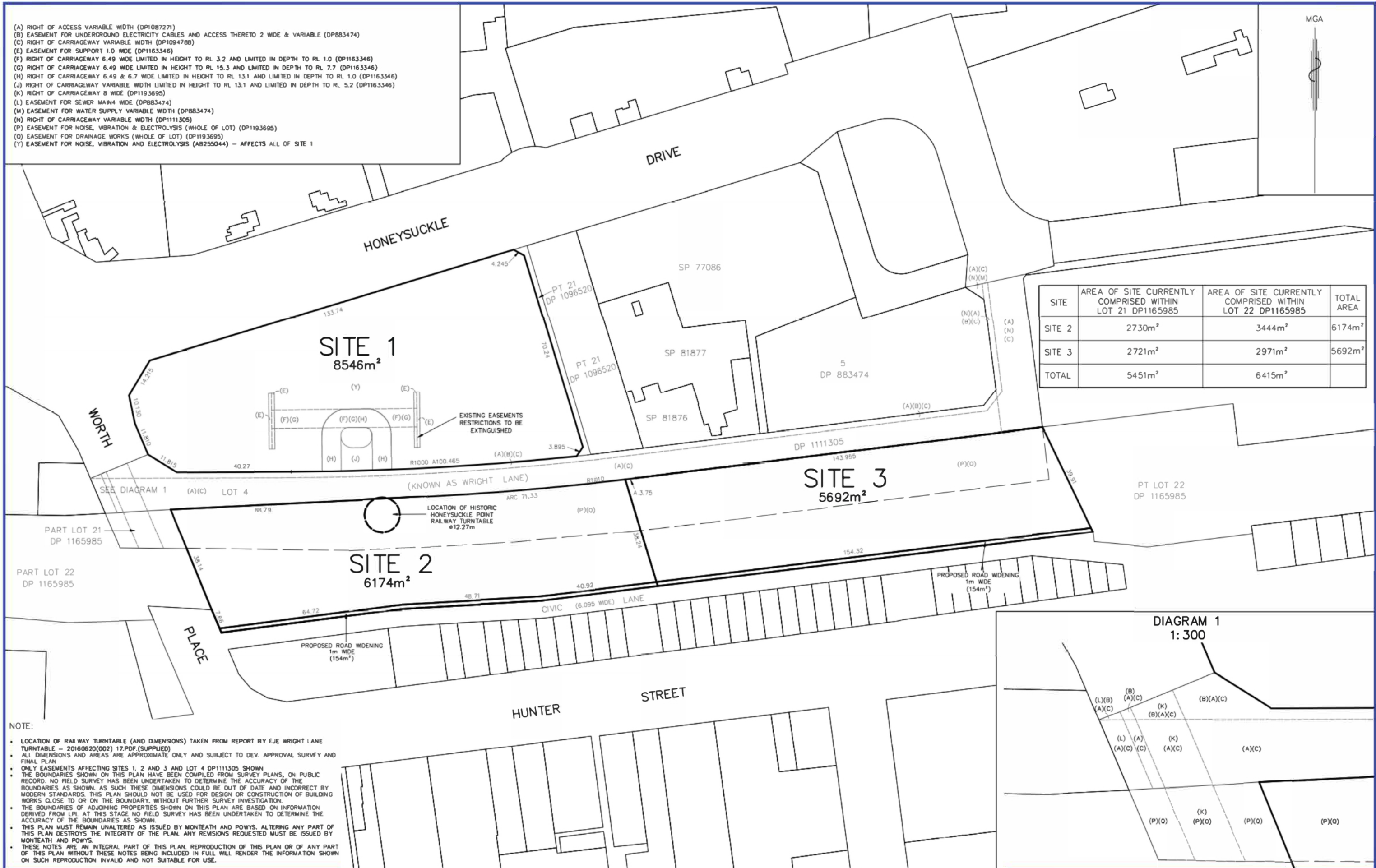


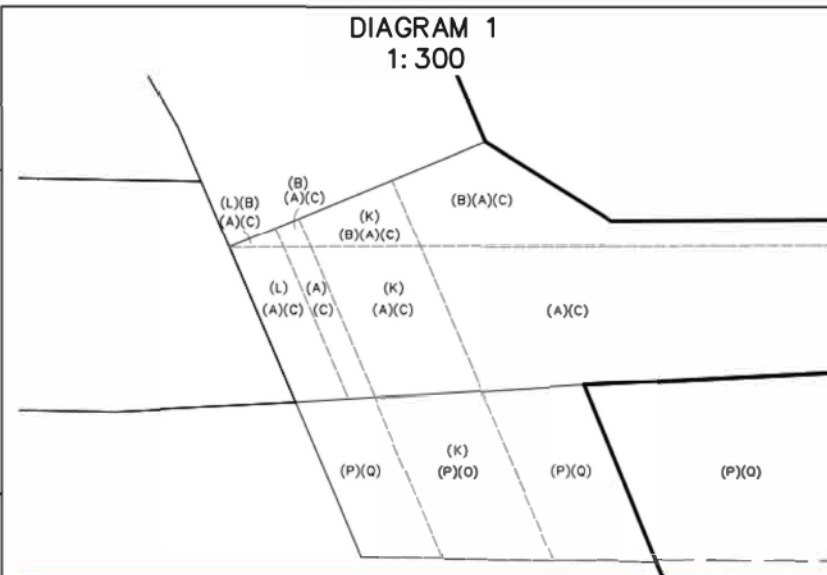
Figure 7.21 Lot F 3D Massing

Site Survey

(A) RIGHT OF ACCESS VARIABLE WIDTH (DP1087271)
(B) EASEMENT FOR UNDERGROUND ELECTRICITY CABLES AND ACCESS THERETO 2 WIDE & VARIABLE (DP883474)
(C) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1094788)
(E) EASEMENT FOR SUPPORT 1.0 WIDE (DP1163346)
(F) RIGHT OF CARRIAGEWAY 6.49 WIDE LIMITED IN HEIGHT TO RL 3.2 AND LIMITED IN DEPTH TO RL 1.0 (DP1163346)
(G) RIGHT OF CARRIAGEWAY 6.49 WIDE LIMITED IN HEIGHT TO RL 15.3 AND LIMITED IN DEPTH TO RL 7.7 (DP1163346)
(H) RIGHT OF CARRIAGEWAY 6.49 & 6.7 WIDE LIMITED IN HEIGHT TO RL 13.1 AND LIMITED IN DEPTH TO RL 1.0 (DP1163346)
(J) RIGHT OF CARRIAGEWAY VARIABLE WIDTH LIMITED IN HEIGHT TO RL 13.1 AND LIMITED IN DEPTH TO RL 5.2 (DP1163346)
(K) RIGHT OF CARRIAGEWAY 8 WIDE (DP1193695)
(L) EASEMENT FOR SEWER MAIN 4 WIDE (DP883474)
(M) EASEMENT FOR WATER SUPPLY VARIABLE WIDTH (DP883474)
(N) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1111305)
(P) EASEMENT FOR NOISE, VIBRATION & ELECTROLYSIS (WHOLE OF LOT) (DP1193695)
(O) EASEMENT FOR DRAINAGE WORKS (WHOLE OF LOT) (DP1193695)
(Y) EASEMENT FOR NOISE, VIBRATION AND ELECTROLYSIS (AB255044) - AFFECTS ALL OF SITE 1



SITE	AREA OF SITE CURRENTLY COMPRISED WITHIN LOT 21 DP1165985	AREA OF SITE CURRENTLY COMPRISED WITHIN LOT 22 DP1165985	TOTAL AREA
SITE 2	2730m²	3444m²	6174m²
SITE 3	2721m²	2971m²	5692m²
TOTAL	5451m²	6415m²	



