



UTS BON MARCHE AND SCIENCE PRECINCT
MP-8_0116 UTS BROADWAY PRECINCT CONCEPT PLAN MODIFICATION 6

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CONTENTS

INTRODUCTION..... 6

EXECUTIVE SUMMARY..... 6

PROJECT VISION..... 7

SITE ANALYSIS..... 8

SURROUNDING BUILT FORM..... 8

ENVIRONMENT & CAMPUS ACCESS..... 10

TRAFFIC & PEDESTRIAN CONGESTION..... 11

HERITAGE CONDITION..... 12

HARRIS STREET FRONTAGE..... 13

BUILDING ENVELOPE..... 14

EXISTING CONDITION AND CURRENT APPROVED CONCEPT PLAN..... 14

PROPOSED CONTROL ENVELOPE..... 15

DESIGN PRINCIPLES..... 16

INTRODUCTION..... 16

1. INDIGENOUS HERITAGE AND CULTURE..... 18

2. ENTRY & IDENTITY - BON MARCHE RE-PURPOSED..... 19

3. WESTERN LANE..... 20

4. EXPERIENCE AT STREET LEVEL - HARRIS AND THOMAS STREETS..... 21

5. ARTICULATION AND EXPRESSION OF FORM - PODIUM AND UPPER FORM..... 22

6. ROOFTOP GARDENS - LANDSCAPE IN THE SKY..... 23

7. ALUMNI GREEN EXPERIENCE..... 24

ARCHITECTURAL DRAWINGS..... 30

EXISTING CAMPUS DRAWINGS..... 30

PROPOSED BUILDING ENVELOPE DRAWINGS FOR APPROVAL..... 34

INDICATIVE DESIGN DRAWINGS FOR INFORMATION..... 44

SHADOW ANALYSIS..... 60

ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS..... 60

SHADOW ANALYSIS..... 61

ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS..... 61

SHADOW ANALYSIS..... 62

ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS..... 62

ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE..... 63

ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE..... 64

ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE..... 65

ALUMNI GREEN - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE..... 66

ALUMNI GREEN - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE..... 67



DESIGN REPORT

BON MARCHE AND SCIENCE PRECINCT

INTRODUCTION

EXECUTIVE SUMMARY

This project gives rise to a number of significant opportunities for UTS, the urban precinct, and for wider Sydney.

The UTS city campus is in the heart of Sydney’s creative and innovation precinct and alongside Sydney’s central business district.

The decade-long UTS City Campus Master Plan, authored by BVN, which began in 2008, is a once-in-a-generation vision to deliver a vibrant and engaging education precinct. Through the Master Plan, UTS is making a \$1 billion-plus investment that is fundamentally changing the way they deliver teaching, learning and research. UTS propose to continue the past 10-year period of major development that has been guided by the Campus 2020 Masterplan, and to continue the transformation of the UTS campus to maintain and develop a purpose - and sustainably-built campus to support innovation in education and research.

INTENSIFYING THE INNOVATION CORRIDOR

The UTS vision is to be a world leading university of technology, and the new development, which is the subject of this Concept Modification is intended to be developed for educational uses which may include science teaching and research and design, enabling an extension of its capabilities in these important fields.

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UTS sits within an “emerging Innovation Corridor on its western edge comprising universities, a major teaching hospital, international innovation companies and fast-growing start-ups” as identified by the Greater Sydney Region Plan, as noted in the Plan:

“Facilitating the attraction and development of innovation activities enhances Greater Sydney’s global competitiveness. Planning controls need to be flexible to allow for the needs of the innovation economy”

The provision of space that will enable an expansion of world class new teaching and research facilities will enable UTS to support Sydney in its focus on innovation and global competitiveness which will underpin its continued growth.

GREATER PUBLIC ENGAGEMENT WITH THE UTS CAMPUS

There is an excellent opportunity to broaden public engagement with the UTS campus through this new development. The Campus 2020 Masterplan, conceived in 2008, did not propose any work along the campus’ eastern edge along Harris Street as Building 4 (a 1950’s building) which borders this edge had just gone through a significant refurbishment. The refurbishment didn’t address one of the building’s significant shortfalls which was its address to the street and public domain.

The redevelopment enables the ability to connect ground level spaces to the street and to provide transparency and public engagement.

NEW CONNECTIONS TO ALUMNI GREEN

Alumni Green is the centre of the 2020 Masterplan and vital green lungs for the campus providing outdoor social space and amenity for students, staff and researchers in this dense urban setting. Its access is from Jones Street on its west, and is almost impenetrable from other streets.

There is the ability to create new connections directly to the Green from Harris Street and Broadway, both through buildings and between them.

ADDITIONAL GREEN SPACE

Increasing built development will bring an increased population to campus. The opportunity to provide significant new green space to supplement Alumni Green is a key consideration in this proposal. An elevated roof terrace, connecting existing and new rooftops will be able to supplement Alumni Green’s outdoor recreation, and to provide an elevated green amenity in a high-rise campus.

IMPROVE THE PUBLIC DOMAIN ON HARRIS AND THOMAS STREETS

The southern end of Harris Street is an unpleasant and uninviting area of the city. The traffic is heavy and one directional, the footpaths are narrow and generally devoid of landscaping, and the buildings turn their backs to the public domain. The ability to rebuild an entire block addressing the street and both corners is almost unparalleled in the context of the city. The project will enable a focus on building quality at street level, transparency, connections and public engagement.

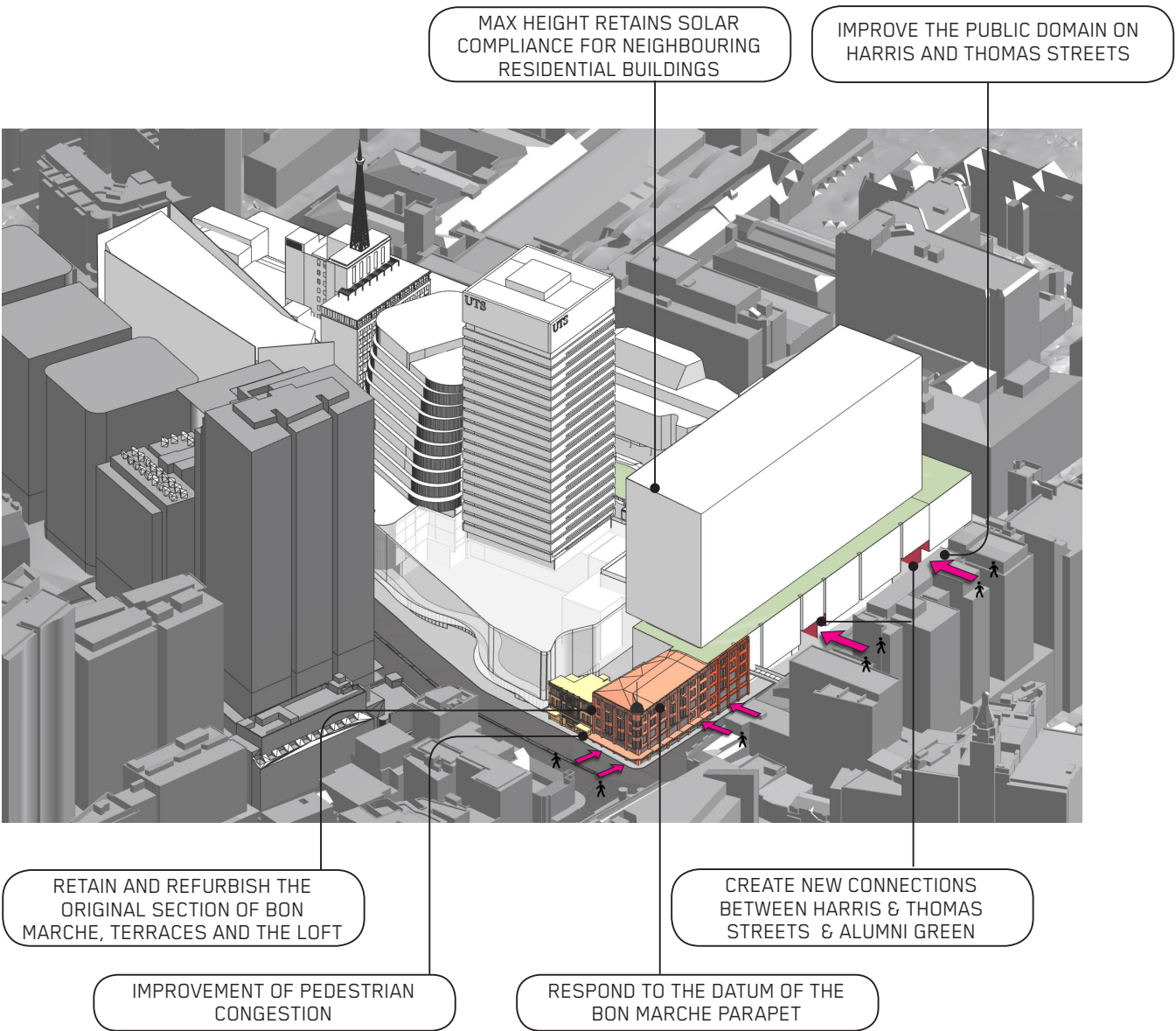
ENHANCING HERITAGE BUILDINGS AND HERITAGE SETTING

The heritage listed Bon Marche building (Building 3), on the corner of Broadway and Harris Street, has had major interventions to its internal fabric, with little original fabric remaining. The external appearance of the building has also undergone significant intervention with rendering of its face brick walls, and replacement of its timber windows and awnings, among other items. However, the overall form is still predominantly intact. The heritage terraces (Building 18), a rare example of commercial terraces, have also had little change to their external form. The most significant aspect of the heritage qualities of Bon Marche are more related to its setting, as it forms one of four original buildings, on each corner of Broadway and Harris Street, that form an ‘intact’ setting.

The refurbishment of Bon Marche and the terraces, including the provision of an additional entry to the campus through Bon Marche will allow the buildings to be experienced and retained, enhancing the unique heritage setting. They also offer the opportunity to experience a different scale and finer grain to the large public spaces of many of the surrounding buildings.

IMPROVEMENT OF PEDESTRIAN CONGESTION

The corner of Harris Street and Broadway is heavily congested with vehicular traffic and pedestrians. The corner sits on a key route from the buses and trains at Central Station, through to campus entry on Broadway, and the increasing density and surrounding development, coupled with narrow footpaths has led to busy and heavily trafficked footpaths. An opportunity exists to alleviate the congestion at the corner through reinstating the original entry positions in Bon Marche at street level. Creating a series of openings (2 on Broadway and one on Harris) that enable pedestrians to move through and off the footpath easily will alleviate the congestion, providing a more pleasant environment and improving safety. In addition the proposed street level setback along Harris St will serve to widen the footpath.



INTRODUCTION

PROJECT VISION

The subject site on UTS’s Broadway Precinct runs from the corner of Broadway and Harris Street through to the corner of Harris Street and Thomas Street, and along Thomas Street to meet Building 7. The proposal for this Concept Modification is for a building control envelope that replaces Building 4 that corners and fronts Harris and Thomas Streets, replaces the rear wing of Bon Marche, and refurbishes and repurposes the corner section of Building 3 (the original Bon Marche building) and Building 18 (the Terraces) which both face Broadway. This control envelope is configured to:

- Preserve sunlight to north facing apartments of Central Park on Broadway in accordance with the planning controls for that site
- Preserve the façade and form of the heritage listed Bon Marche building
- Set back new built form from the corner of Broadway and Harris Street to enable the form and height of the Bon Marche building to be read clearly and distinctly
- Preserve the sunlight amenity that Alumni Green currently enjoys in mid-winter between the hours of 10am – 5pm
- Provide large floor plates that are suitable for the uses of research and teaching buildings to enable effective planning and future flexibility

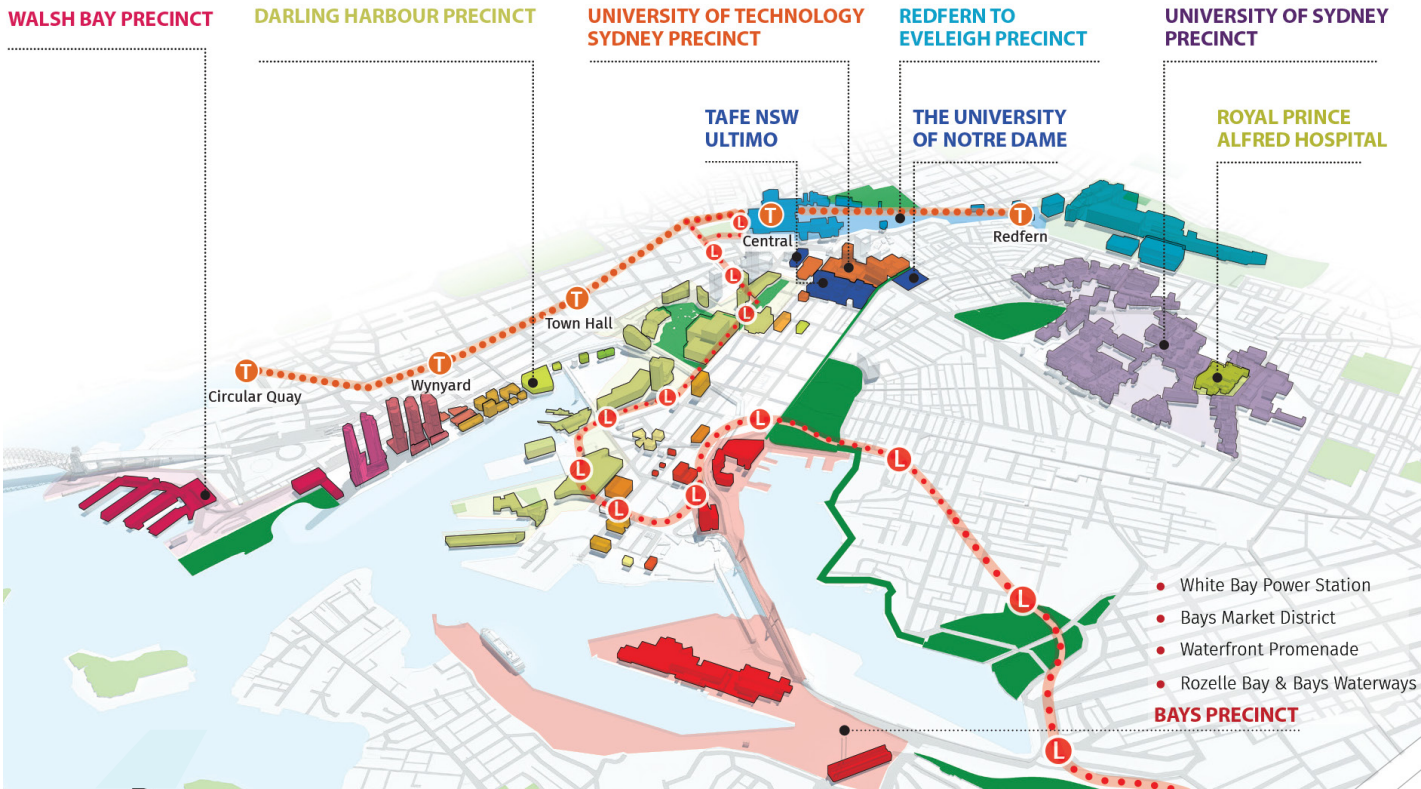
- Provide a height and form that is appropriate for the surrounding urban context
- Provide a control envelope that enables flexibility for creativity, formal manipulation and innovation in future design solutions

The form of the development is generated from a thorough site analysis that positions the new building form within the dense urban context of the new and existing UTS campus buildings, those under construction and the large scale residential and urban development at Central Park.

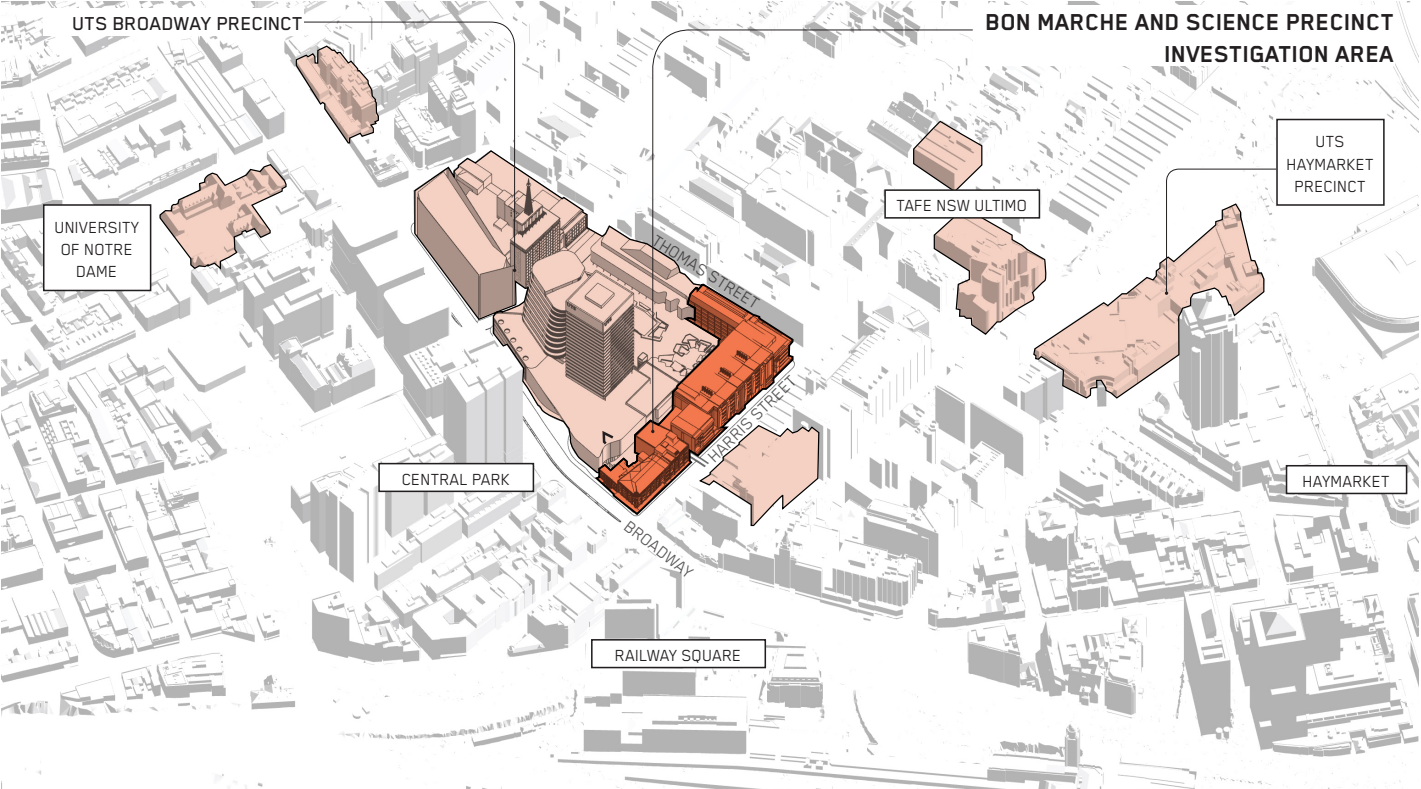
The position of the southernmost end of the envelope as well as its height achieves sunlight to the north facing apartments of Central Park on Broadway in accordance with the planning controls for the site. In addition, this setback from the Broadway corner enables the form and height of the Bon Marche building to be read clearly and distinctly with the other lower form buildings on each of the corners of the Broadway/Harris Street intersection. The overall height of the form has also been considered in response to the height of Building 1 tower and the height of the new UTS Central building (under construction). Both the new envelope and UTS central site alongside Building 1, as complimentary extensions, allow Building 1’s height to remain prominent in the streetscape and skyline as originally intended.



AERIAL VIEW OF UTS PRECINCT



SYDNEY INNOVATION CORRIDOR



SUBJECT SITE & SURROUNDING CONTEXT

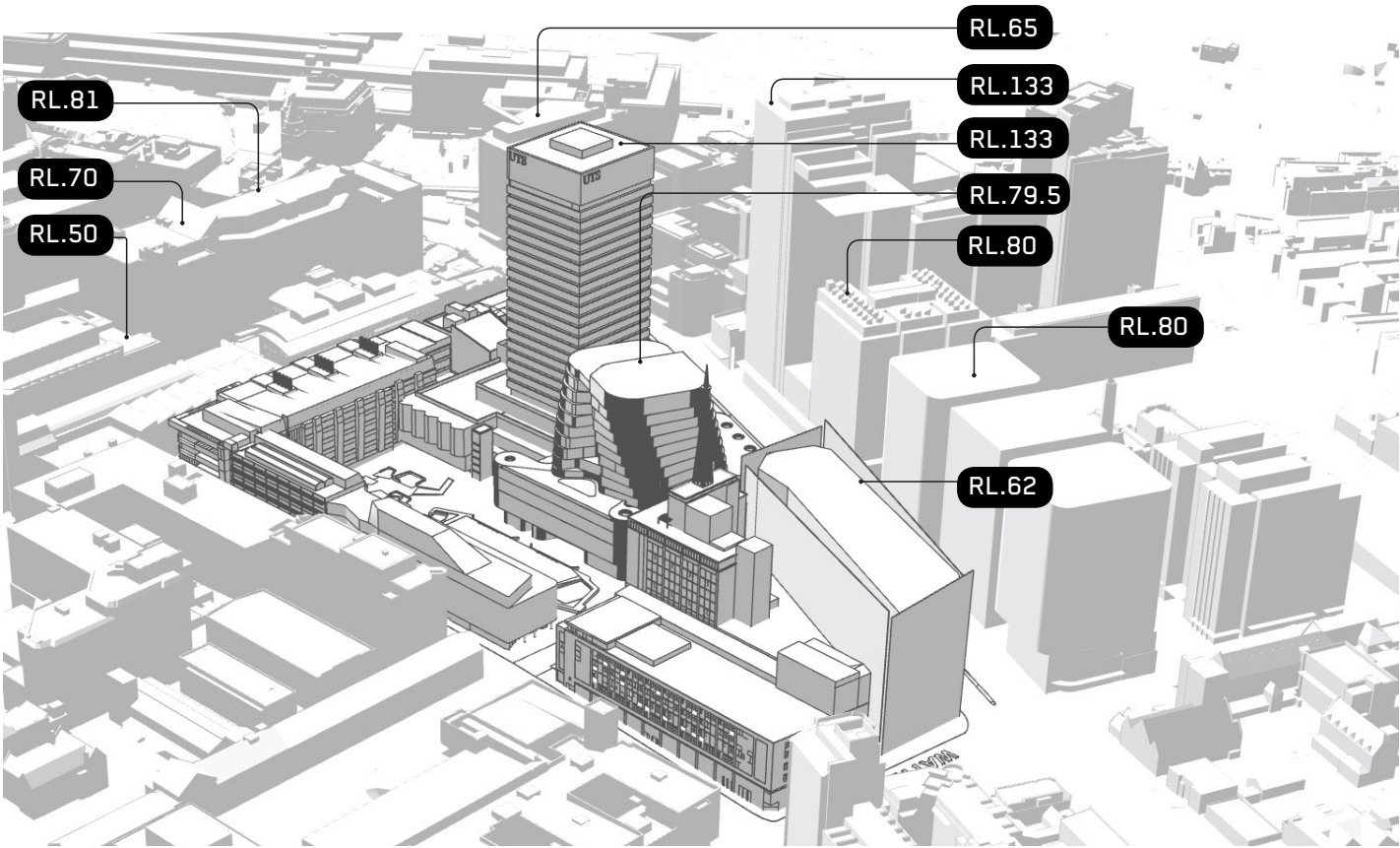
SITE ANALYSIS

SURROUNDING BUILT FORM

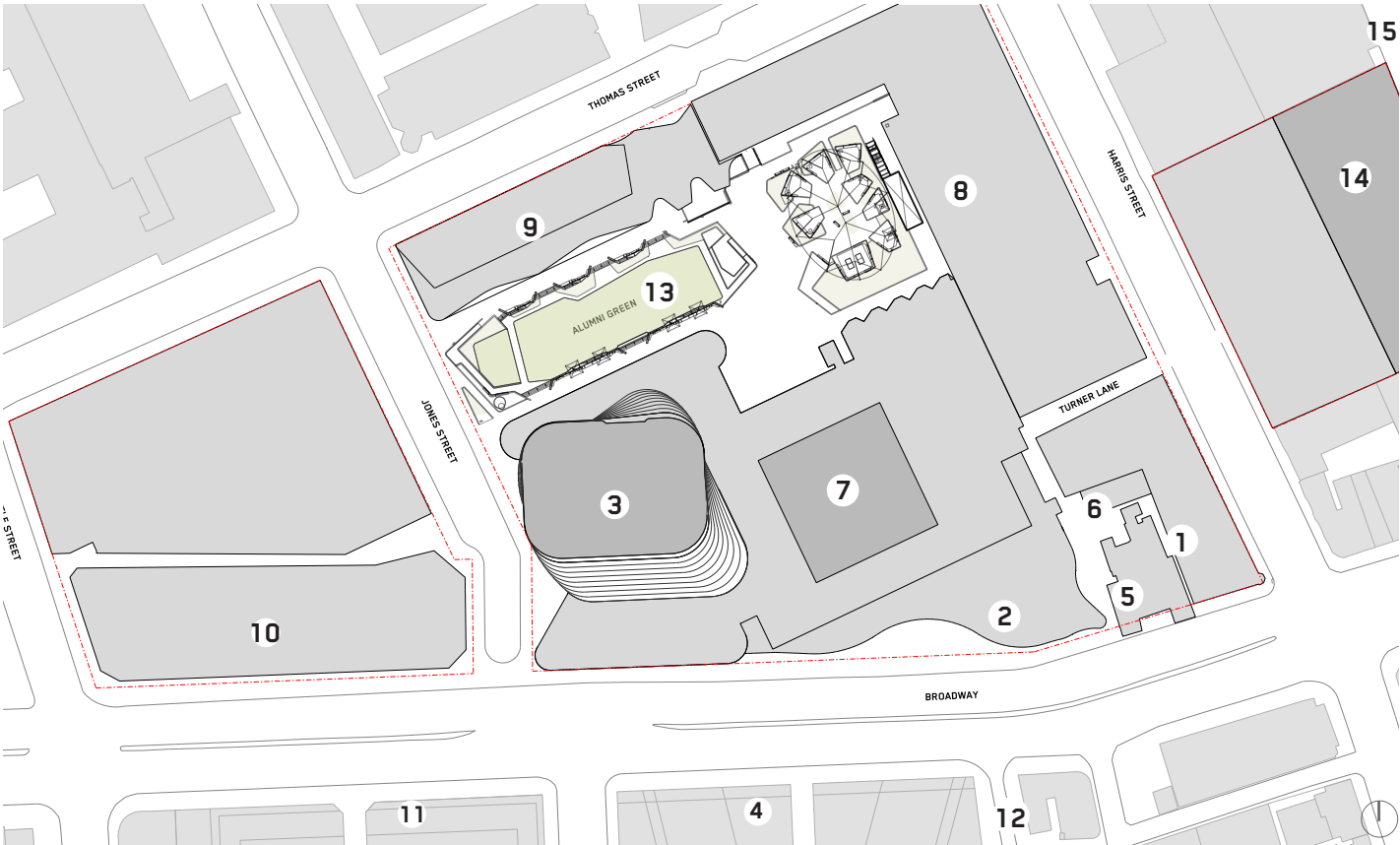
The ongoing delivery of UTS City Campus Master Plan which began in 2008, has resulted in a radical transformation of the UTS Campus – creating a vibrant and engaging education precinct. Major new buildings and spaces have been developed which have had a significant impact on the public domain.

In addition, the recent development of Central Park on the old Carlton United Breweries site has transformed the urban form of the gateway to the western entry to the CBD and the UTS Broadway precinct. Building heights have increased along the Broadway frontage with UTS’s tower now being matched by Central Park at 133m, with a number of the other buildings at 80m.

Many of the new developments are the results of design competitions, and provide a variety of different examples of creative and bold new architecture, experimenting and innovating with form, material and expression.



SURROUNDING BUILT FORM
Building Heights



SURROUNDING BUILT FORM
Existing Site Plan



CB 03 BON MARCHÉ



CB04 SCIENCE BUILDING

SITE ANALYSIS

SURROUNDING BUILT FORM



2 BUILDING 1 PODIUM EXT. (TO BE CONSTRUCTED)



3 CB02 UTS CENTRAL (UNDER CONSTRUCTION)



4 ONE CENTRAL PARK



5 CB18 THE TERRACES



6 CB09 THE LOFT



7 CB01 UTS TOWER



9 CB07 GRADUATE SCHOOL OF HEALTH



10 CB11 ENGINEERING



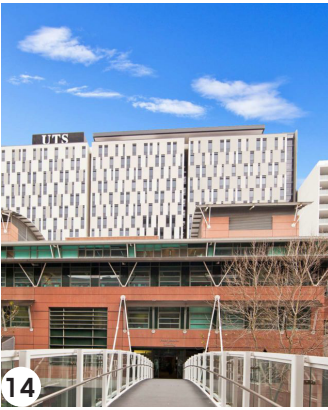
11 100 BROADWAY



12 SPICE ALLEY



13 ALUMNI GREEN



14 CB06 STUDENT HOUSING



15 THE GOODS LINE

SITE ANALYSIS

ENVIRONMENT & CAMPUS ACCESS

ENVIRONMENTAL CONDITIONS

The adjacent diagram is a high-level, campus-wide site analysis summarised below.

- The site is predominantly east west facing, providing access to either morning or afternoon sun
- The site is open to summer's north-easterly winds, and is relatively protected from the south westerly winter wind.
- It is bordered by Harris Street and Broadway, both busy CBD arterial streets which create a high level of noise and air pollution

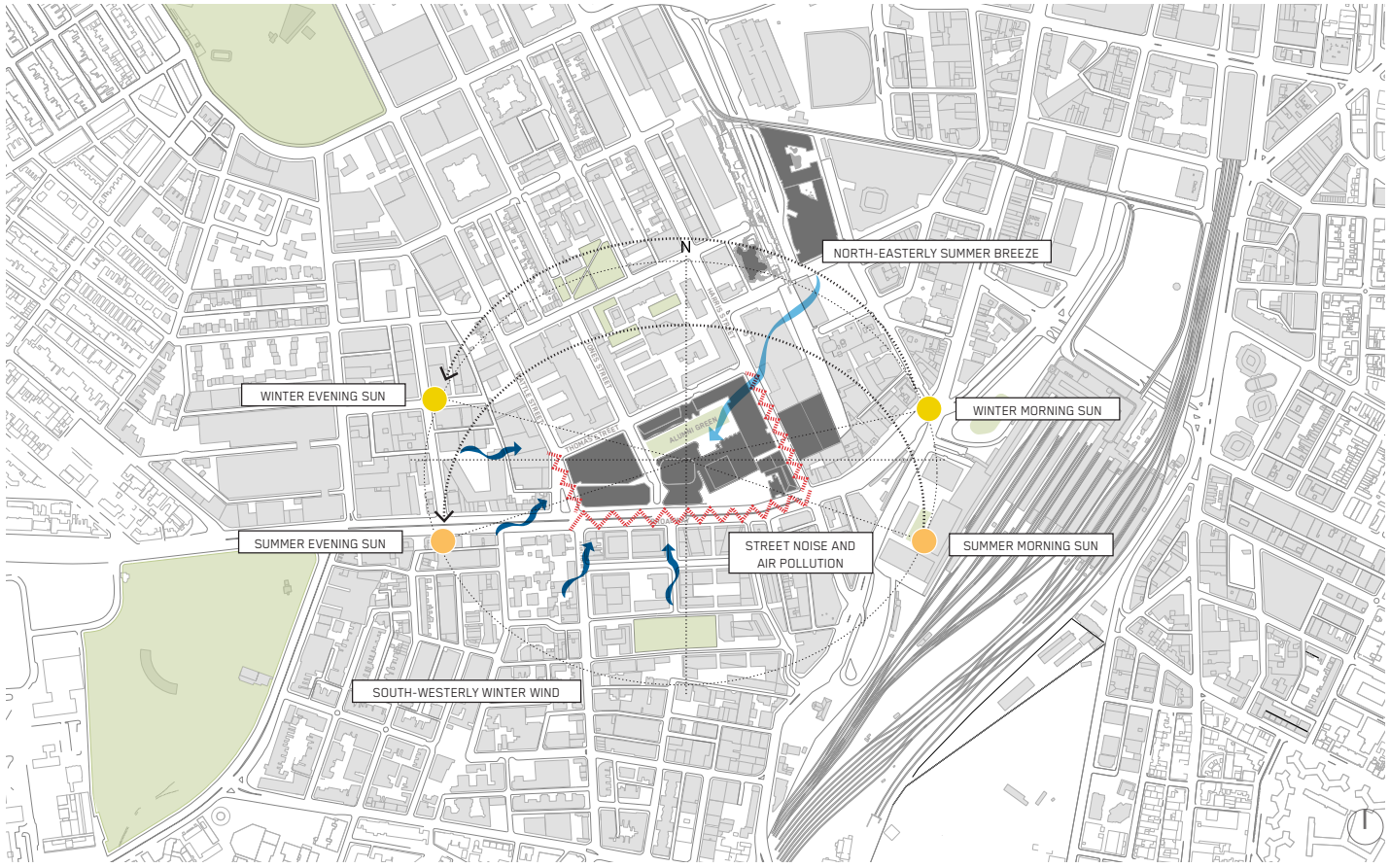
CAMPUS CIRCULATION & BUILDING ENTRIES

The below diagram indicates major circulation to and from the campus, identifies key inter-campus circulation routes, and the main campus and building entry points.

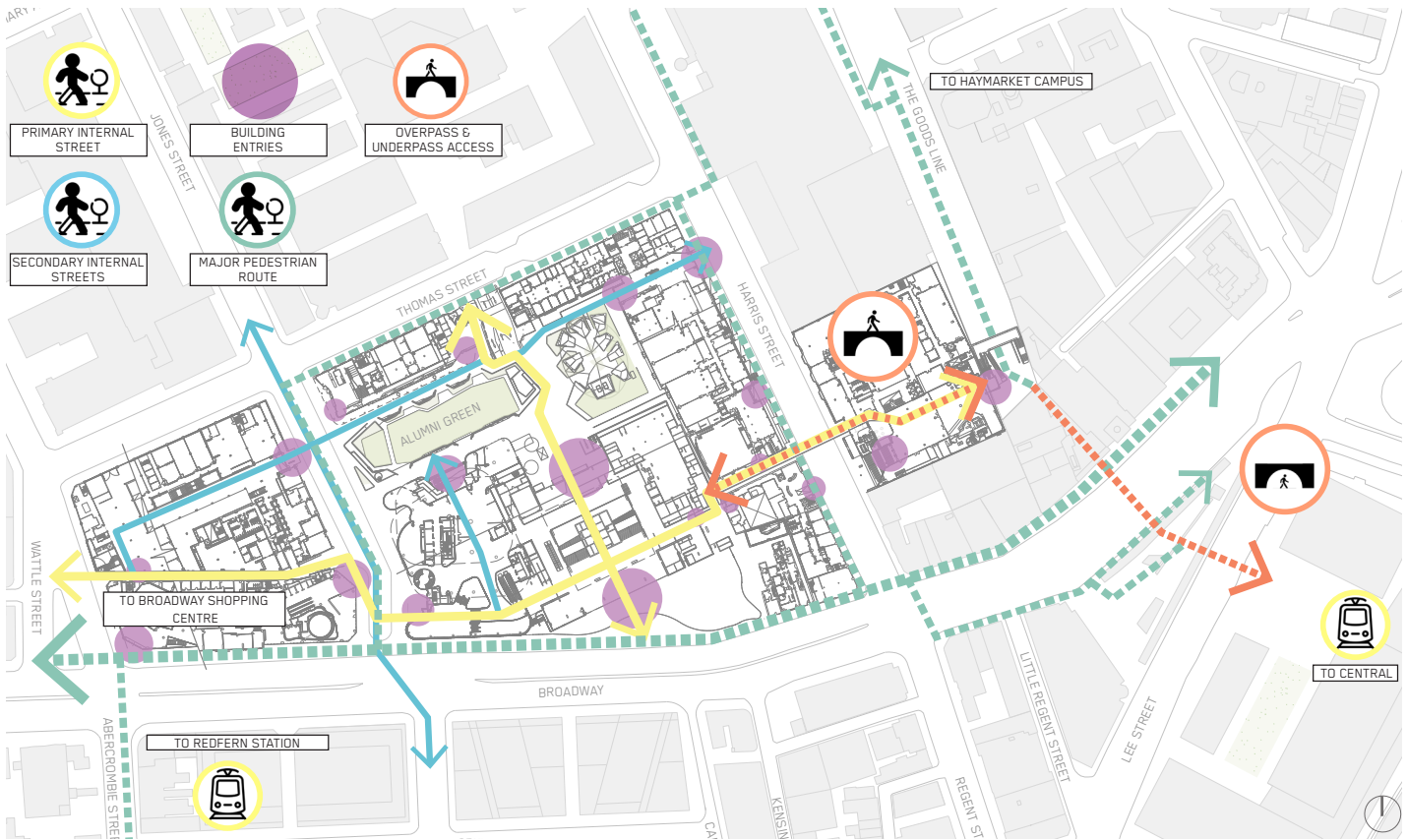
There are three primary circulation routes to the Broadway precinct from Central Station and the Devonshire Street Tunnel entry. The first involves exiting the tunnel on the southern side of Broadway and crossing Broadway to reach the campus. The second is to remain in the tunnel and exit on the northern side of Broadway via the escalators. The third is to continue through the tunnel until it exits at The Goods Line. This then requires travelling via the stair and escalators to Level 4 of Building 6.

There are currently two primary circulation routes between the Broadway Precinct and the Haymarket Precinct, one down Harris Street and along Ultimo Road, and the second via the Harris Street overpass, through Building 6, down the stair and escalator, along The Goods Line and down the stair onto Ultimo Road.

There are 3 entries into Building 4 along Harris Street. The first is close to the corner of Thomas and Harris Streets, and is one level below the Alumni Green level. The second is midway along the building, is accessed via a stair or ramp off street level and is poorly used. The third, more incidental, is via Turner Lane, a narrow service lane that is not designed as a pedestrian environment. Bon Marche has one access off Harris Street which is just to the south of Turner Lane.



ENVIRONMENTAL ANALYSIS DIAGRAM



MAJOR PEDESTRIAN ROUTES + CAMPUS STREETS & ENTRIES DIAGRAM



BON MARCHE HARRIS STREET ENTRANCE



OVERPASS BRIDGE CAMPUS ENTRY FROM BUILDING 6

SITE ANALYSIS

TRAFFIC & PEDESTRIAN CONGESTION

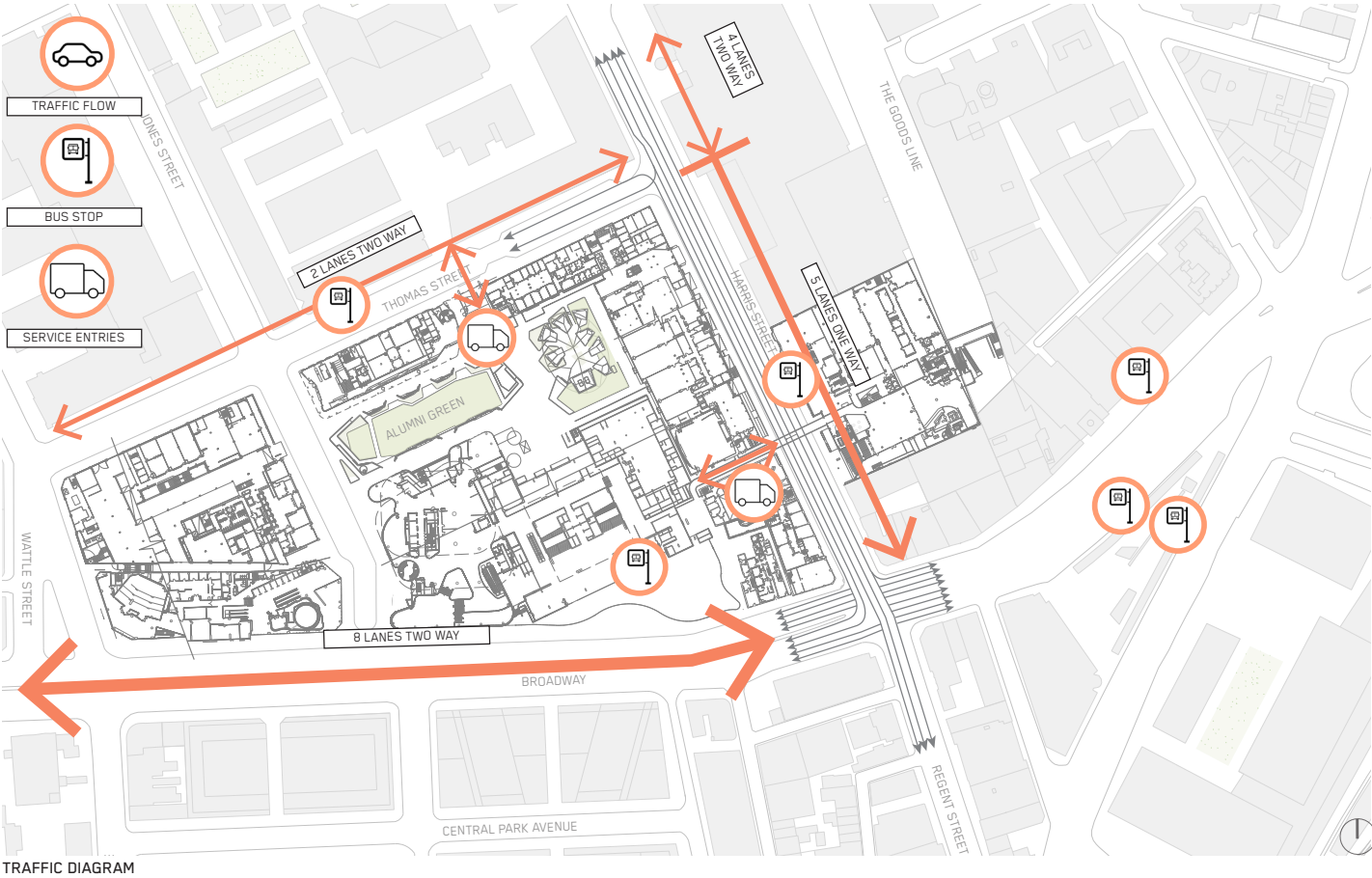
TRAFFIC & PEDESTRIAN CONGESTION

Broadway is a wide, heavily trafficked road which forms a pedestrian barrier to areas to the south. There is considerable bus movement with designated bus lanes in each direction. As a major arterial into the city from the west, Broadway presents significant visual, acoustic and air quality pollution to the buildings along its edges.

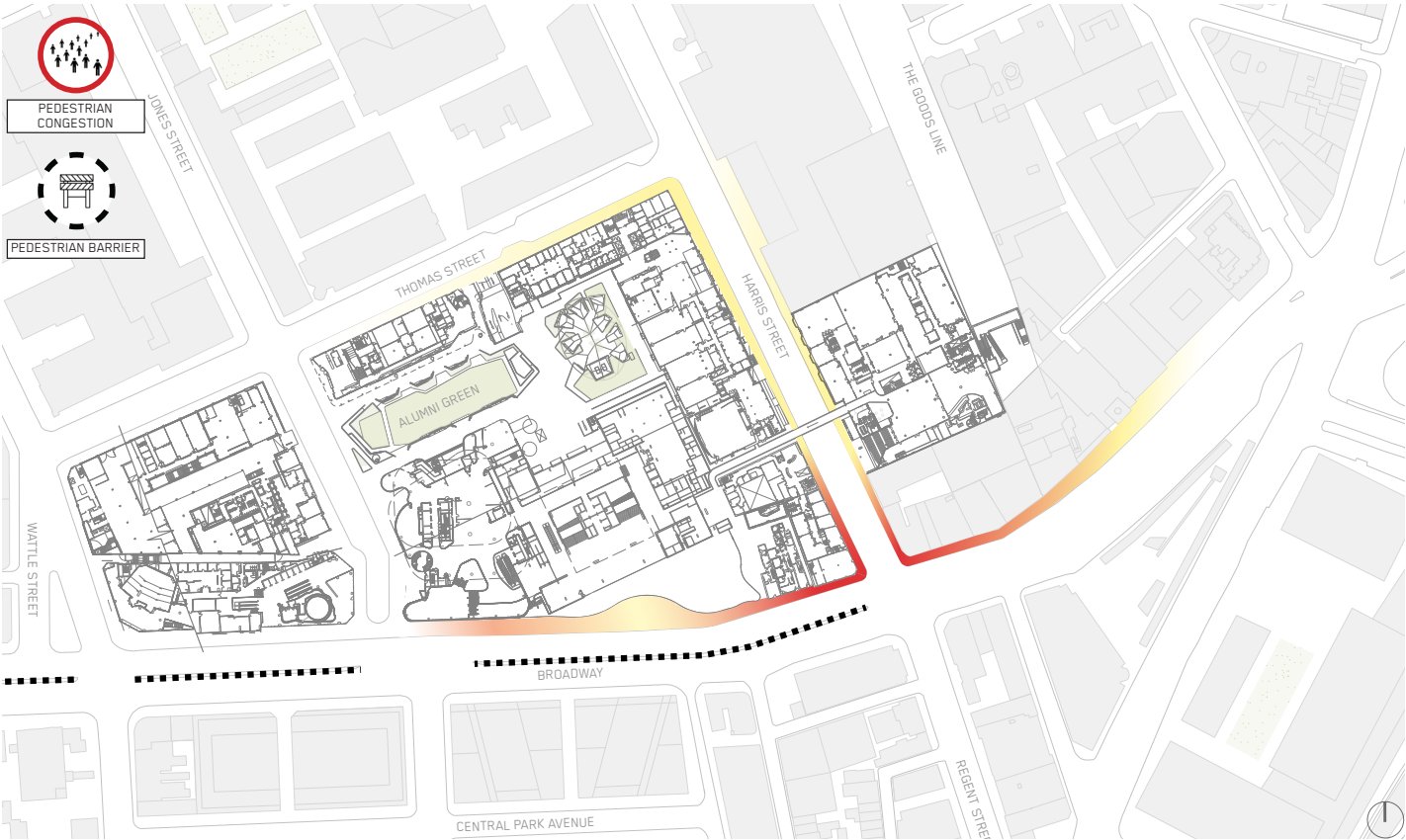
Harris Street is a busy street with considerable heavy traffic movements, with four lanes of two-way traffic becoming five lanes of southbound one way at the Thomas Street intersection. It presents significant visual, acoustic and air quality pollution to the buildings along its edges.

The corner of Harris Street and Broadway is heavily congested with vehicular traffic and pedestrians. The corner sits on a key route to and from the buses and trains at Central Station. The campus entry on Broadway, and the increasing density of the surrounding development, coupled with narrow footpaths has led to busy and heavily trafficked footpaths.

There is a service vehicle access route at Turner Lane accessed directly from Harris Street. This service access is not heavily used and its width and configuration limit vehicle sizes. It predominantly provides deliveries to CB09 - the Loft & Glasshouse Bar.