NOTE:

- LOCATION OF RAILWAY TURNTABLE (AND DIMENSIONS) TAKEN FROM REPORT BY EJE WRIGHT LANE TURNTABLE - 20160620(002) 17.PDF (SUPPLIED)
- ALL DIMENSIONS AND AREAS ARE APPROXIMATE ONLY AND SUBJECT TO DEV. APPROVAL SURVEY AND FINAL PLAN
- ONLY EASEMENTS AFFECTING SITES 1, 2 AND 3 AND LOT 4 DP1111305 SHOWN
- THE BOUNDARIES SHOWN ON THIS PLAN HAVE BEEN COMPILED FROM SURVEY PLANS, ON PUBLIC RECORD. NO FIELD SURVEY HAS BEEN UNDERTAKEN TO DETERMINE THE ACCURACY OF THE BOUNDARIES AS SHOWN. AS SUCH THESE DIMENSIONS COULD BE OUT OF DATE AND INCORRECT BY MODERN STANDARDS. THIS PLAN SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION OF BUILDING WORKS CLOSE TO OR ON THE BOUNDARY. WITHOUT FURTHER SURVEY INVESTIGATION.
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REVISIONS

No	REVISION	SVY	DFT	CHK	DATE
3	ADDITIONAL CHANGES TO PLAN - SITE 3 EASTERN BOUNDARY AND ROAD WIDENING	-	SS	ES	8/11/16
2	TABLE SHOWING SITE AREAS COMPRISED WITHIN LOTS 21 & 22	-	SS	ES	4/11/16
1	ISSUE TO CLIENT	-	KE	ES	03.11.16

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Surveyed	Drafted	Checked	Client
SS/KE	SS/KE	ES	
Scale: @A1 : 1:600 @A3 : 1:1200			Original Size
DO NOT SCALE			A1

URBAN GROWTH

PLAN OF SITES 1, 2 AND 3 BEING PART OF A PROPOSED SUBDIVISION OF LOT 21 AND 22 DP 1165985 AND LOTS 1, 2 AND 3 DP 1163346

CAD File: 160500c_03 Ref No: 16/0500 Date: 08.11.2016

Sheet No. 1/1
Revision 3

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