TRAFFIC DIAGRAM



PEDESTRIAN CONGESTION DIAGRAM



HARRIS STREET & BROADWAY TRAFFIC CONDITION



HARRIS STREET & BROADWAY PEDESTRIAN CONGESTION

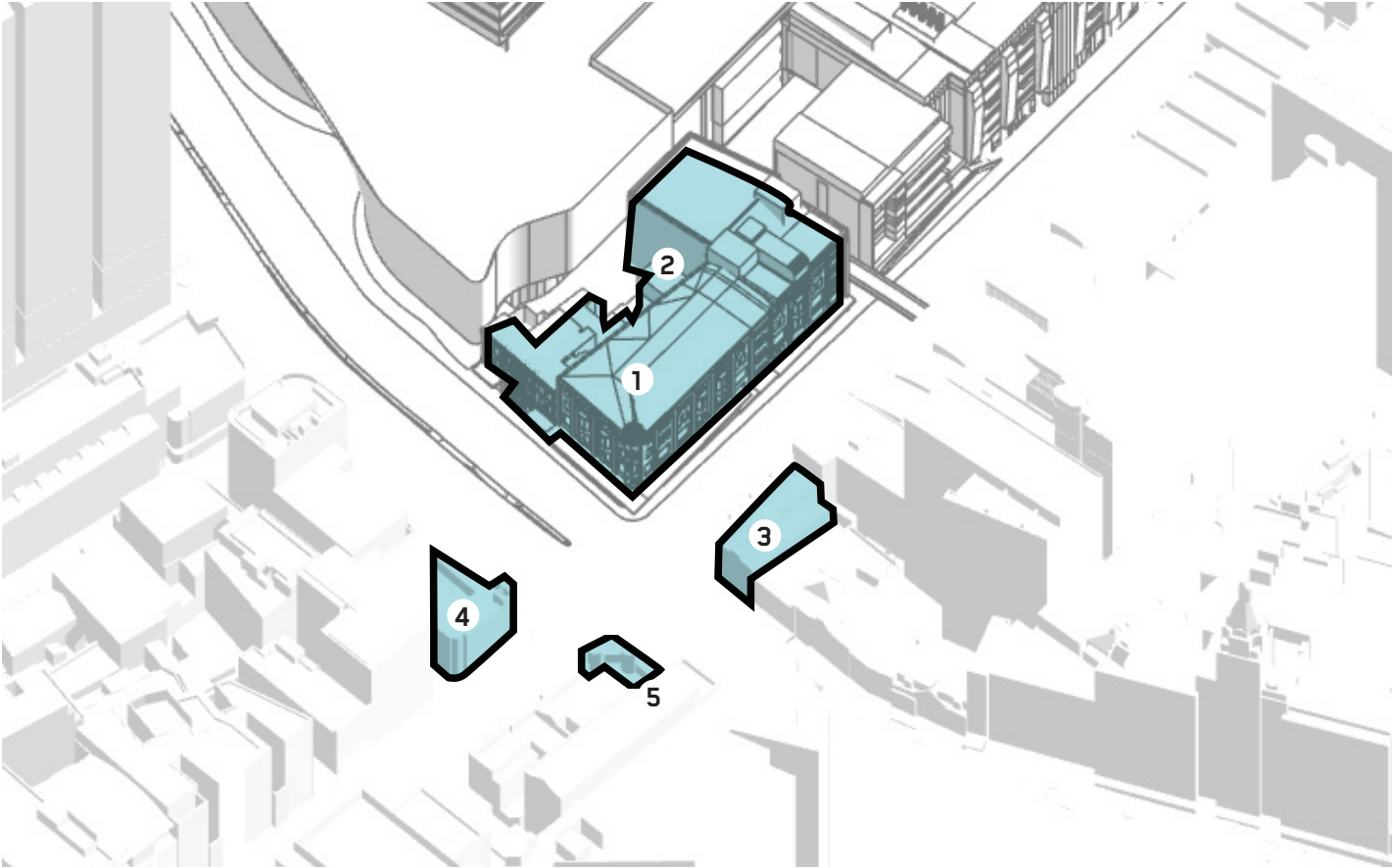
SITE ANALYSIS

HERITAGE CONDITION

The four level heritage listed former Bon Marche building (CB03), was an early Sydney department store prior to being used for educational uses. It is on the corner of Broadway and Harris Street and is comprised of 2 parts - the original building which faces the corner and a 1930's extension to its north. The extension is not perceivable as an addition as it continues as a consistent façade treatment along Harris Street. The building has had major interventions to its internal fabric, with little original fabric remaining.

The external appearance of the building has also undergone significant intervention with rendering of its face brick walls, and replacement of its timber windows and awnings, among other items. However, the overall form is still predominantly intact. Bon Marche is adjacent to three storey heritage terraces (Building 18), which are a rare example of commercial terraces which have also had little change to their external form.

The most significant aspect of the heritage qualities of Bon Marche are more related to its setting, as it forms one of four original buildings, on each corner of Broadway and Harris Street, that form an 'intact' setting.



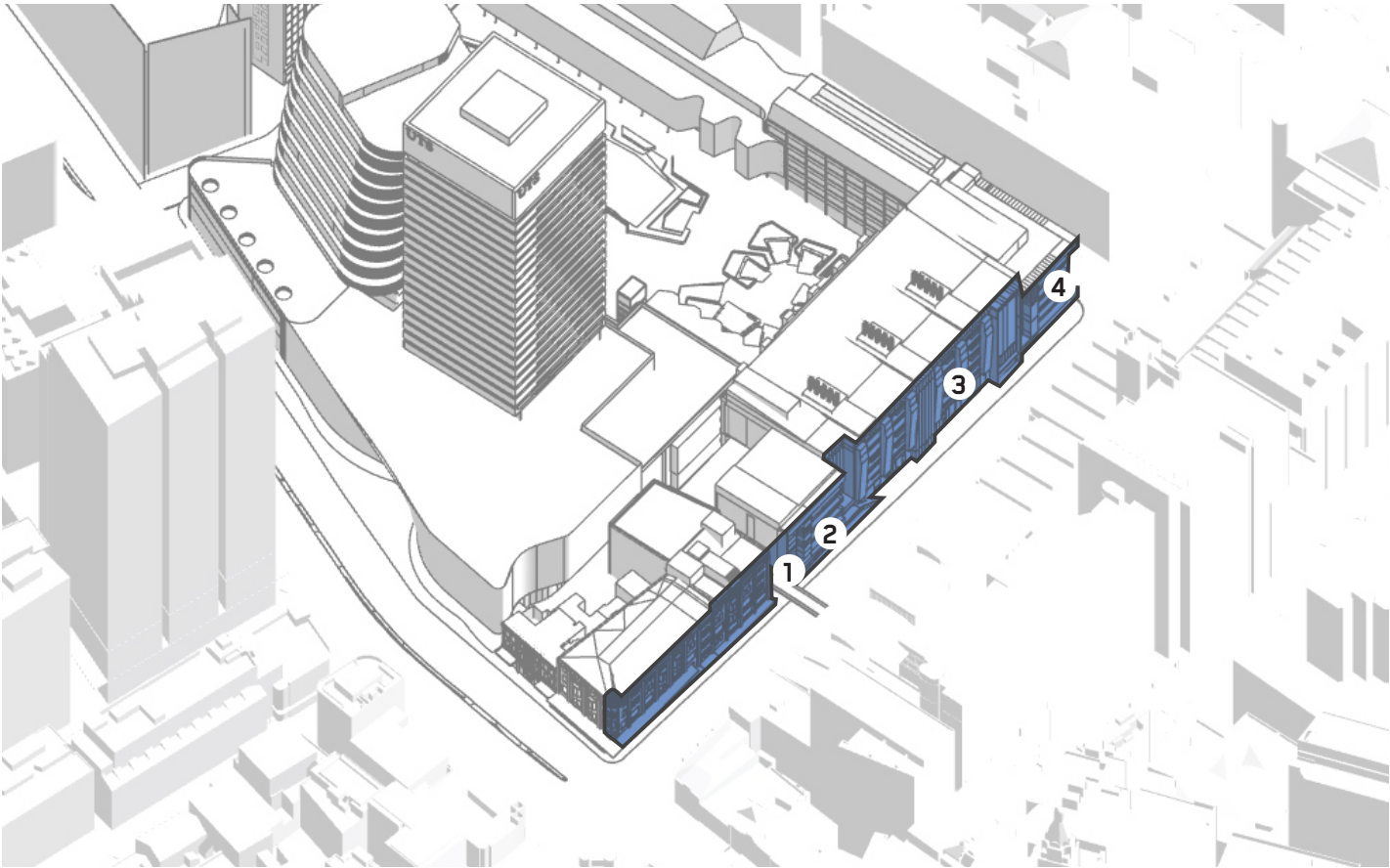
SITE ANALYSIS

HARRIS STREET FRONTAGE

The southern-most end of Harris Street is an unpleasant and uninviting area of the city. The traffic is heavy and one directional, the footpaths are narrow and generally devoid of landscaping, and the buildings turn their backs to the public domain.

Building 4 presents a relatively solid wall to the street with no access, view or interface between the building and the street. The building is a 1950's structure that underwent a major refurbishment to create new science teaching laboratories in the early 2000's. The refurbishment made little attempt to improve the building's approach to the public domain, in either its material use, its design quality or its spatial arrangement. Specialist reports have identified that the building is coming to the end of its structural and service life.

The street slopes almost two full levels from the corner at Broadway down to Thomas Street which has added to the lack of building engagement with the street.



BUILDING ENVELOPE

EXISTING CONDITION AND CURRENT APPROVED CONCEPT PLAN

THE FOLLOWING BUILDINGS COMPRISE THE SUBJECT SITE:

CAMPUS BUILDING 3: The four level heritage listed Bon Marche building (Building 3), was an early Sydney department store prior to being used for educational uses. It is on the corner of Broadway and Harris Street and is comprised of 2 parts - the original building which faces the corner and a 1930's extension to its north. The extension is not perceivable as an addition as it continues as a consistent façade treatment along Harris Street. The building increases to five levels as it continues north along Harris Street due to the sloping street. Whilst there has been little change to the external form, the interior has been almost completely removed over the years with new internal floor structure in some areas.

CAMPUS BUILDING 18: Bon Marche is adjacent to the three storey heritage terraces (Building 18), which are a rare example of commercial terraces which have also had little change to their external form.

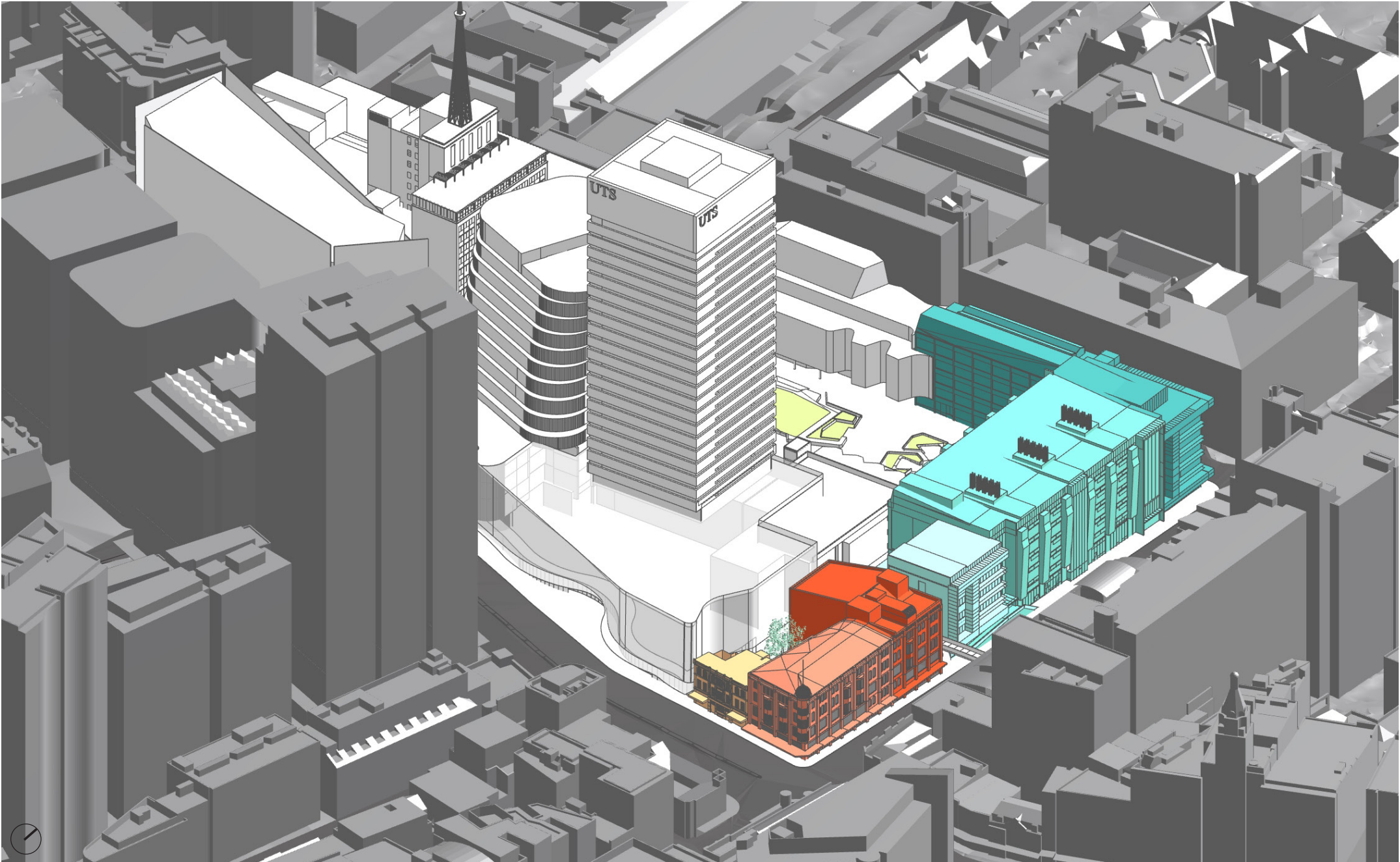
CAMPUS BUILDING 4: Building 4 is a 1950's structure that is used for science research and teaching. It comprises three key components: the Thomas street section (CB04 North), the northernmost section along Harris Street (CB04 East) and the southern end (CB04 South)

CAMPUS BUILDING 4 NORTH: This section of Building 4 is 5 storeys and has a relatively narrow building footprint at approximately 18m deep. As a result, its predominant use is for academic offices as its dimensions limit laboratory or teaching uses. It has had no significant change or refurbishment since it was built. It provides direct internal connections to the new Building 7 further west along Thomas Street.

CAMPUS BUILDING 4 EAST: This section of Building 4 underwent a major refurbishment to create new science teaching laboratories. The refurbishment involved widening of the building footprint toward the west and into what is now Alumni Green. The building footprint is approximately 34m wide and the building is predominately 6 storeys.

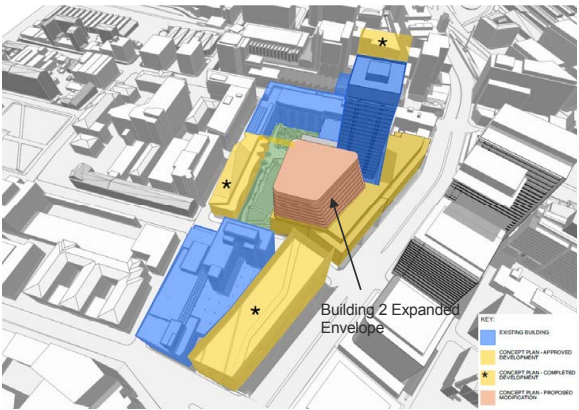
CAMPUS BUILDING 4 SOUTH: The southernmost section of Building 4 which ends at Turner Lane matches the height of the eastern component of Building 4, and its lower levels match the overall width, but its upper levels represent the original building width.

PODIUM EXTENSION: The podium extension is not built nor yet under construction, however its design was selected via a design competition and forms an important completion of the Building 1 entrance off Broadway. It is proposed to be 5 levels, which is an extension of the podium of UTS Central which is currently under construction.



BON MARCHE SCIENCE PRECINCT - EXISTING BUILT FORM

- PODIUM EXTENSION (TO BE CONSTRUCTED)
- CB04 EAST
- CB04 NORTH
- CB04 SOUTH
- CB03 BON MARCHE
- CB03 BM ADDITION (1928)
- CB18 TERRACES / CB09 LOFT



CURRENT APPROVED CONCEPT PLAN
(MOD 5 JULY 2015)

BUILDING ENVELOPE

PROPOSED CONTROL ENVELOPE

The proposed control envelope is based on demolishing Building 4 in its entirety as well as the rear wing of the Bon Marche addition behind the facade. The envelope is comprised of two key forms – the podium which aligns with the parapet datum of Bon Marche and Building 7, and the horizontal upper form which runs north/south along Harris Street is similar in height to many of the new adjacent buildings (including UTS Central) which are at RL 80.

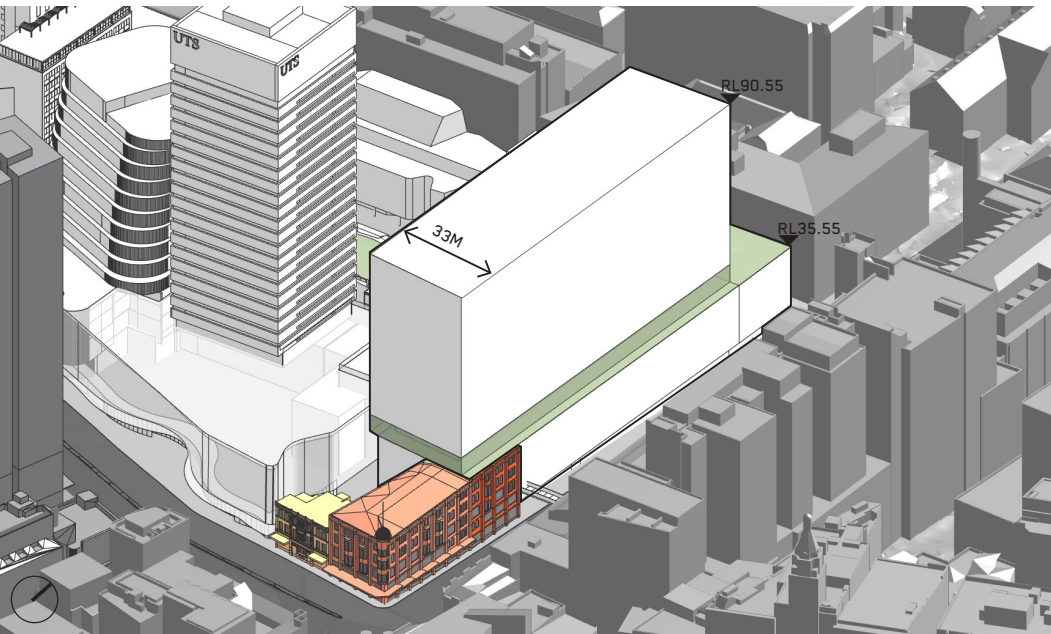
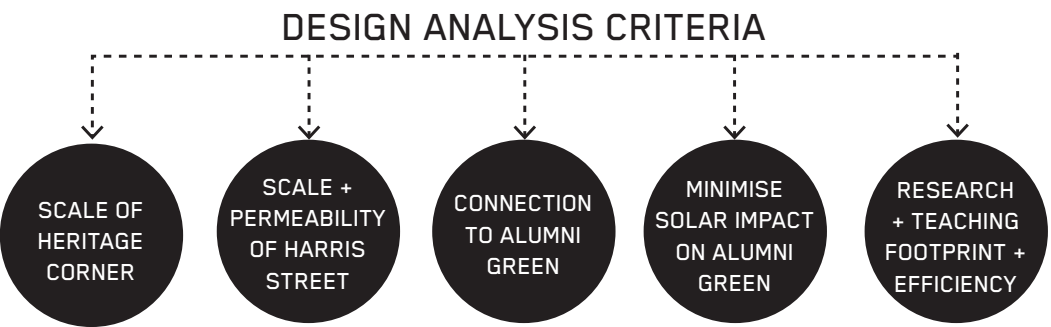
THE PODIUM FORM:

- Preserves the façade and form of the original section of the heritage listed Bon Marche building
- Potential to preserve the Harris Street facade of the rear wing of Bon Marche
- Extends the parapet datum of Bon Marche along the length of Harris Street (which is lower than the current Building 4) and returns that datum along Thomas Street to align with Building 7 – to engage with the scale established on Harris Street by Bon Marche
- Matches the width of the current Building 4 along Harris Street
- Sets back on its south-western edge as it aligns with the current Building 1 podium to create an access into Alumni Green from Broadway
- Matches the width of Building 7 along Thomas Street
- Setbacks along the northern and eastern edges of Alumni Green to create a colonnade around the Green
- Increases the height in a portion of the northern form to allow for services plant similar to Building 7
- Proposes to remove the service access via Turner Lane, and remove the lane, whilst continuing access from the pedestrian bridge above.
- Proposes to widen the current service vehicle and carpark access along Thomas Street by one lane in order to focus all vehicle access to the Bon Marche and Science Precinct and Buildings 1 and 2 (UTS Central) through this single point.

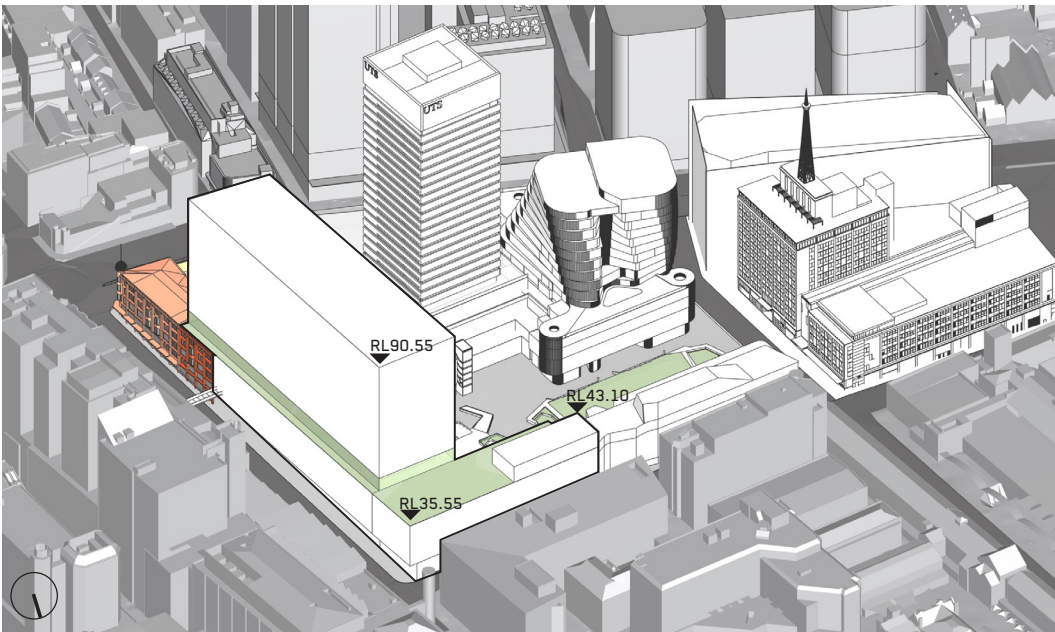
THE HORIZONTAL UPPER FORM:

- Sets back from the corner of Broadway and Harris Street to preserve sunlight to north facing apartments of Central Park on Broadway in accordance with the planning controls for that site
- Sets back from the corner of Broadway and Harris street to enable the form and height of the Bon Marche building to be read clearly and distinctly
- Sets back from the northern corner at Harris and Thomas Streets to preserve the sunlight amenity that Alumni Green currently enjoys in mid-winter between the hours of 10am – 5pm
- Proposes a level of roof terrace and recreation space as separation between the podium and horizontal upper form
- Matches the width of the current Building 4 along Harris Street
- Provides large floor plates that are suitable for the uses of research and teaching buildings to enable effective planning and future flexibility

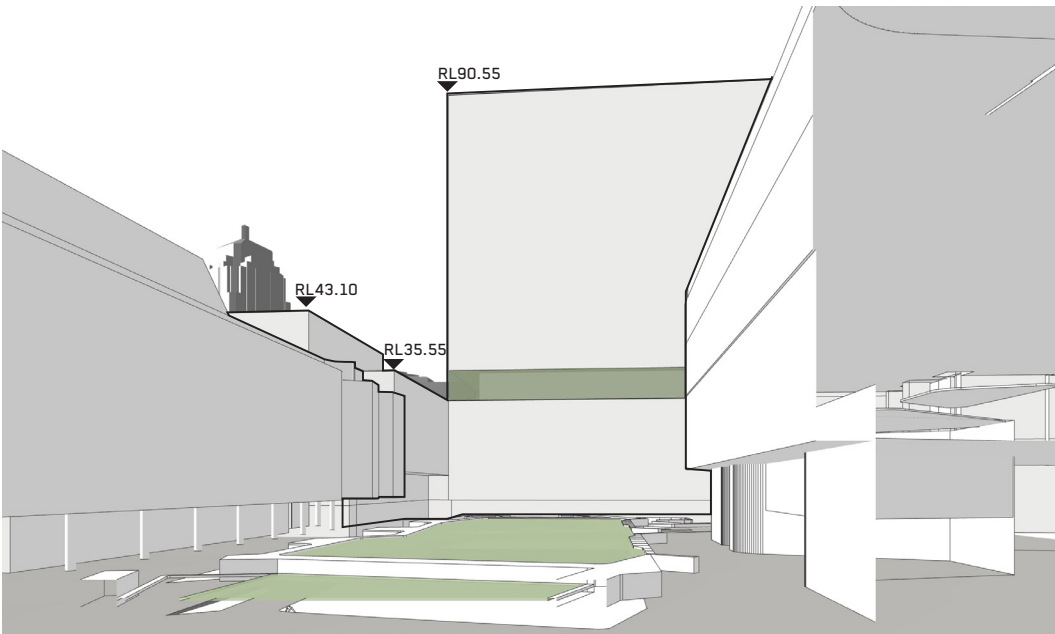
- Provides a height and strong form that is appropriate for the surrounding urban context
- Provides a control envelope that enables flexibility for creativity, formal manipulation and innovation in future design solutions



PROPOSED ENVELOPE - SOUTH EAST ISOMETRIC VIEW



PROPOSED ENVELOPE - NORTH EAST ISOMETRIC VIEW



PROPOSED ENVELOPE - PERSPECTIVE VIEW FROM ALUMNI GREEN

DESIGN PRINCIPLES

INTRODUCTION

This major new development with its new urban edges, building façades and internal areas is an opportunity to create, and in turn identify, richness and diversity. It should be engaging and perforate at ground level, its façades varied and expressive, and its character representative of UTS as a home for innovative ideas, for creative thought and for cross disciplinary, discussion and research.

This application sets seven Design Principles for the redevelopment of the Bon Marche and Science Precinct which future development will be required to address. Each principle is articulated on the following pages of this report.

DESIGN EXCELLENCE

The Campus 2020 Masterplan outlined the importance of Design Excellence in the development of new buildings and spaces on campus. The Masterplan noted:

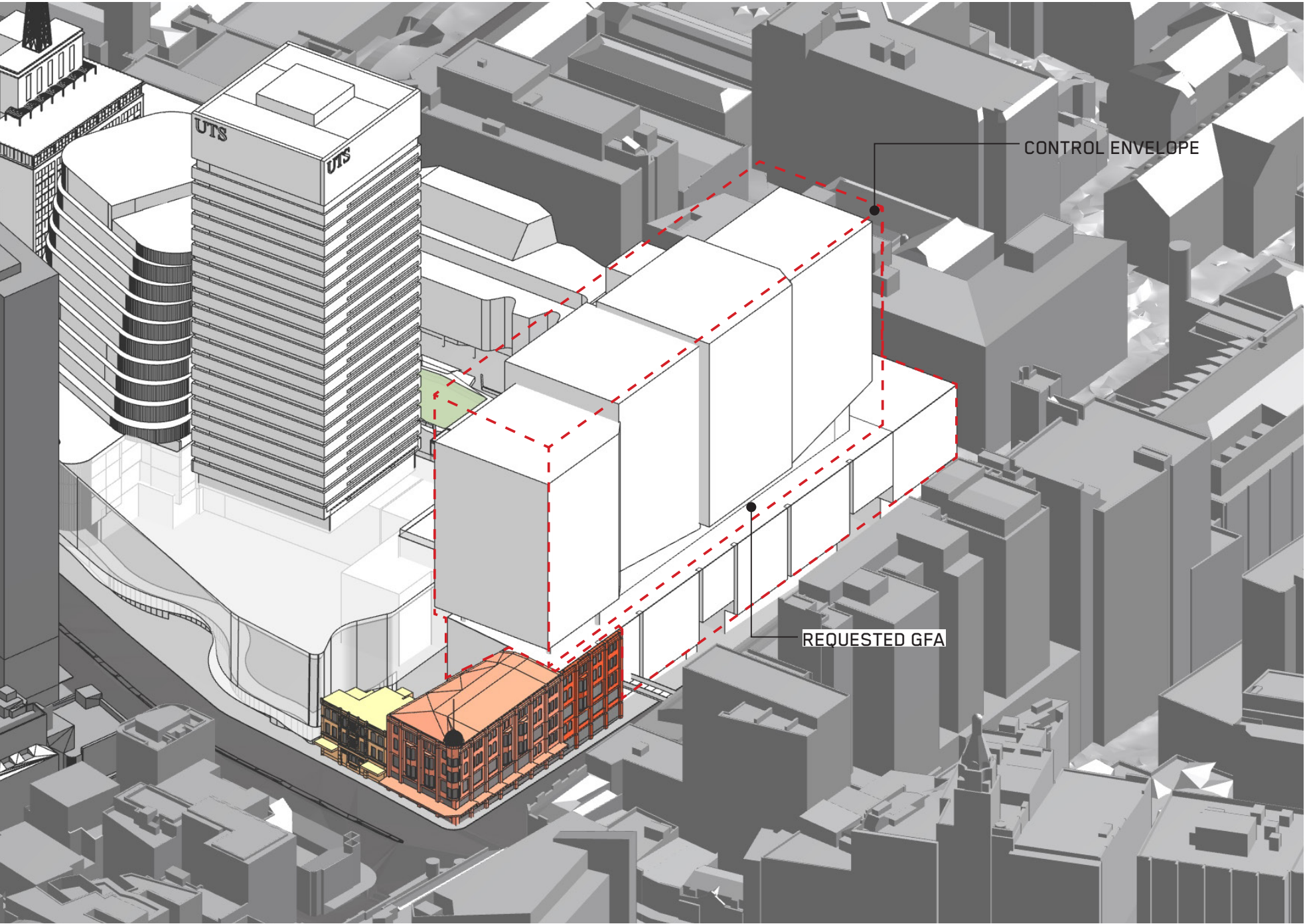
"The character of the Campus needs to be developed as a diverse collection of acquired and purpose-designed buildings that knit together to comprise a rich and interesting city campus and urban environment, as opposed to a singular, massive institution that overwhelms the city and its streets.

There should be no instituted or homogeneous built style for the new buildings at UTS. Controls should encourage quality and creativity in design, rather than dictating design responses.

Design Excellence is not just the quality of a building's façades, it is the quality of the spaces it creates, its urban response, and, most importantly, its ability to enable and reflect developments in teaching, learning and research, and to maintain relevance and flexibility as tertiary institutions and teaching methods change and develop.

The new built environment will be of exemplary design quality, and will be rich and diverse. The quality of the buildings will be judged by the quality of the spaces they create, the way they integrate with the city, the relevance and flexibility they have to the current and future teaching practices, and the manner in which they facilitate human engagement. It is this human engagement that is vital to the communication exchange and collaborative dialogue of an innovative learning institution."

To this end, the proposal provides a control envelope that allows the delivery of the proposed GFA, while having the capacity to enable the necessary sculpting and articulation of the building form to address the design principles that have been established as fundamental to the success of a new development at both an urban and campus level.



CONTROL ENVELOPE TO ENABLE SCULPTING AND ARTICULATION OF FORM

- This diagram illustrates the opportunities of modelling a future building within the proposed control envelope with reference to the indicative design

DESIGN PRINCIPLES

1. INDIGENOUS HERITAGE AND CULTURE

UTS acknowledges the Gadigal People of the Eora Nation and the Boorooberongal People of the Dharug Nation upon whose ancestral lands the University now stands.

There is an ongoing commitment by the University to provide educational opportunities in the higher education sector for Indigenous people and, through research and education, the restoration of their histories and knowledge systems.

As part of this ongoing commitment, the University strives to build an educational environment that is genuinely inclusive of the Indigenous people.

The recording and communication of Aboriginal cultural heritage as it pertains to the site should be explored and recognised in the redevelopment of this site. Future designs should consider the academic, social, cultural and emotional well being of Aboriginal and Torres Strait Islander people through the design of its spaces. Appropriately scaled spaces that allow for gathering and conversation should be integrated into future designs.

Public artwork and landscape elements that celebrate Indigenous identity and culture should be integrated into future schemes.



CHARLES STURT UNIVERSITY, PORT MACQUARIE



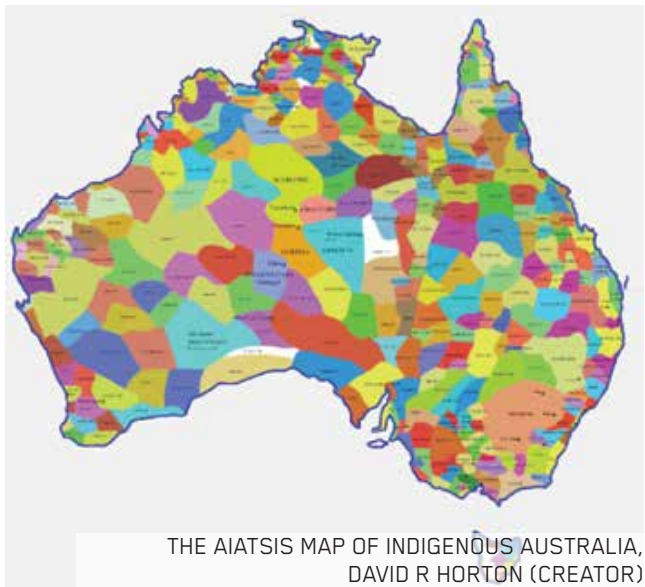
ADELAIDE CONTEMPORARY, ADELAIDE



ST CATHERINE'S COLLEGE, WESTERN AUSTRALIA



NSW ART GALLERY PROPOSAL, SANAA



THE AIATSIS MAP OF INDIGENOUS AUSTRALIA, DAVID R HORTON (CREATOR)



RETAIL STORE AND OFFICES, LOCKHART RIVER

DESIGN PRINCIPLES

2. ENTRY & IDENTITY - BON MARCHE RE-PURPOSED

The Bon Marche building should be considered as a major entrance to the new development, enabling its ground plane to open up and provide connection to the new building lobby and campus beyond.

- Creating new entries in Bon Marche would help alleviate the congestion at the corner. New entrances into Bon Marche through the reinstatement of the original entry positions will enable pedestrians to move through and off the footpath easily and would provide a more pleasant environment and improve safety. There is an opportunity for the entrances to have distinction and interest as modern insertions in the heritage facade.
- A significant new entrance through the Bon Marche addition (northern part of BM) is proposed to create another entry to the campus, but importantly a major front door to the building, proximate to the likely position of a new lift core.
- Bon Marche and the Terraces should be considered as a connected series of spaces that provide entry into the new development as well as providing a finer grained connection into the campus proper. Design solutions should be pursued that investigate creative interpretations of the rear forms of the terraces to enable their structural forms to be apparent whilst creating a connected ground plane and series of linked spaces. These spaces will link to the new Building 1 podium extension and to Alumni Green via the new Western Lane

The re-purposing and reimagining of the heritage buildings and their spaces will not only allow the buildings to be experienced and retained, enhancing the unique heritage setting but will offer the opportunity to experience a different scale and finer grain to the large public spaces of many of the surrounding buildings, and to create a rich and dynamic new civic space on the Broadway corner.

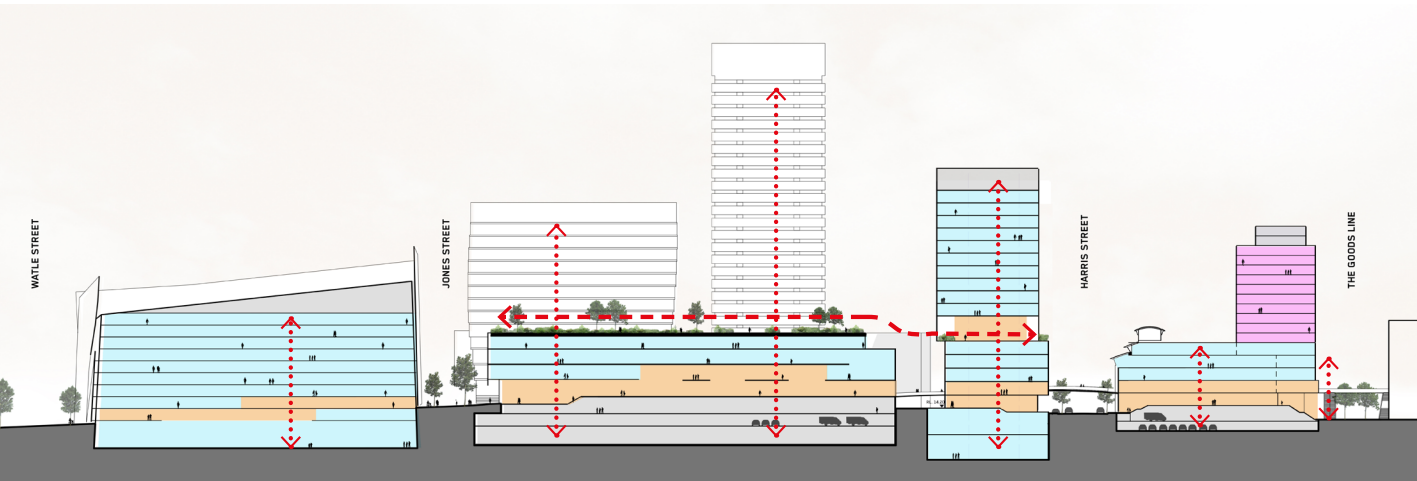
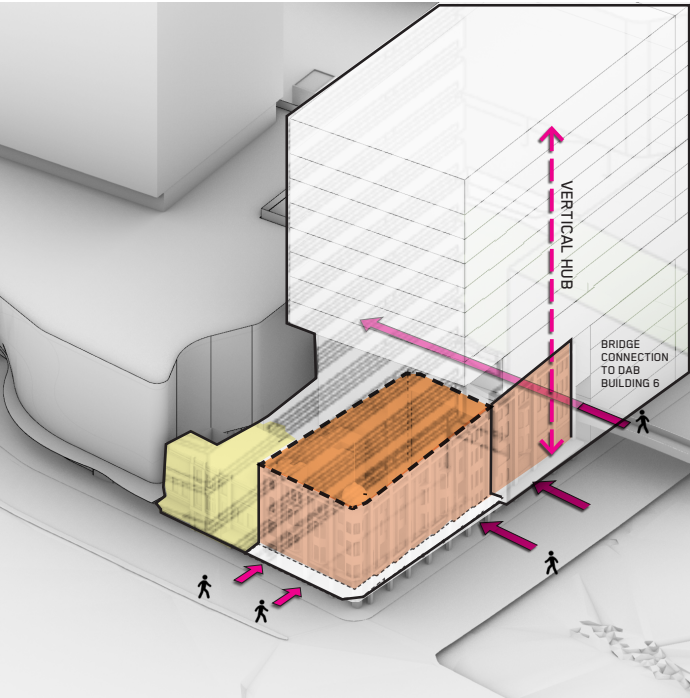
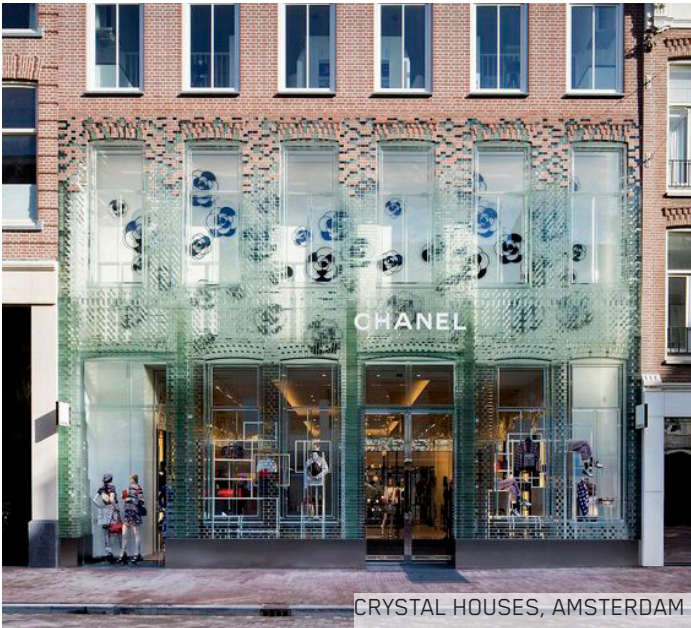
BROADER CAMPUS CONNECTIONS + VERTICAL HUB

To better connect the various buildings as a united campus, and to improve civic routes, key pedestrian movement should be enhanced and continued.

At Broadway, Thomas Street and Harris Street, one should be able to travel at street level and connect into both Alumni Green and the main Campus heart then be able to continue towards Wattle Street to the West of Campus. At Building 6, the pedestrian bridge over Harris Street should interface with the new Bon Marche Envelope and allow a clear continuous route into the Building 1 Podium.

This bridge interface should also feed into a vertical hub that connects the ground plane, foot bridge and Building 4 roof terrace to facilitate activity on and easy movement between levels.

At Building 4 podium roof level one can travel to the roof garden at Building 7 and at the floor below, one can connect to the upper level of Building 1 Podium, to have a connected roof plane.

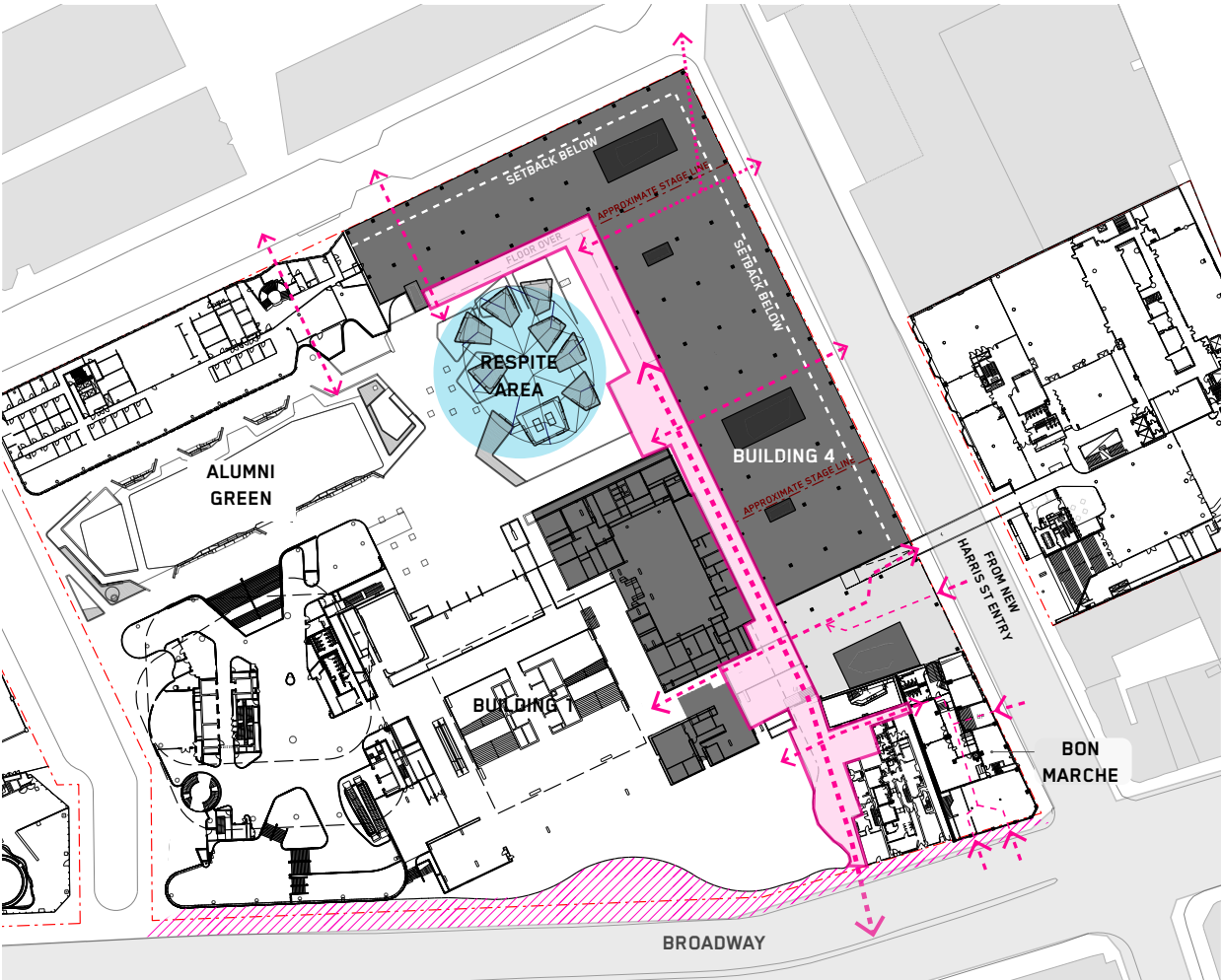
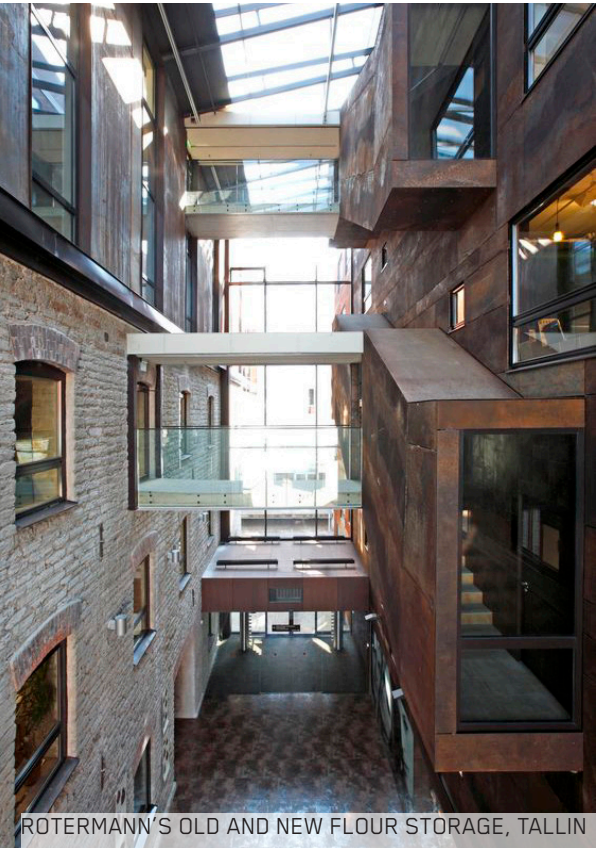
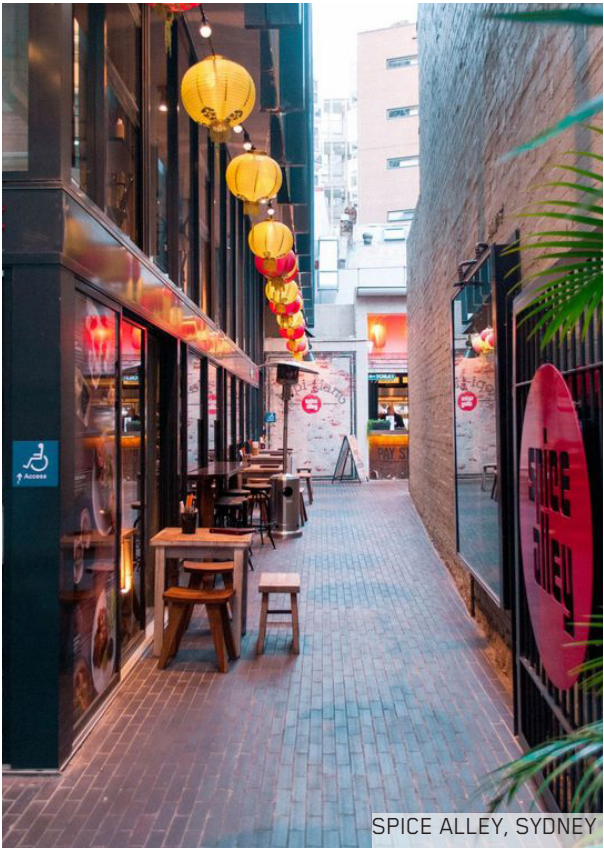


DESIGN PRINCIPLES

3. WESTERN LANE

The proposed building envelope sets back on its south-western edge as it aligns with the current Building 1 podium to create access into Alumni Green from Broadway. This connects to the new campus entries through the original facade of Bon Marche on Harris St, the courtyard at the rear of the terraces, through to the redeveloped rear of the heritage building, to Alumni Green.

This space should be developed as a fine-grained laneway through the site with the consideration of its volume and scale to be in balance with the main formal entry of Building 1, and the activation along its edges.



DESIGN PRINCIPLES

4. EXPERIENCE AT STREET LEVEL - HARRIS AND THOMAS STREETS

The ability to rebuild an entire block addressing the street and both corners is almost unparalleled in the context of the city. There is an excellent opportunity to transform the urban domain and pedestrian experience along Harris Street and Thomas Street, to focus on transparency, connections and building quality at street level, and to broaden public engagement with the UTS campus.

IMPROVEMENT AND WIDENING OF THE PUBLIC REALM

The pedestrian footpath along Harris Street between Thomas Street and Broadway is narrow and has little landscaping. Traffic is one-way southbound with no pedestrian crossing other than at signalised intersections at the corners.

The envelope proposal sets back the ground level/s from the boundary to enable widening of the footpath and public domain.

ENTRANCE AND CONNECTION

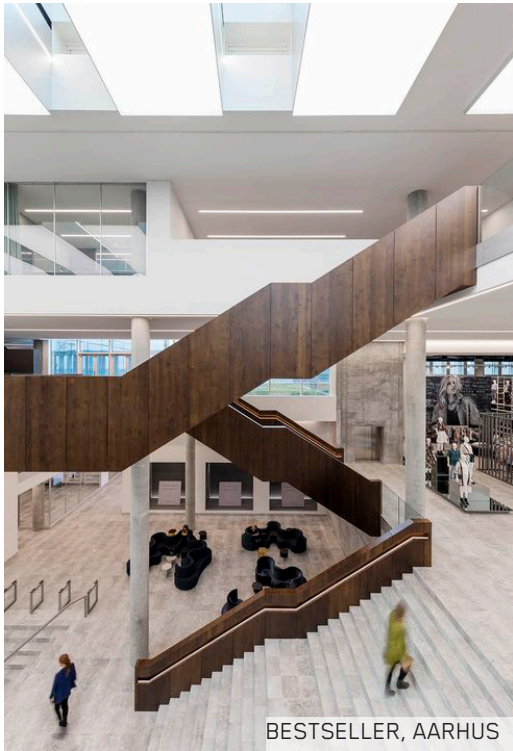
Alumni Green is the centre of the existing 2020 Masterplan and vital green lungs for the campus providing outdoor social space and amenity for students, staff and researchers in this dense urban setting. Its access is from Jones Street on its west, and is almost impenetrable from other streets.

Future development should create new connections directly to the Green from Harris Street and Thomas Street, considering at a minimum, a connection along Thomas Street, connections at the corner of Thomas Street and further south along Harris street, as well as addressing the change in level between the Green and Harris Street.

ENGAGEMENT AND TRANSPARENCY

The redevelopment enables the ability to connect ground level spaces to the street and to provide transparency and public engagement. Future development should consider allocation of uses along the ground that support public connection and encourage interaction.

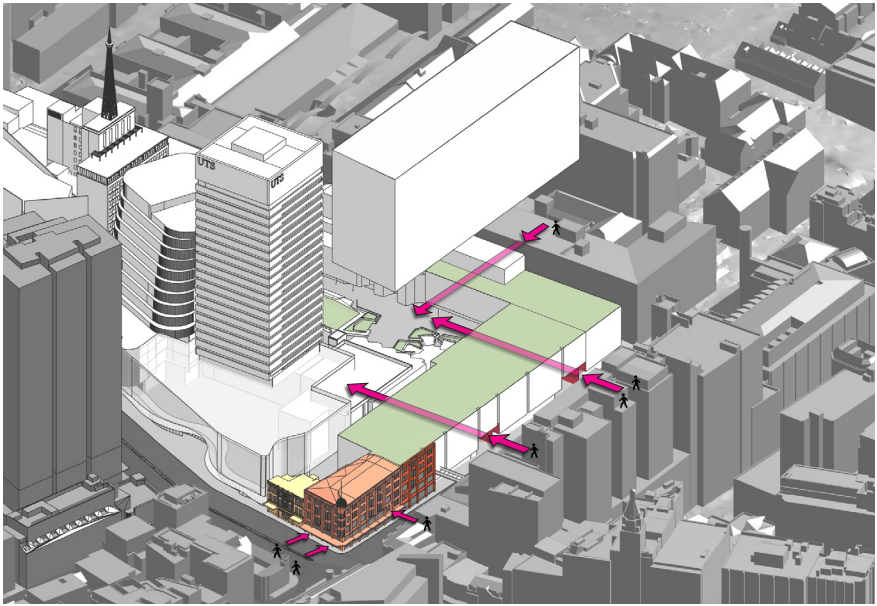
The sloping nature of Harris Street provides a challenge to constant and level connection along the Harris Street façade, therefore proposals that include tiered/stepping ground planes should be examined.



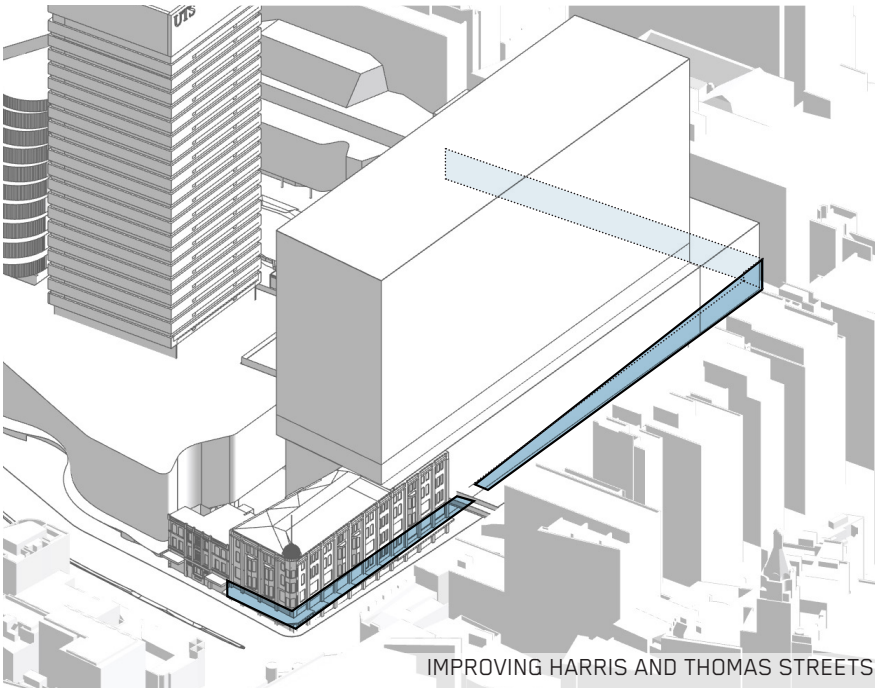
BESTSELLER, AARHUS



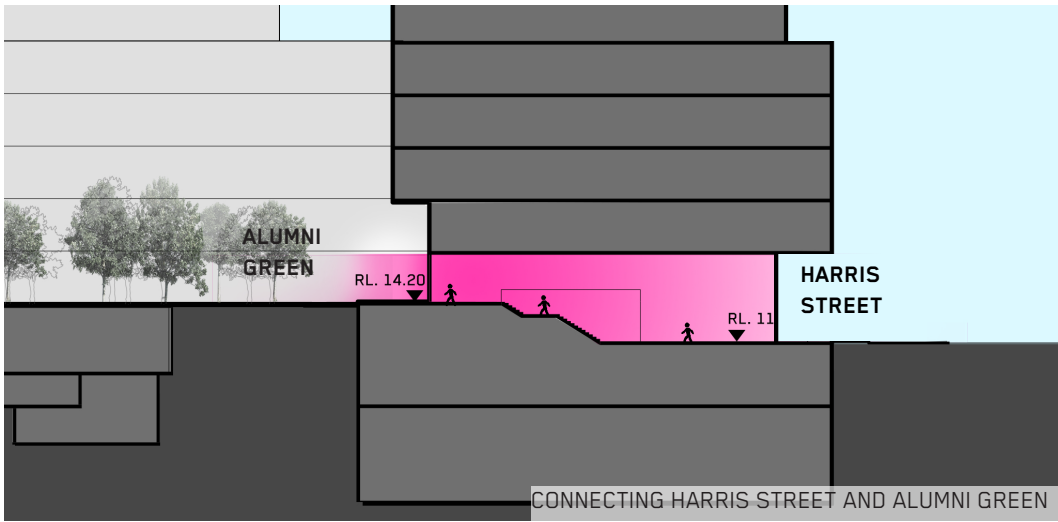
WHITE BLOCK GALLERY, HEYRI



CONNECTING HARRIS AND THOMAS STREETS WITH ALUMNI GREEN



IMPROVING HARRIS AND THOMAS STREETS



CONNECTING HARRIS STREET AND ALUMNI GREEN

DESIGN PRINCIPLES

5. ARTICULATION AND EXPRESSION

Utilising the capacity in the allowable envelope, the overall building form should be shaped and articulated to give the best appropriate response in regards to the environmental, urban and university requirements. It should be engaging and perforate at ground level, its façades varied and expressive and its character representative of UTS as a home for innovation.

BON MARCHE DATUM

To return Bon Marche's presence, to combine together the podium buildings with Bon Marche and to give the appropriate street scale along Harris Street, the podium should generally align with Bon Marche's parapet height as a clear datum.

TWO DISTINCT FORMS

With the datum alignment for Bon Marche defined, it is important that this podium and the upper form are clearly delineated with a strong separation such a change in materials, set-backs or recesses in addition to the roof terrace concept separating the two forms.

FINE GRAIN EXPRESSION OF PODIUM

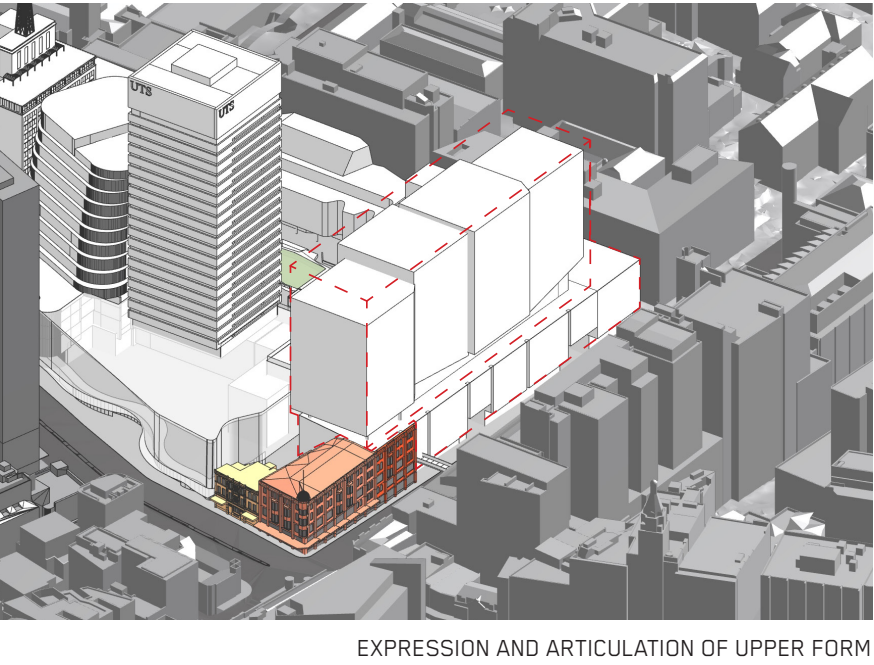
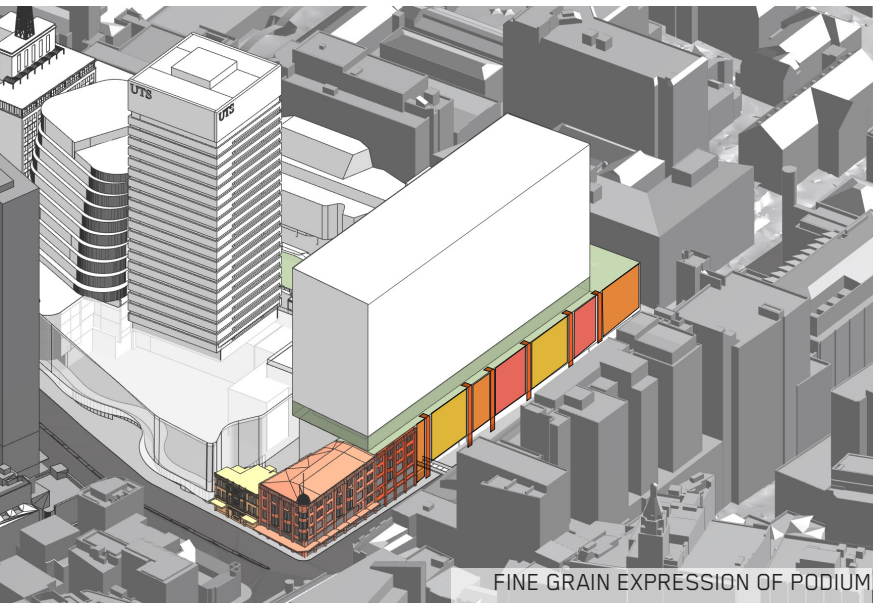
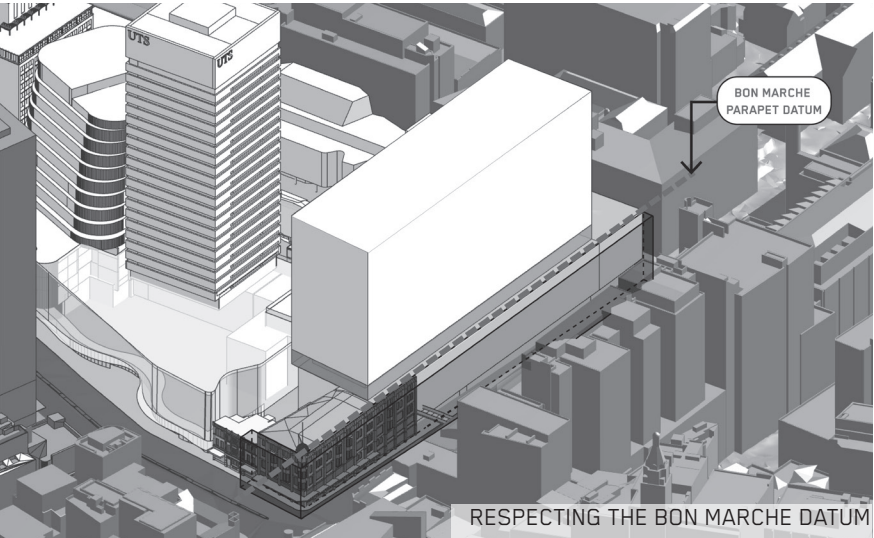
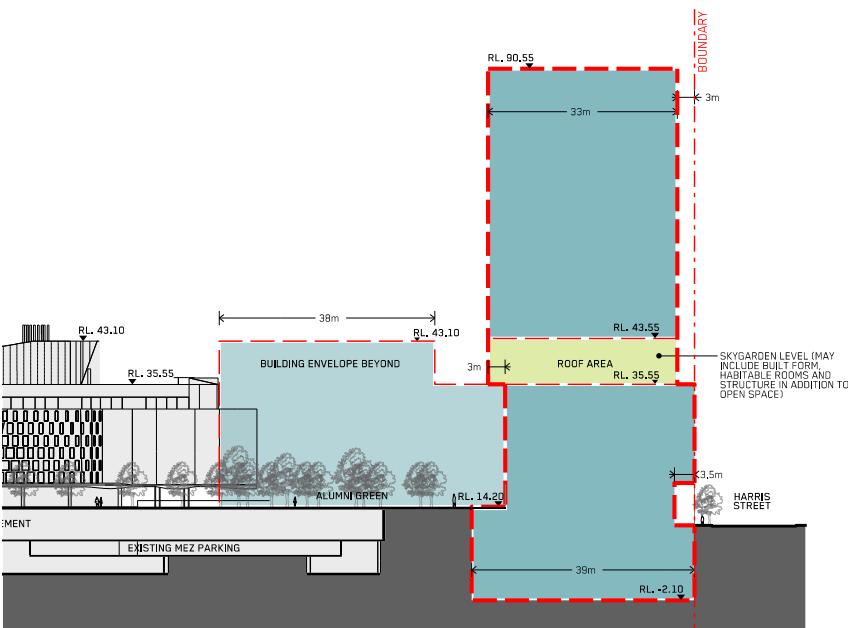
To respond to the vertical expression of Bon Marche, and to maintain an appropriate street scale, the length of the podium should be articulated to break down the single form to create a human scale, while expressing the continuous rhythm of the street grain.

FAÇADE AND FORM

In conjunction with the climatic considerations, the future designed building should also be shaped to respect the Bon Marche volume, provide a sense of scale and grain to Harris Street to give form and expression to the urban context, and give relief towards Alumni Green and the main campus. The language and detail of the upper form should also respond to the immediate context - the views from the surrounding streets, the expression at the Broadway and Thomas Street corners and the view within Alumni Green. The setback in the upper form of the eastern facade should be considered as an articulation zone to achieve modulation, depth and interest in the building envelope.

TREATMENT OF NORTH AND SOUTH FACADES

The North and south facades have a strong presence to the Harris Street approach and Broadway respectively. Their expression and treatment requires a considered approach as 'elevated front doors' to the precinct..



DESIGN PRINCIPLES

6. ROOFTOP GARDENS - LANDSCAPE IN THE SKY

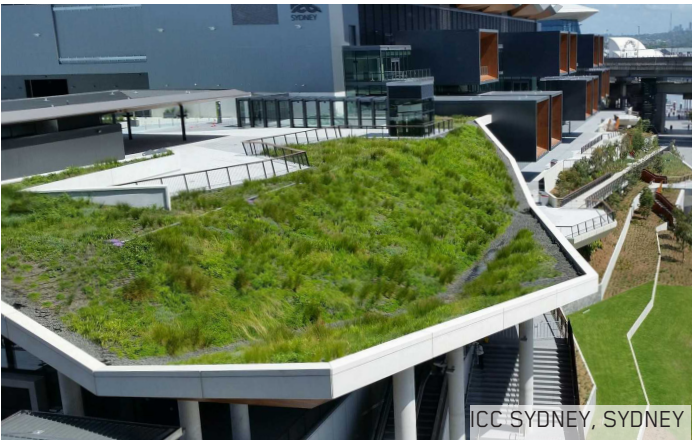
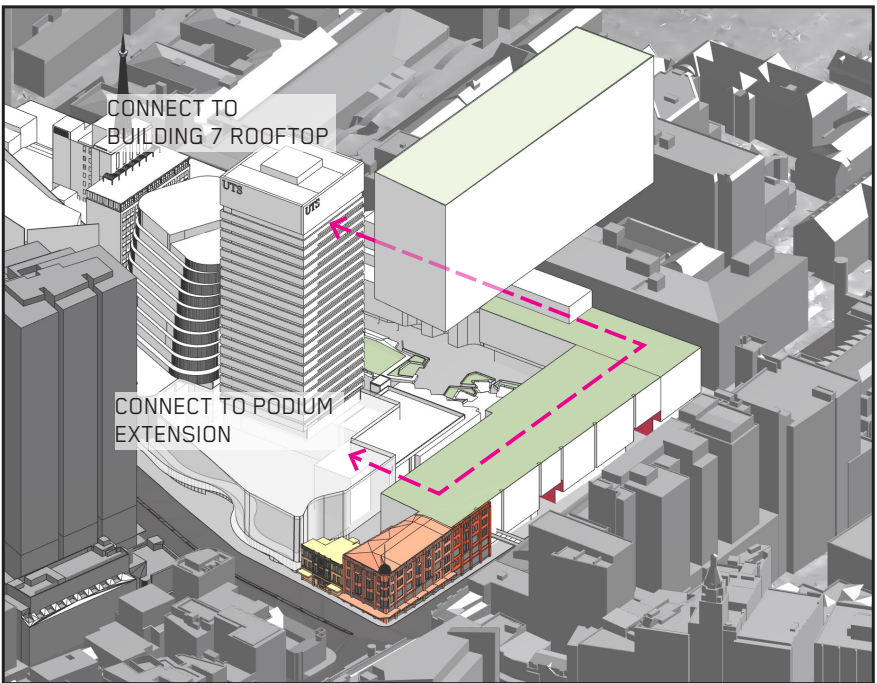
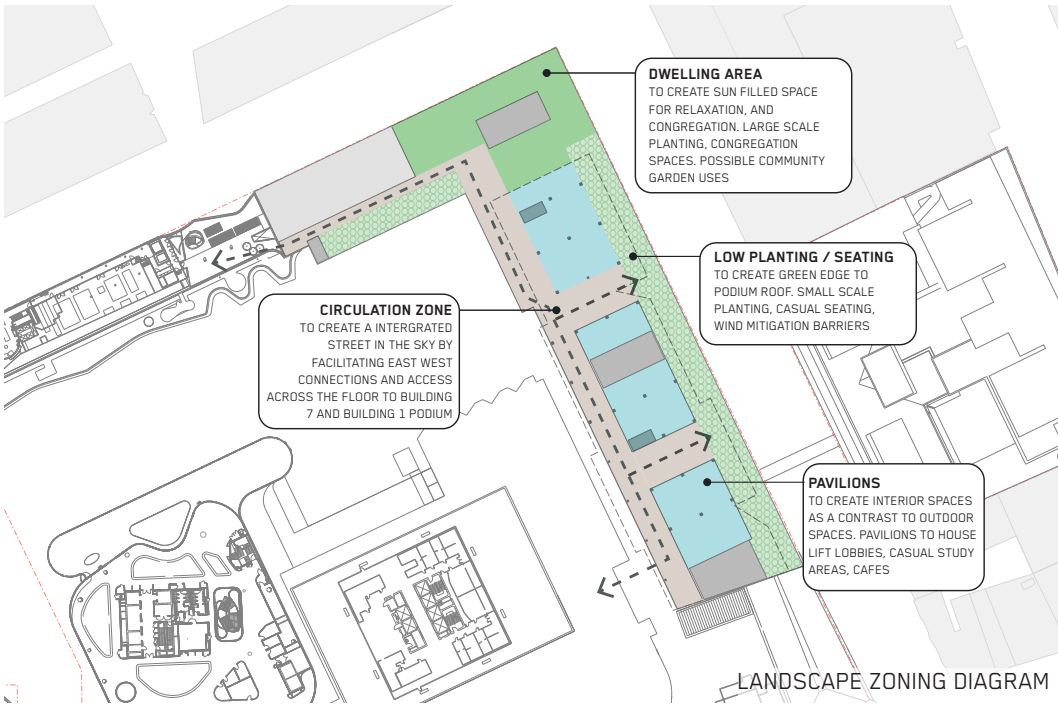
The opportunity to provide significant new green space and recreation space to supplement Alumni Green is a key consideration in this proposal.

ROOF TERRACE

An elevated roof terrace and garden and associated spaces provides a formal separation between the development's two defining forms. The garden should provide respite, amenity and outdoor recreational space for students, staff, researchers and visitors. The garden should be considered as one of a series of landscaped rooftop spaces, and provide connections between existing and new rooftops on Building 7 and UTS Central to supplement Alumni Green's outdoor recreation, and to provide an elevated green amenity in a high-rise campus.

Careful consideration needs to be given to the design to provide an exemplar destination space and experience on this unique elevated landscape. Items to consider include:

- Height of building form overhead positioned to maximise solar access penetration along western and eastern perimeters
- maximising use of soft landscaped areas along north, west and eastern perimeters where solar access is most abundant
- Combination of external and internal areas, with internal areas positioned to best use the covered shaded areas in the centre of the space
- Balancing soft and hard landscaped spaces
- Providing a combination spaces for passive and active recreation as well as areas that provide for working and collaboration
- Consideration of wind mitigation from westerly and north-easterly winds through screening and landscaped zones
- Shaping and material selection of the soffit of the form above to consider maximising light and reflection into the space as well as views from the streets below



DESIGN PRINCIPLES

7. ALUMNI GREEN EXPERIENCE

Alumni Green is a key open air landscaped space at the heart of the UTS Broadway Precinct. With limited other quality outdoor space in the district, preserving Alumni Green’s amenity and enhancing connections to the Green are key to keeping an activated, and inviting public realm.

CONNECTING THE CITY TO ALUMNI GREEN

The main visible access into the Green is via Jones Street to the west. To provide stronger connections it is imperative clear direct access from the surrounding streets is provided, particularly on key pedestrian desire lines. Entries at the north via Thomas Street should be provided for flows from the north. From Harris Street connections are required which also need to respond to the change in levels between the Street and Green. From Broadway connections via Western Lane, and Bon Marche Entry are required, creating a south-east to north-west flow across campus.

MAINTAINING SUNLIGHT AND OUTLOOK FROM WITHIN

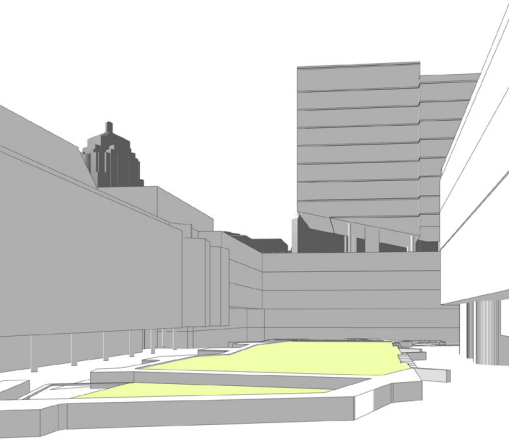
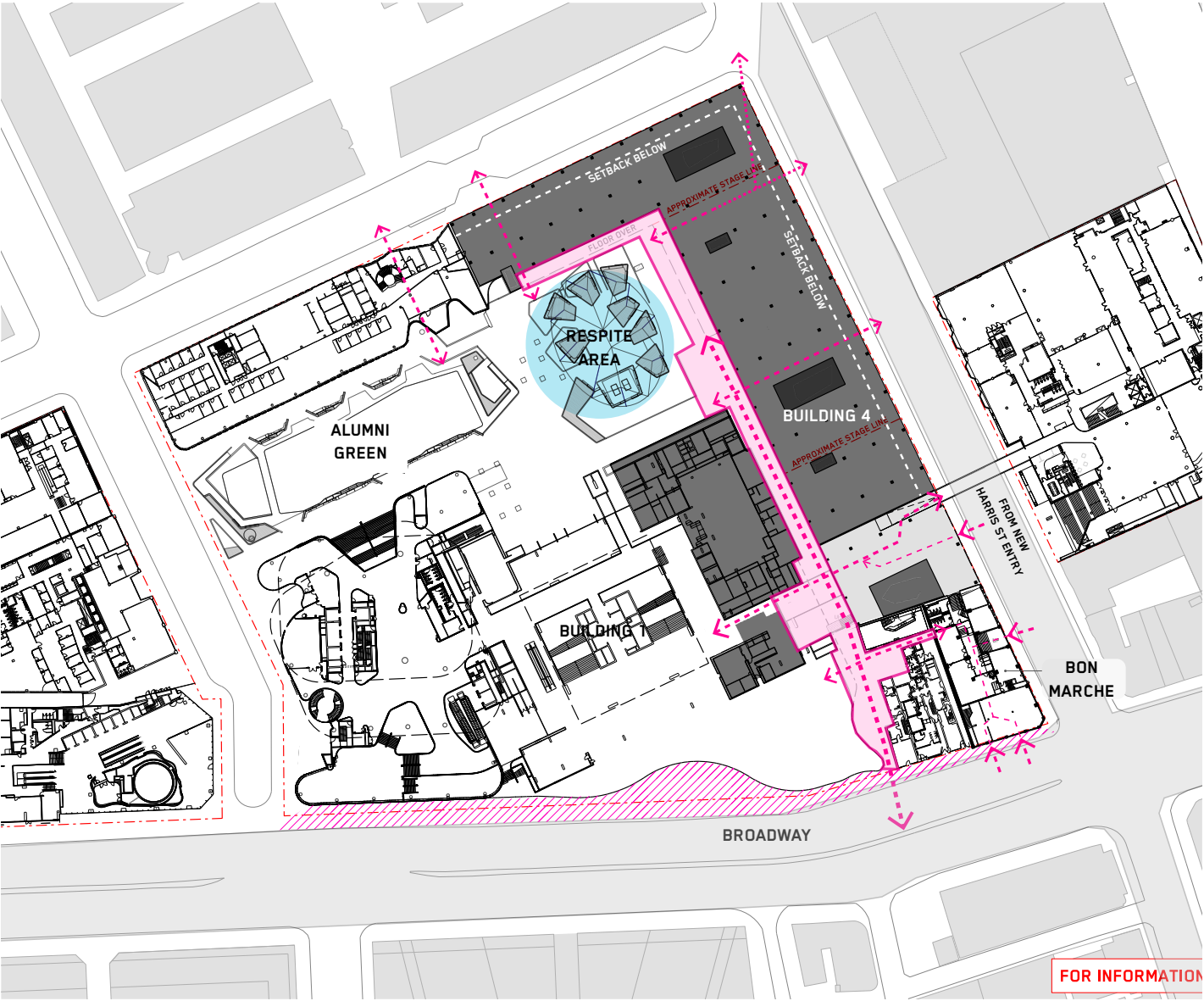
It is key that both sunlight into the Green, as well as outlook to sky from within is maintained to provide a desirable environment physically and psychologically. The envelope of the upper form therefore steps back from Thomas Street to maintain winter sunlight. Within this control envelope the built form should be designed to provide the necessary sculpting of form to maintain or increase the extent after 10am on 21st June.

REDUCING ADVERSE WIND IMPACTS ON ALUMNI GREEN

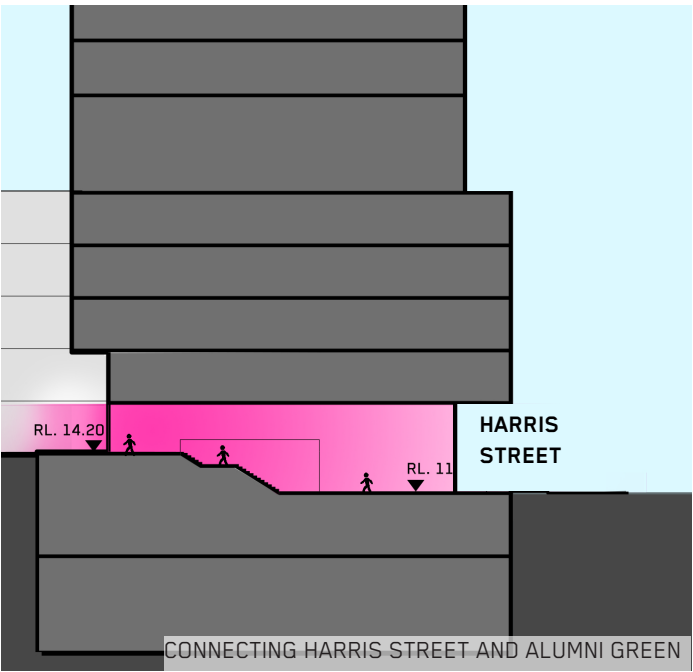
The design should take into consideration the impact of wind to Alumni Green and the public domain, and mitigate any adverse impacts to ensure safe and comfortable pedestrian movement and recreational use of Alumni Green. Note that the benefits of enabling north easterly breezes to access Alumni Green through the new development have been identified as providing important cross ventilation opportunities.

RETAINING PLACES OF RESPITE

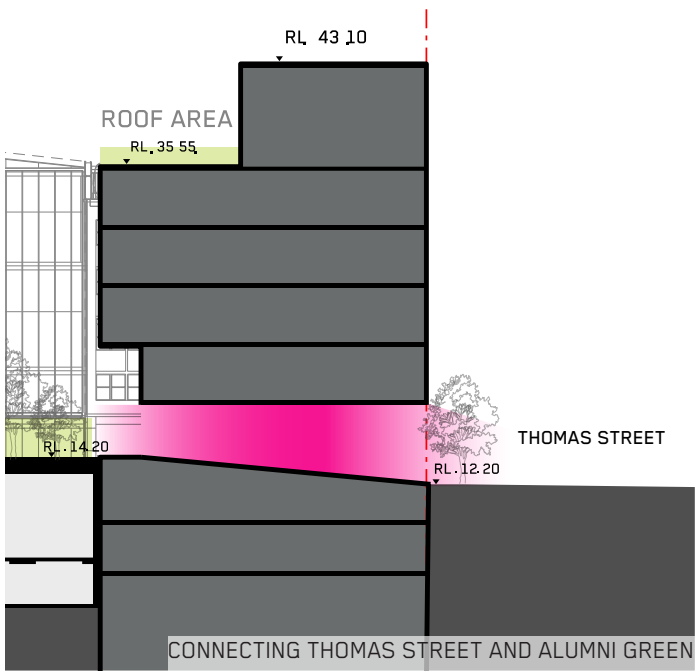
Any intervention to the existing Alumni Green should retain the mix of active and passive recreational uses that the current space provides. To preserve the usability of the respite area in the north-east of Alumni Green, new pedestrian connections should be directed around rather than through the space.



GROUND VIEW FROM WITHIN ALUMNI GREEN OF INDICATIVE STUDY FORM



CONNECTING HARRIS STREET AND ALUMNI GREEN



CONNECTING THOMAS STREET AND ALUMNI GREEN



APPENDIX

BON MARCHE AND SCIENCE PRECINCT

ENVELOPE & REFERENCE DRAWINGS

DRAWING NUMBER	DRAWING NAME
EXISTING CAMPUS DRAWING SET	
EX-SP-RF-01	EXISTING CAMPUS - SITE SURVEY PLAN
EX-EL-SE-01	EXISTING CAMPUS - BROADWAY ELEVATION (SOUTH)
EX-EL-EE-01	EXISTING CAMPUS - HARRIS ST ELEVATION (EAST)
EX-EL-NE-01	EXISTING CAMPUS - THOMAS ST ELEVATION (NORTH)
ENVELOPE DRAWING SET	
EN-FP-TY-BA	PROPOSED CONTROL ENVELOPE DRAWING - TYPICAL BASEMENT LEVEL
EN-FP-TY-LO	PROPOSED CONTROL ENVELOPE DRAWING - TYPICAL LOWER LEVEL
EN-FP-TY-UP	PROPOSED CONTROL ENVELOPE DRAWING - TYPICAL UPPER LEVEL
EN-EL-SE-01	PROPOSED CONTROL ENVELOPE DRAWING - BROADWAY ELEVATION (SOUTH)
EN-EL-EE-01	PROPOSED CONTROL ENVELOPE DRAWING - HARRIS STREET ELEVATION (EAST)
EN-EL-NE-01	PROPOSED CONTROL ENVELOPE DRAWING - THOMAS STREET ELEVATION (NORTH)
EN-SS-EW-01	PROPOSED CONTROL ENVELOPE DRAWING - EAST-WEST SECTION 01
EN-SS-EW-02	PROPOSED CONTROL ENVELOPE DRAWING - EAST-WEST SECTION 02
EN-SS-EW-03	PROPOSED CONTROL ENVELOPE DRAWING - EAST-WEST SECTION 03
EN-SS-NS-01	PROPOSED CONTROL ENVELOPE DRAWING - NORTH-SOUTH SECTION 01
INDICATIVE DESIGN DRAWING SET	
ID-FP-CL-B3	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL BASEMENT 3
ID-FP-CL-B2_M	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL BASEMENT MEZZANINE
ID-FP-CL-B1	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL BASEMENT 1
ID-FP-CL-00	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL 00 (LOWER GROUND)
ID-FP-CL-01	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL 01 (UPPER GROUND)
ID-FP-CL-02	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL 02 (TYPICAL LOWER FLOOR)
ID-FP-CL-05	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL 05 (ROOF GARDEN)
ID-FP-CL-06	INDICATIVE DESIGN DRAWING - CAMPUS LEVEL 06 (TYPICAL UPPER FLOOR)
ID-SS-EW-01	INDICATIVE DESIGN DRAWING - EAST-WEST SECTION 01
ID-SS-EW-02	INDICATIVE DESIGN DRAWING - EAST-WEST SECTION 02
ID-SS-EW-03	INDICATIVE DESIGN DRAWING - EAST-WEST SECTION 03
ID-SS-EW-04	INDICATIVE DESIGN DRAWING - EAST-WEST SECTION 04
ID-SS-NS-01	INDICATIVE DESIGN DRAWING - NORTH-SOUTH SECTION 01
ID-SS-NS-02	INDICATIVE DESIGN DRAWING - NORTH-SOUTH SECTION 02
ID-EL-EE-01	INDICATIVE DESIGN DRAWING - HARRIS STREET ELEVATION (EAST)

SHADOW ANALYSIS

SHADOW ANALYSIS - ONE CENTRAL PARK

NEIGHBOURING RESIDENTIAL - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE

JUNE 21ST 7:30AM

JUNE 21ST 8:30AM

JUNE 21ST 9:00AM

JUNE 21ST 10:00AM

JUNE 21ST 11:00AM

JUNE 21ST 12:00AM

JUNE 21ST 01:00PM

JUNE 21ST 02:00PM

JUNE 21ST 03:00PM

JUNE 21ST 04:00PM

JUNE 21ST 04:30PM

ALUMNI GREEN - EXISTING CONDITION - WINTER SOLSTICE

JUNE 21ST 9:00AM

JUNE 21ST 10:00AM

JUNE 21ST 11:00AM

JUNE 21ST 12:00AM

JUNE 21ST 01:00PM

JUNE 21ST 02:00PM

JUNE 21ST 03:00PM

ALUMNI GREEN - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE

JUNE 21ST 9:00AM

JUNE 21ST 10:00AM

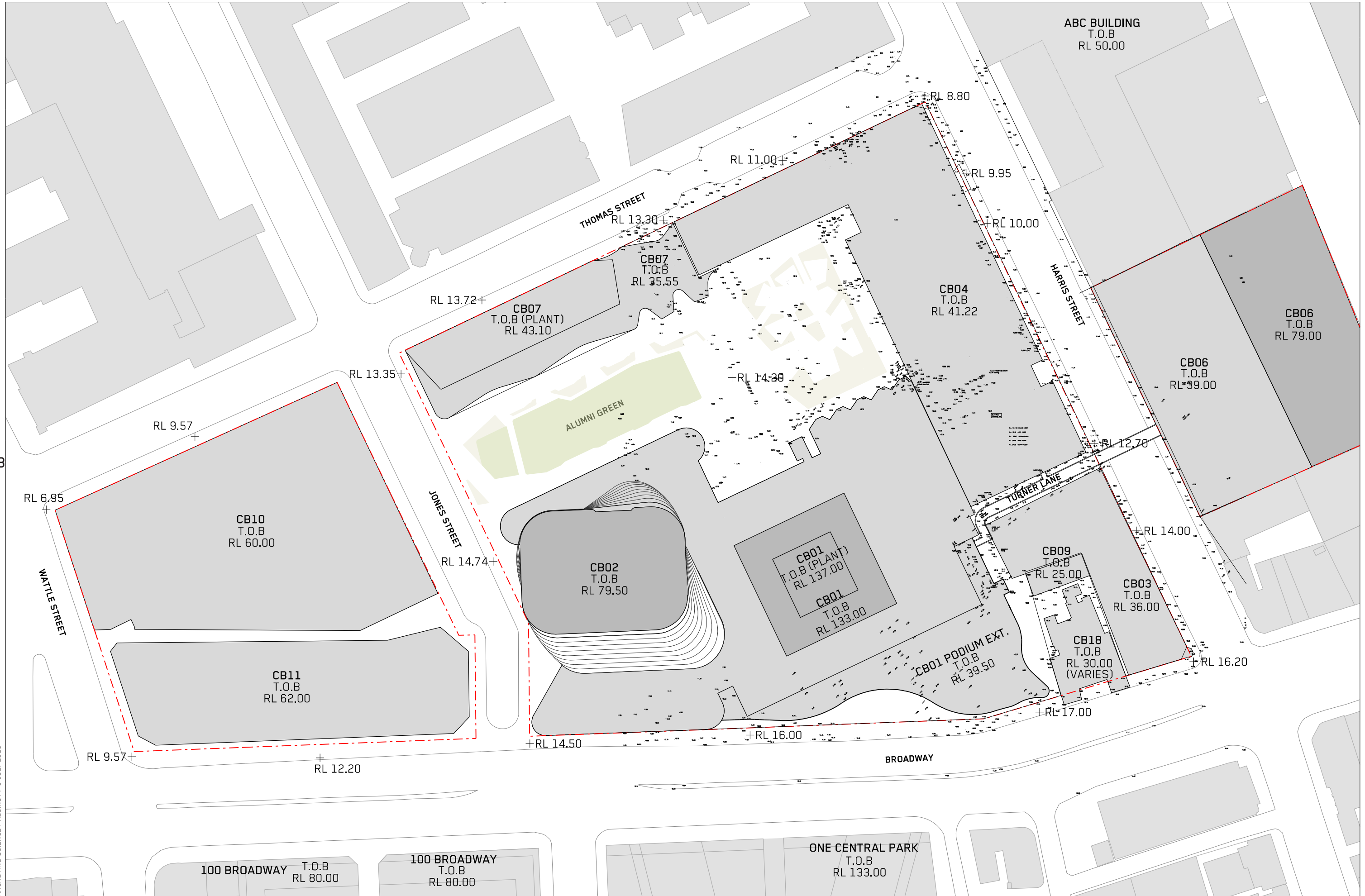
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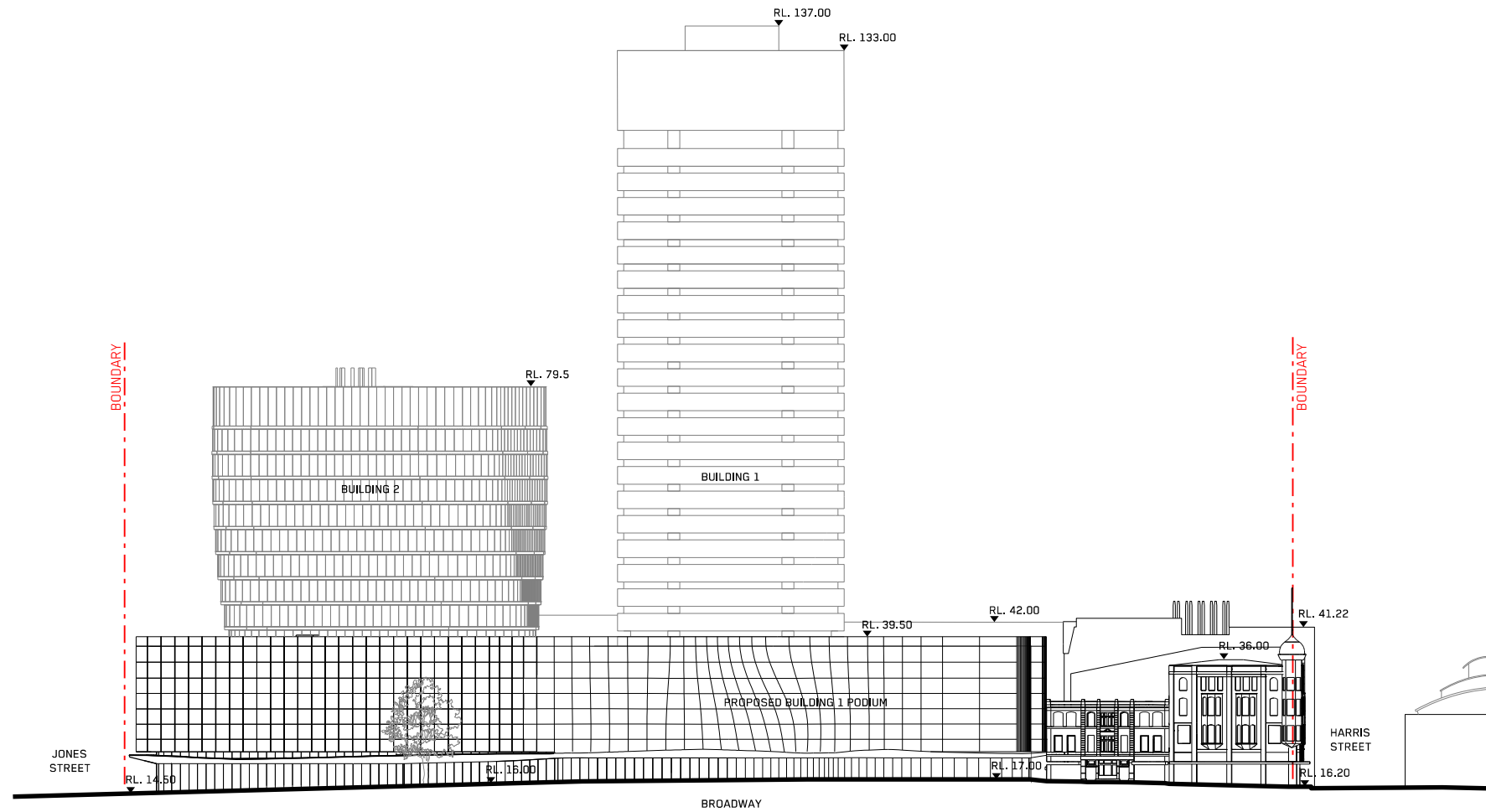
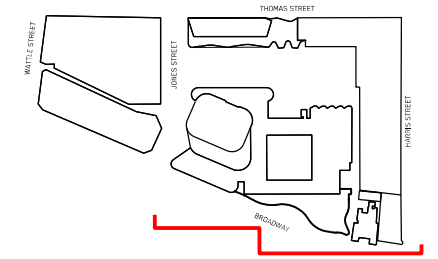
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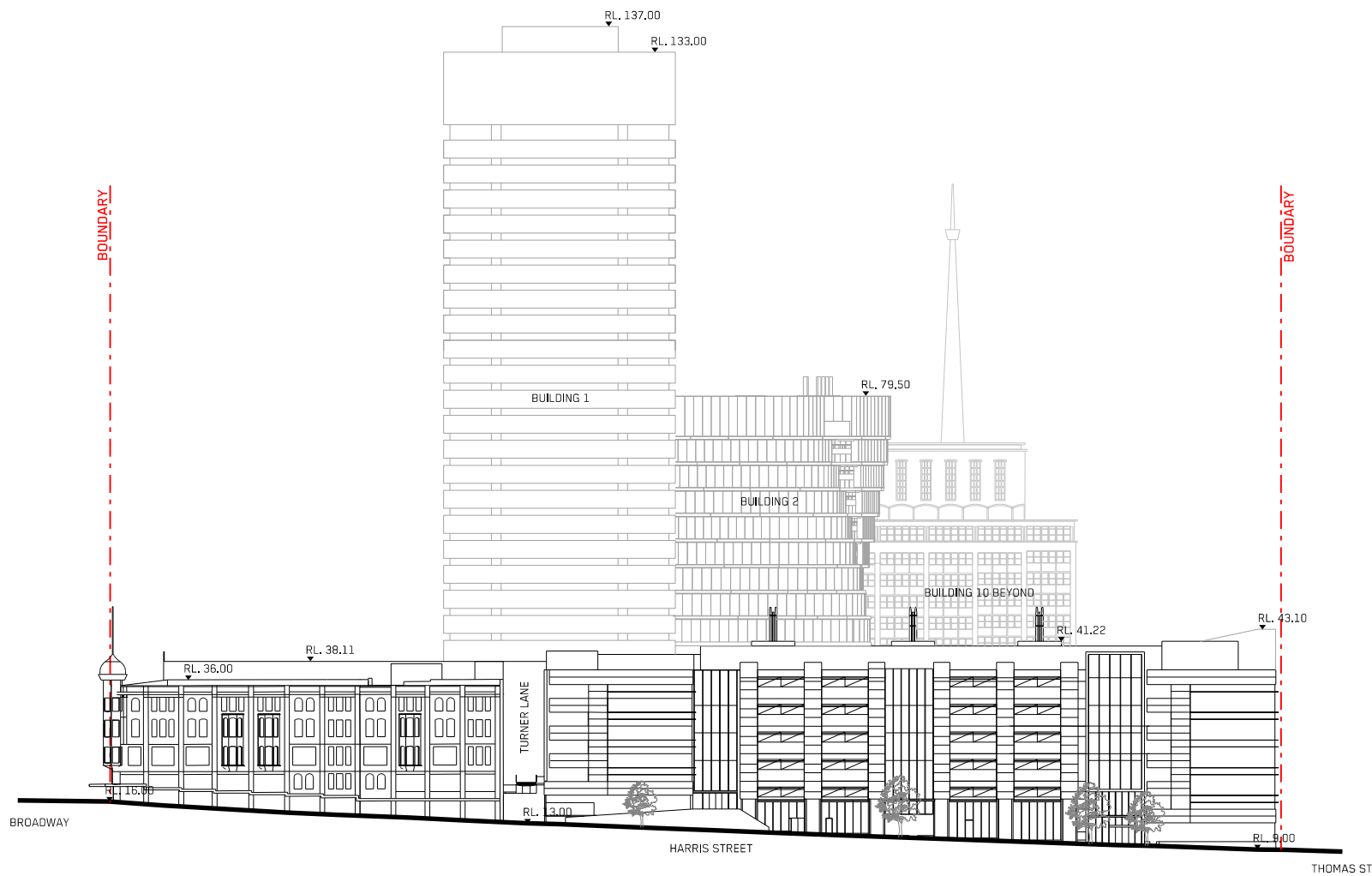
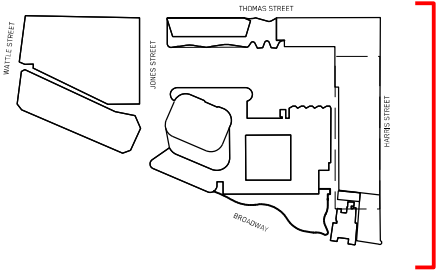
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JUNE 21ST 02:00PM

JUNE 21ST 03:00PM







LEGEND
CAMPUS BOUNDARY

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH
PROJ. NORTH
GRAPHIC SCALE
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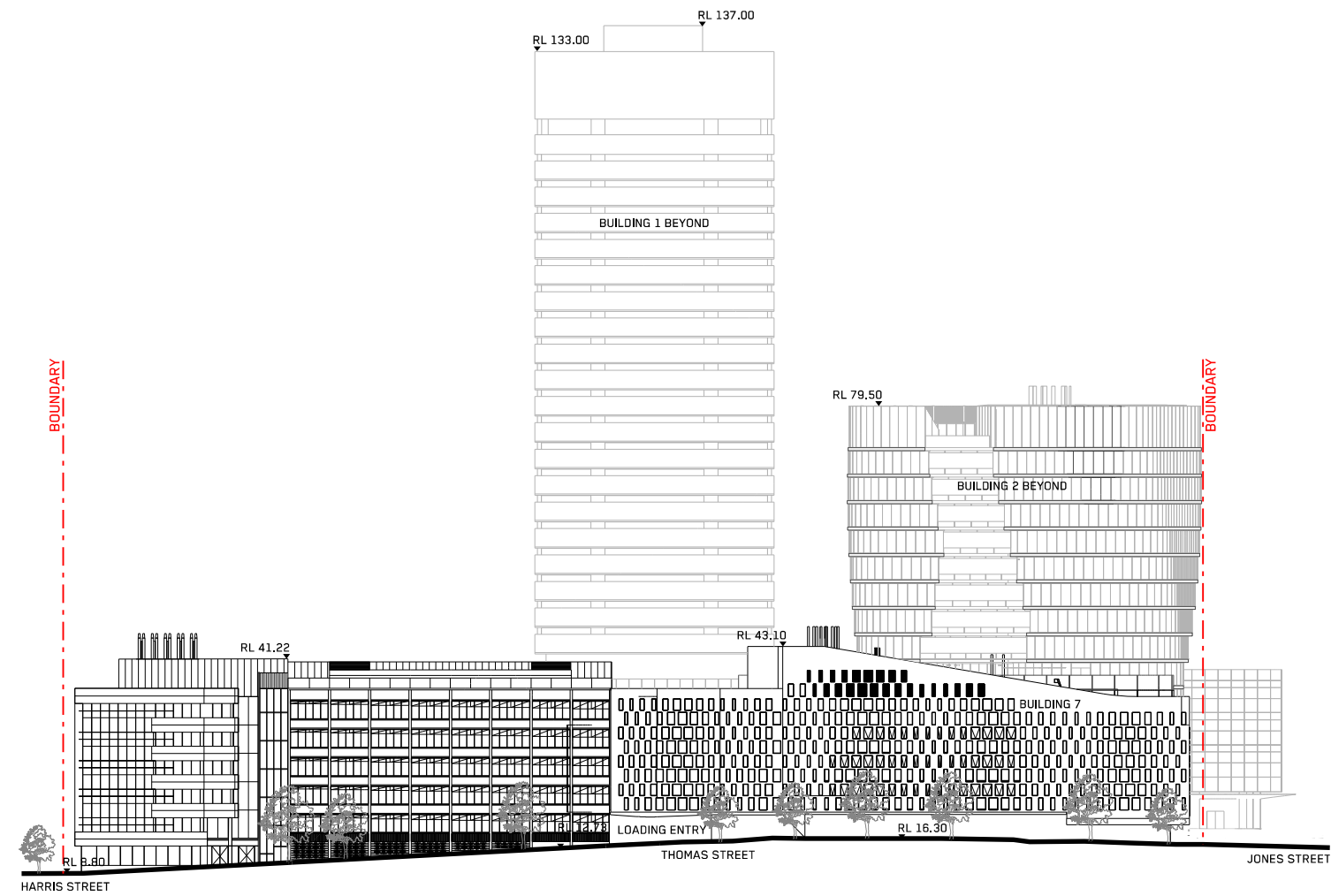
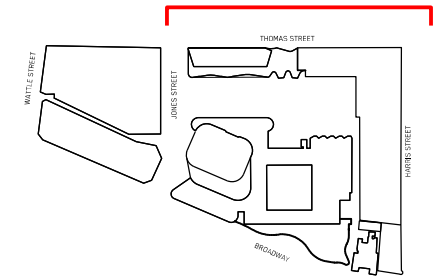
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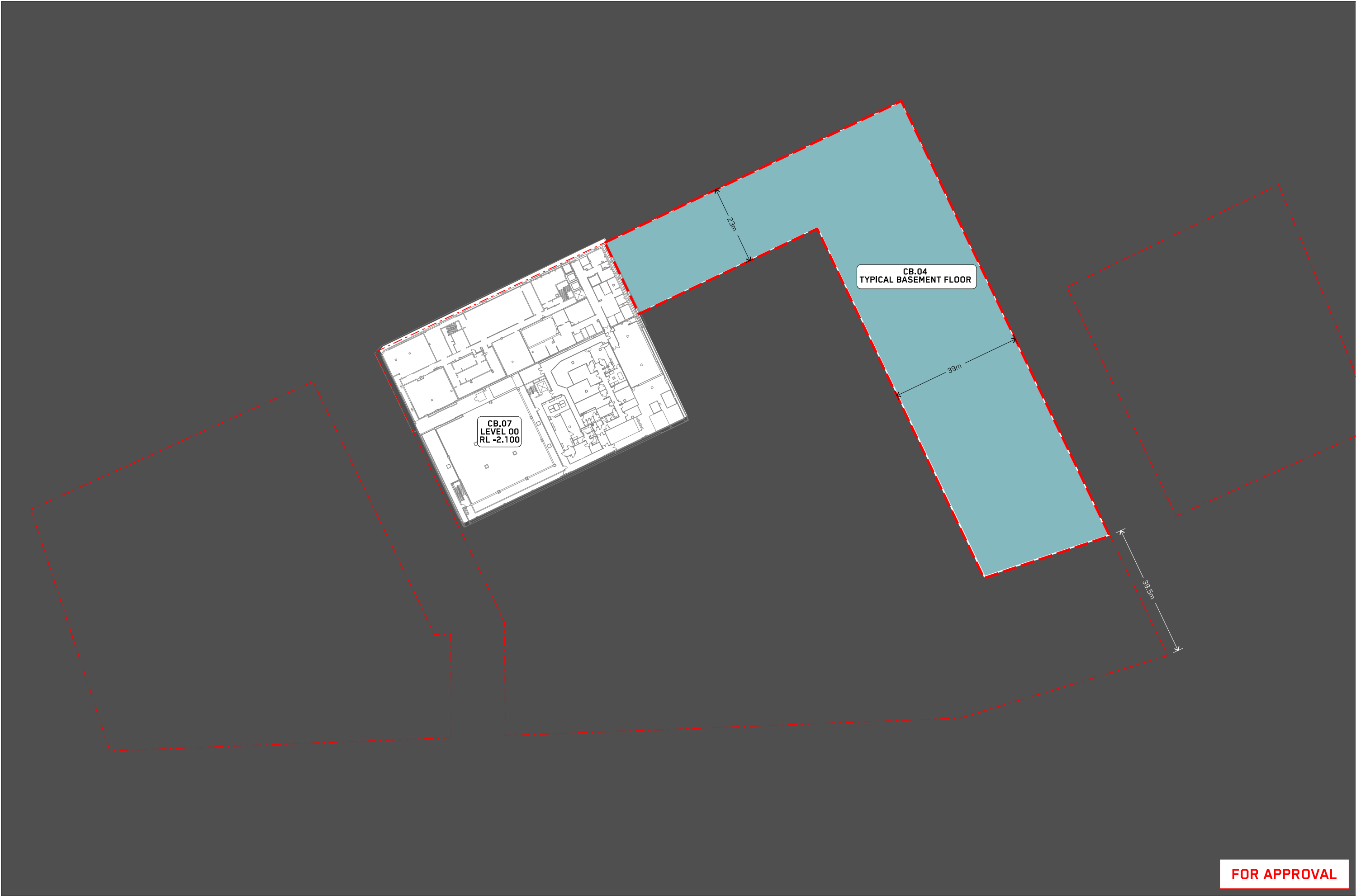
DRAWING
EXISTING CAMPUS
HARRIS STREET ELEVATION (EAST)

DRAWING NO
EX-EL-EE-01

DATE
18/04/2019

ISSUE
C





FOR APPROVAL



LEGEND			
CAMPUS BOUNDARY	NEW BUILT AREA	SKYGARDEN	
PROPOSED NEW ENVELOPE	EXISTING REFURBISHED	EXISTING	

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

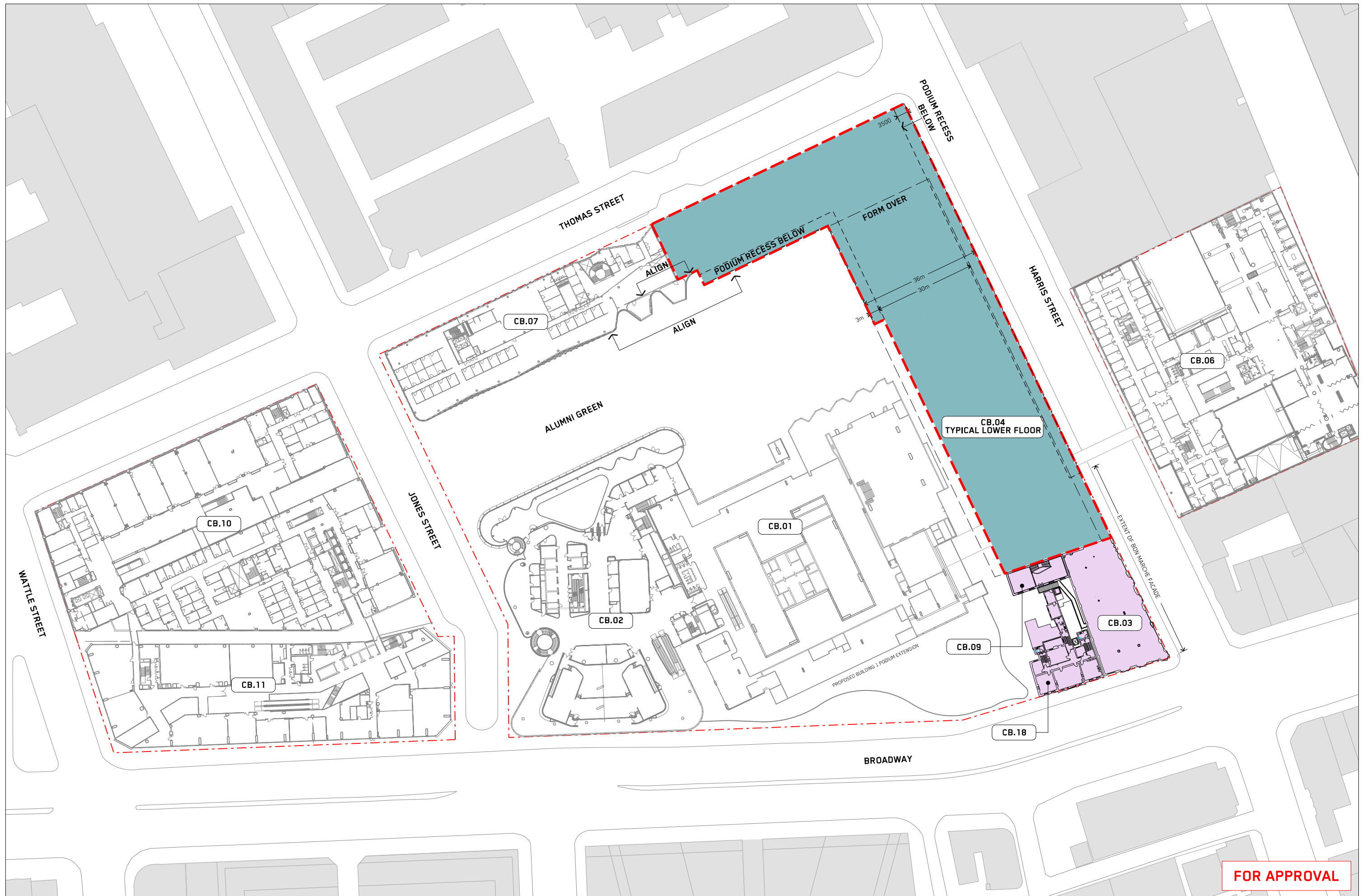
PROJECT
BON MARCHE & SCIENCE PRECINCT

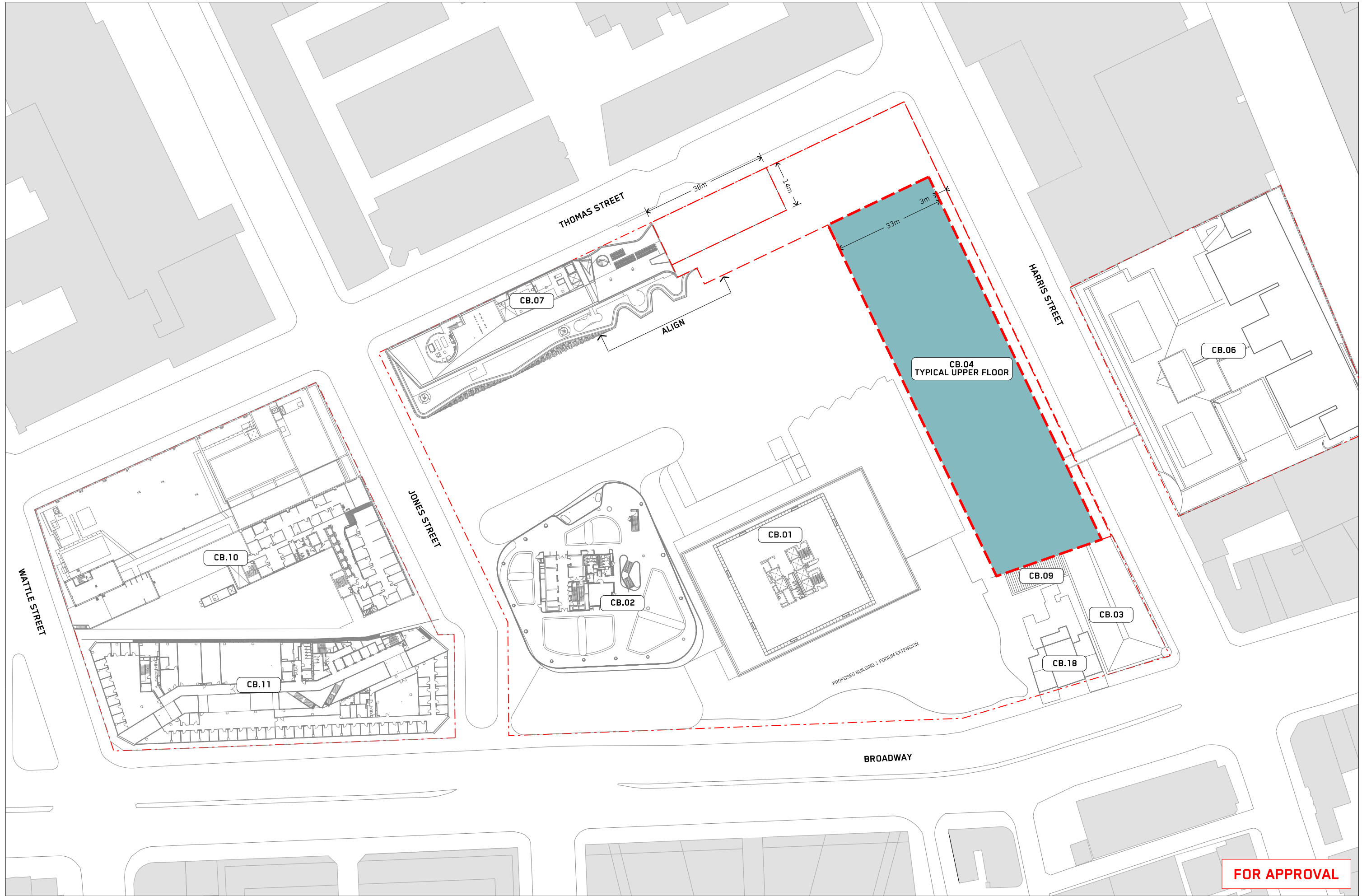
TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE

SCALE
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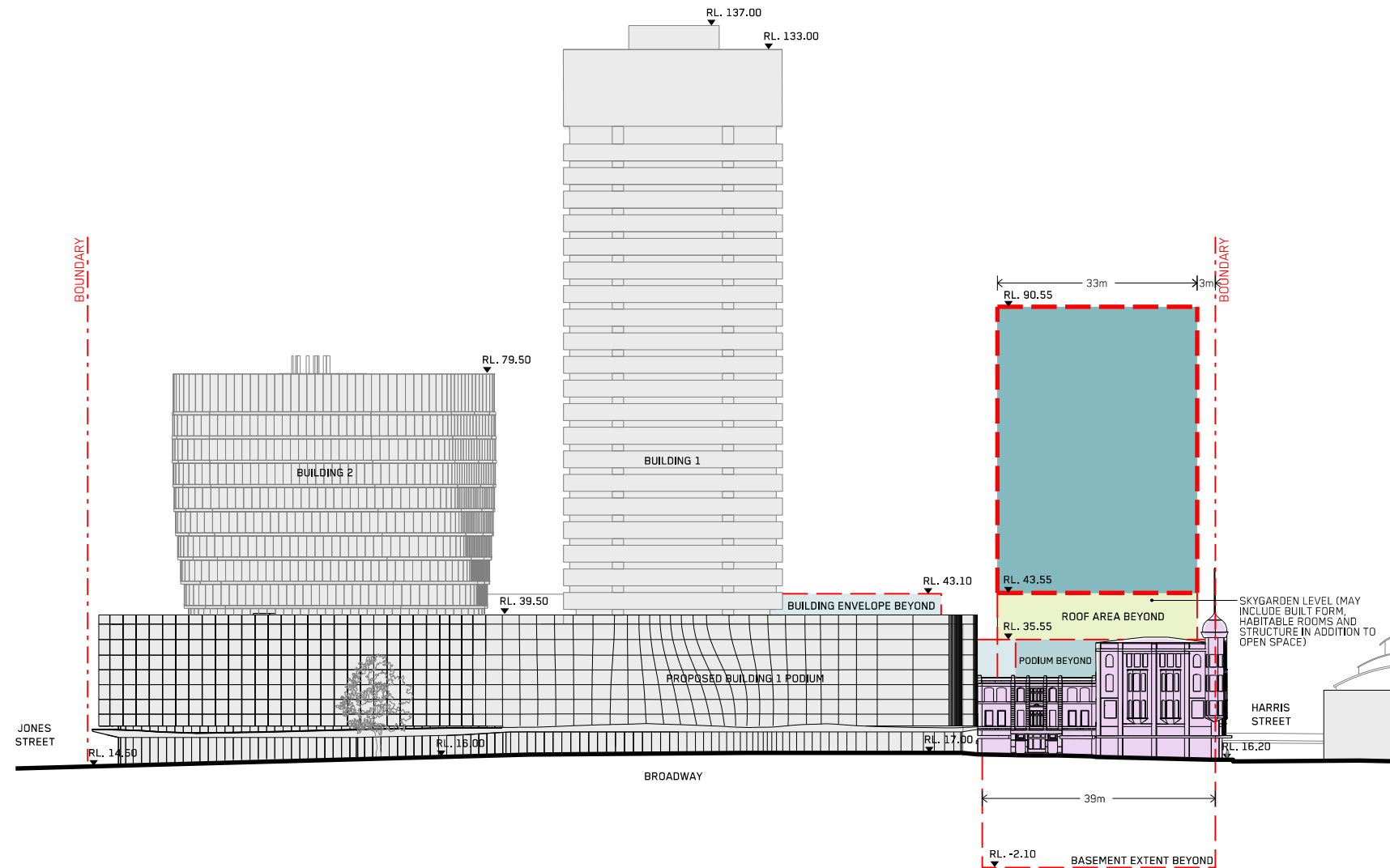
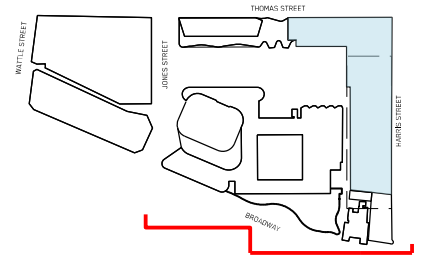
DRAWING
PROPOSED CONTROL ENVELOPE TYPICAL BASEMENT FLOOR

DRAWING NO	DATE	ISSUE
EN-FP-TY-BA	18/04/2019	C





FOR APPROVAL



FOR APPROVAL



LEGEND
 CAMPUS BOUNDARY
 PROPOSED NEW ENVELOPE
 NEW BUILT AREA
 EXISTING
 REFURBISHED
 SKYGARDEN
 EXISTING

CLIENT
 UNIVERSITY OF TECHNOLOGY SYDNEY

PROJECT
 BON MARCHE & SCIENCE PRECINCT

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 PROJ. NORTH
 GRAPHIC SCALE
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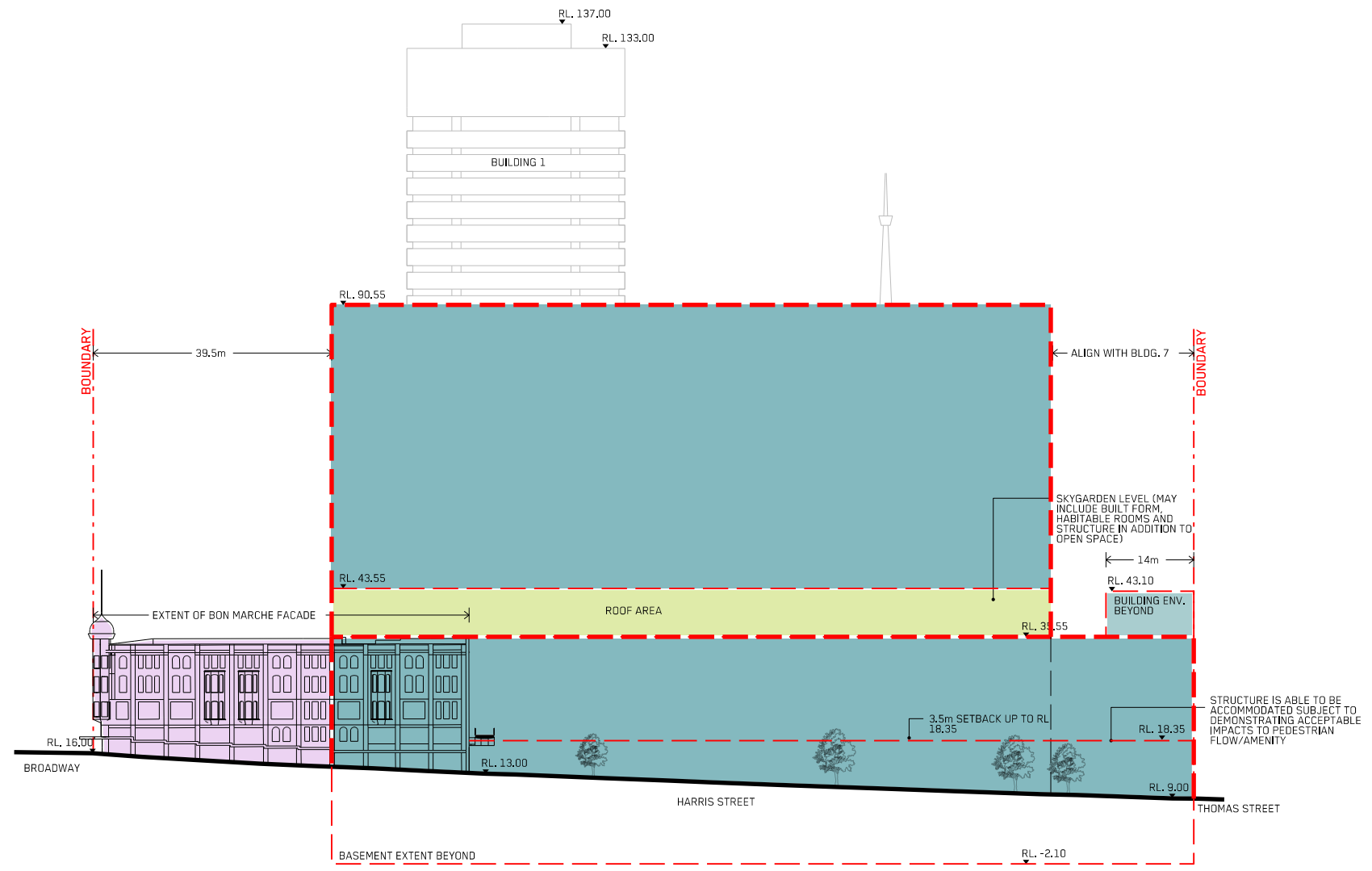
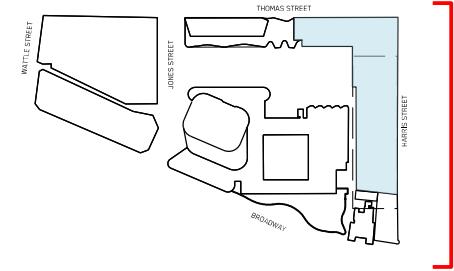
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 PROPOSED CONTROL ENVELOPE
 BROADWAY ELEVATION (SOUTH)

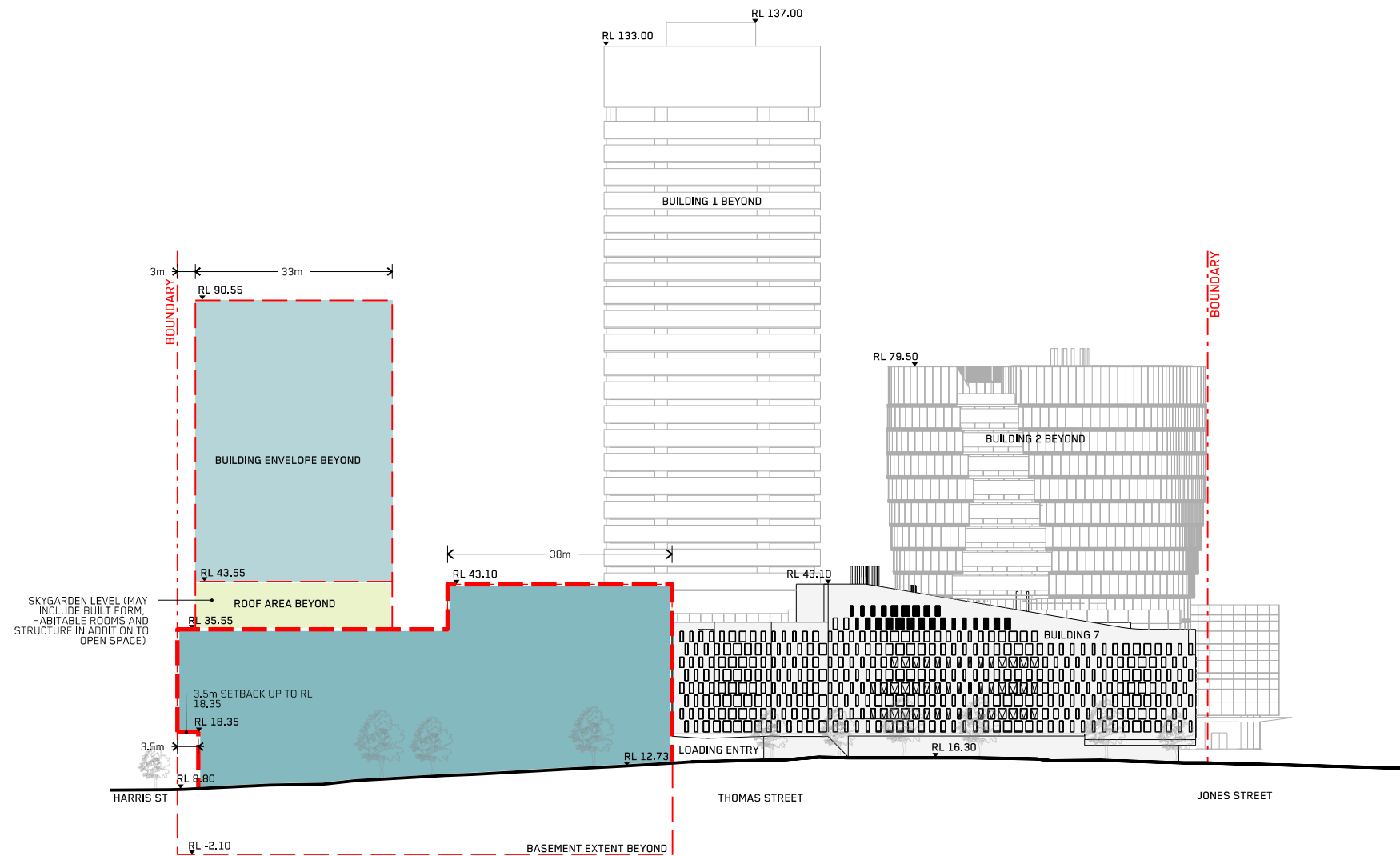
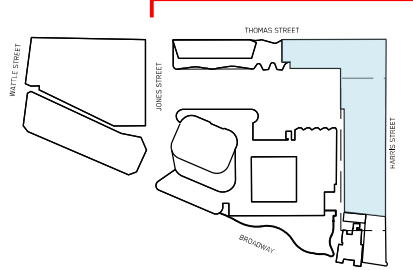
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DATE
 02/07/2019

ISSUE
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FOR APPROVAL



FOR APPROVAL



LEGEND				
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PROPOSED NEW ENVELOPE	EXISTING	REFURBISHED	EXISTING	

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

PROJECT
BON MARCHE & SCIENCE PRECINCT

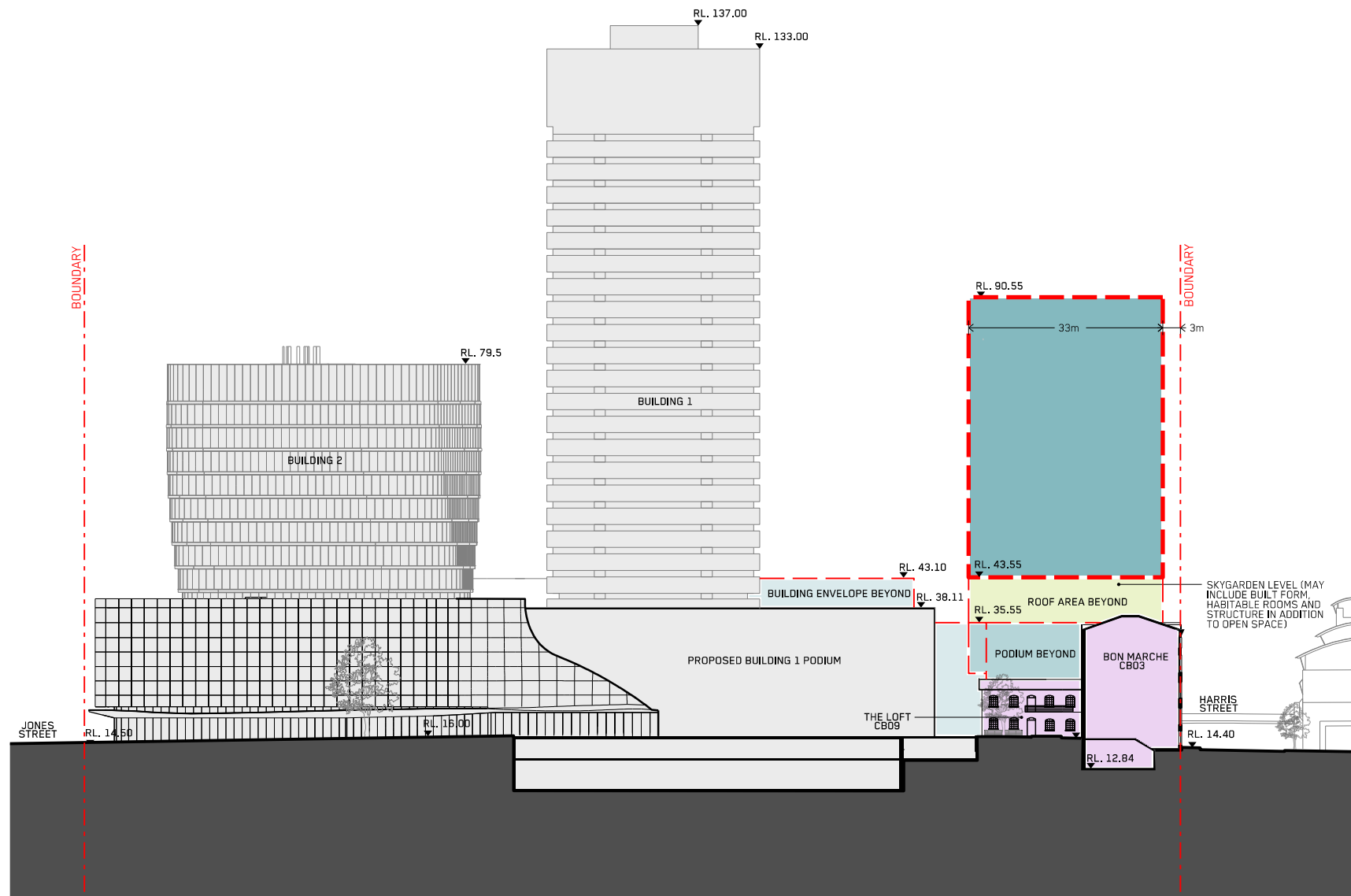
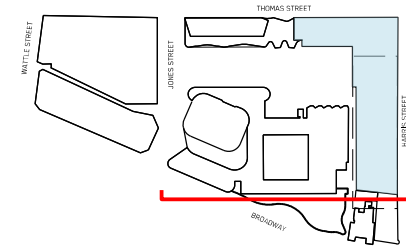
TRUE NORTH
PROJ. NORTH
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SCALE
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DRAWING
PROPOSED CONTROL ENVELOPE
THOMAS STREET ELEVATION

DRAWING NO
EN-EL-NE-01

DATE
02/07/2019
ISSUE
D



FOR APPROVAL



LEGEND					
	CAMPUS BOUNDARY		NEW BUILT AREA		SKYGARDEN
	PROPOSED NEW ENVELOPE		EXISTING REFURBISHED		EXISTING

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

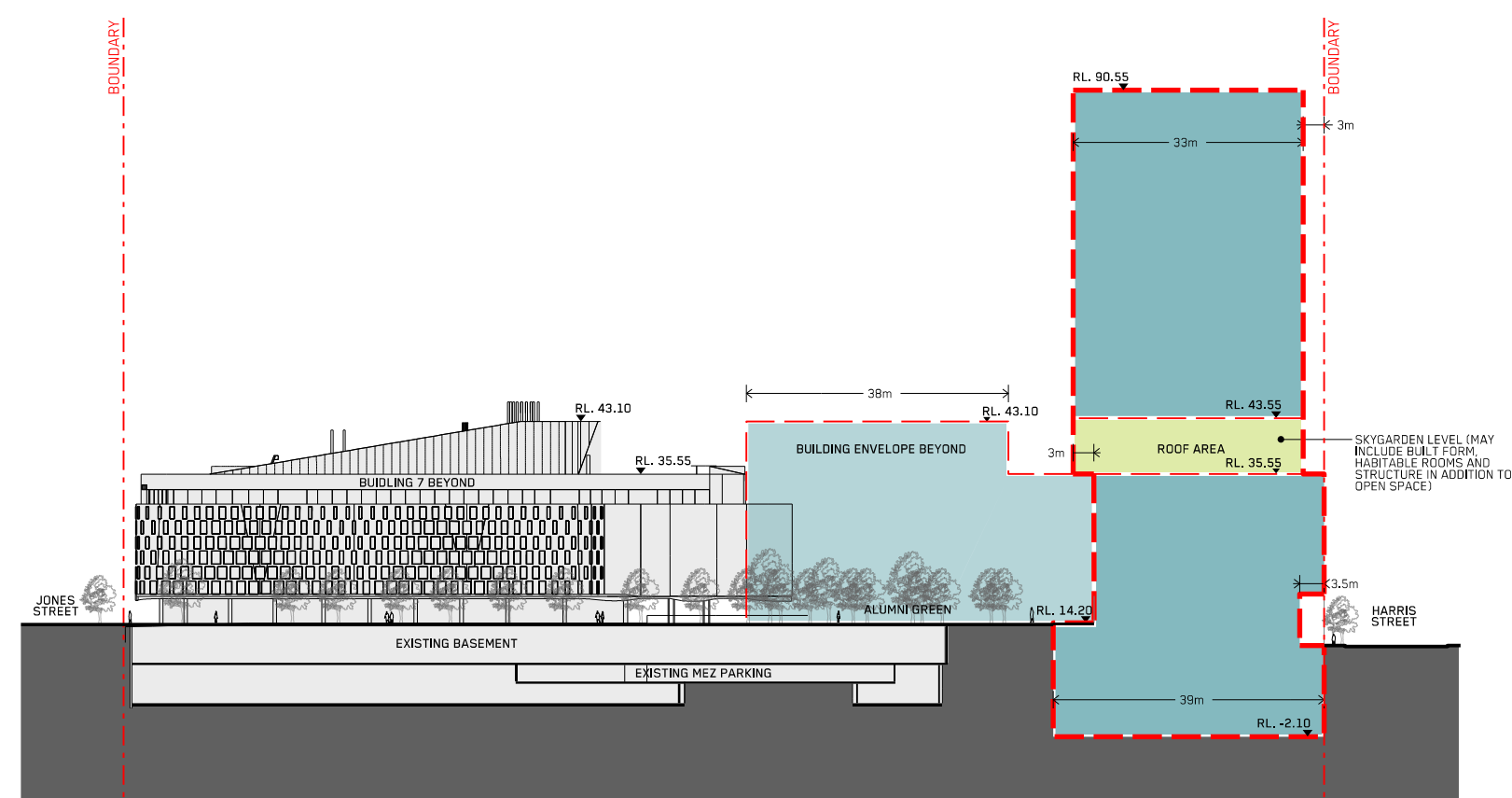
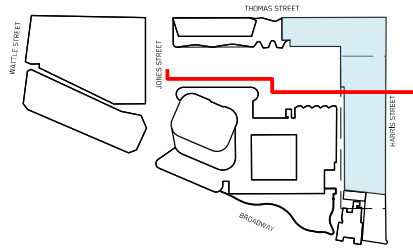
PROJECT
BON MARCHÉ & SCIENCE PRECINCT

TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE

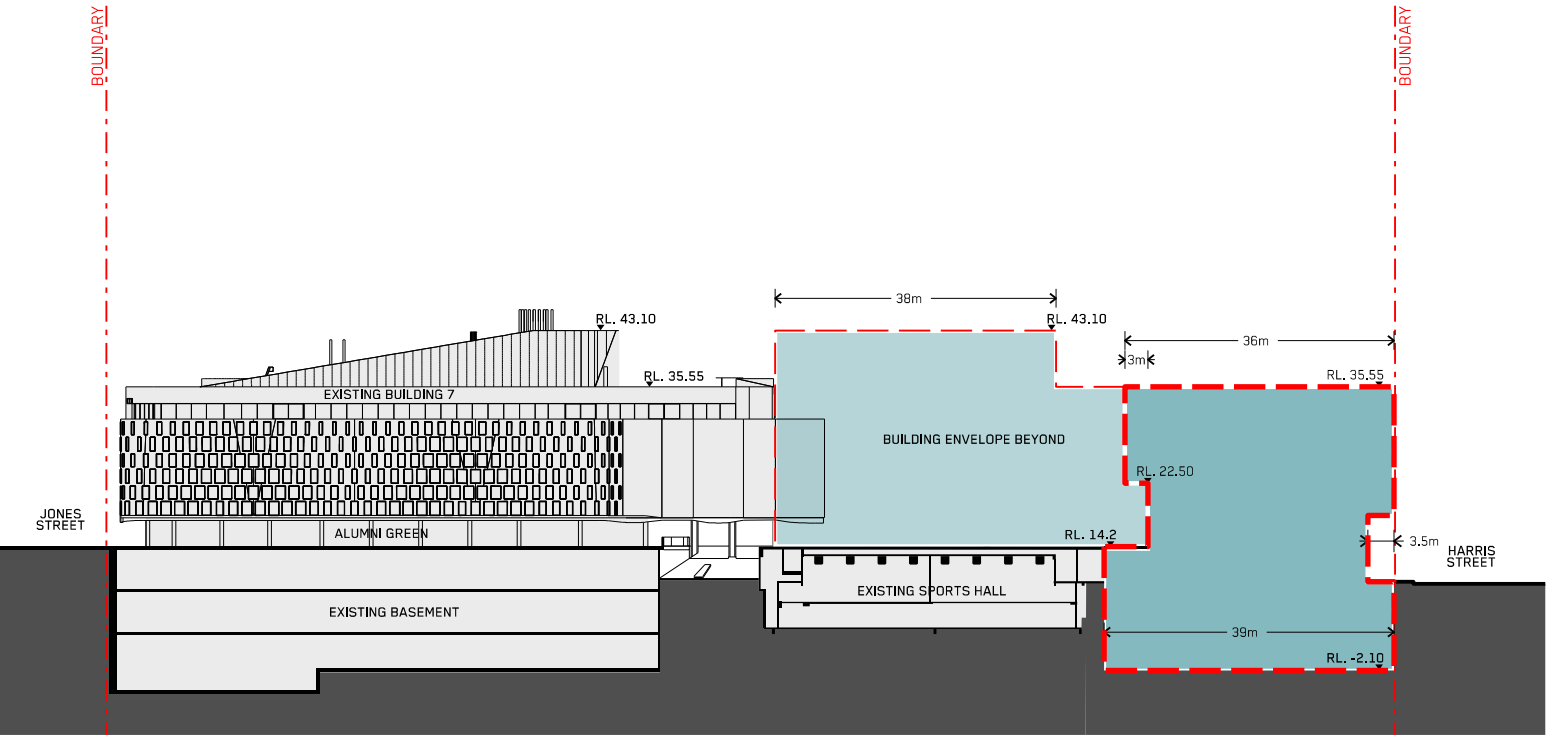
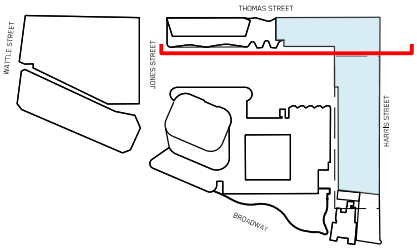
SCALE
1:500 at A1

DRAWING
PROPOSED CONTROL ENVELOPE EAST-WEST SECTION 01

DRAWING NO	DATE	ISSUE
EN-SS-EW-01	02/07/2019	D



FOR APPROVAL



FOR APPROVAL



LEGEND					
	CAMPUS BOUNDARY		NEW BUILT AREA		SKYGARDEN
	PROPOSED NEW ENVELOPE		EXISTING		REFURBISHED

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

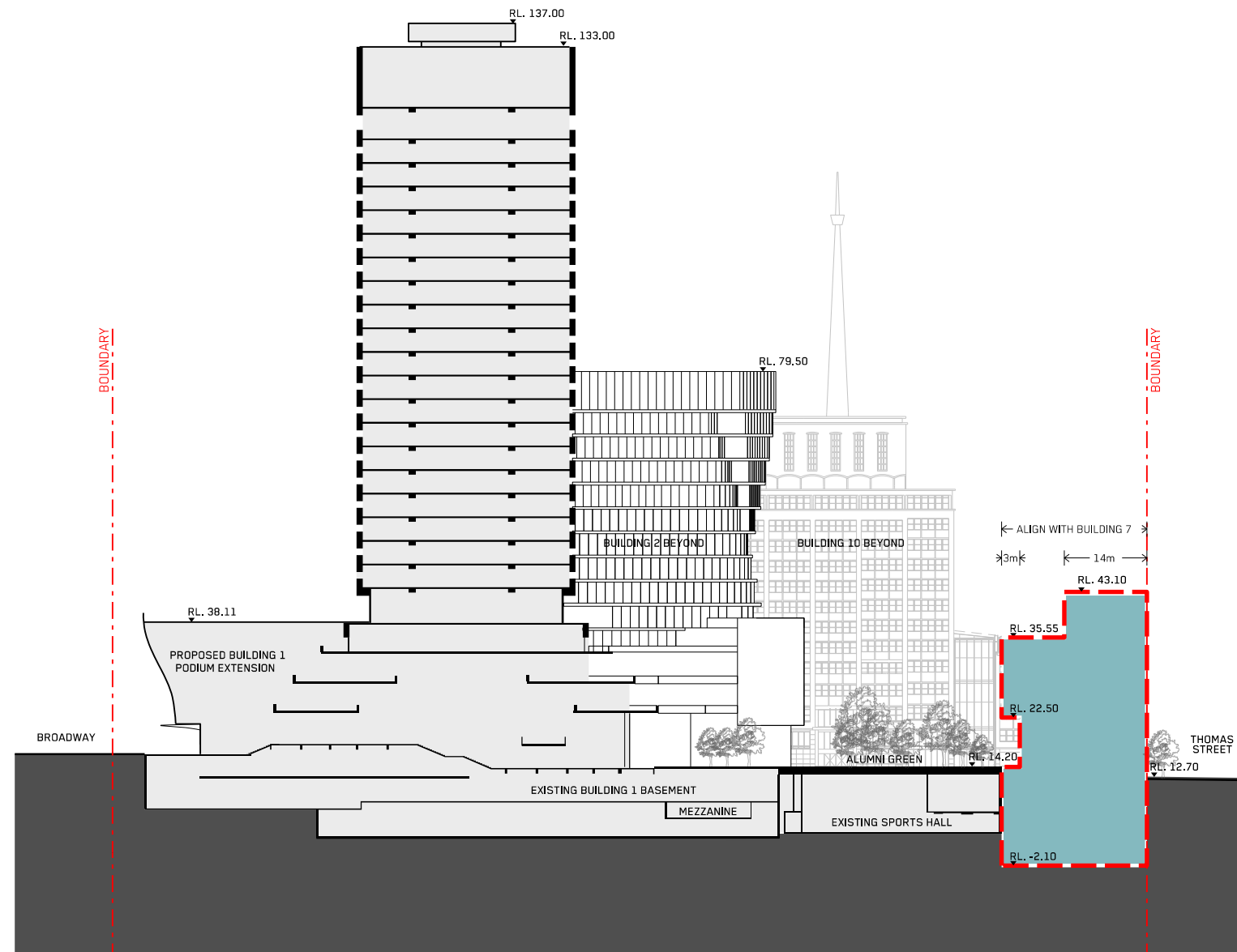
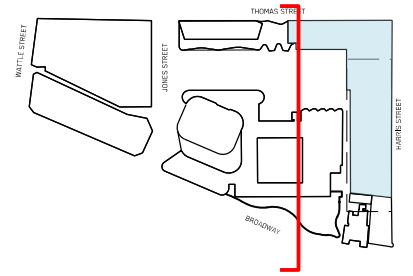
PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE

SCALE
1:500 at A1

DRAWING
PROPOSED CONTROL ENVELOPE EAST-WEST SECTION 03

DRAWING NO	DATE	ISSUE
EN-SS-EW-03	18/04/2019	C



FOR APPROVAL



LEGEND	CAMPUS BOUNDARY	NEW BUILT AREA	SKYGARDEN
	PROPOSED NEW ENVELOPE	EXISTING	EXISTING
		REFURBISHED	

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH
PROJ. NORTH
GRAPHIC SCALE
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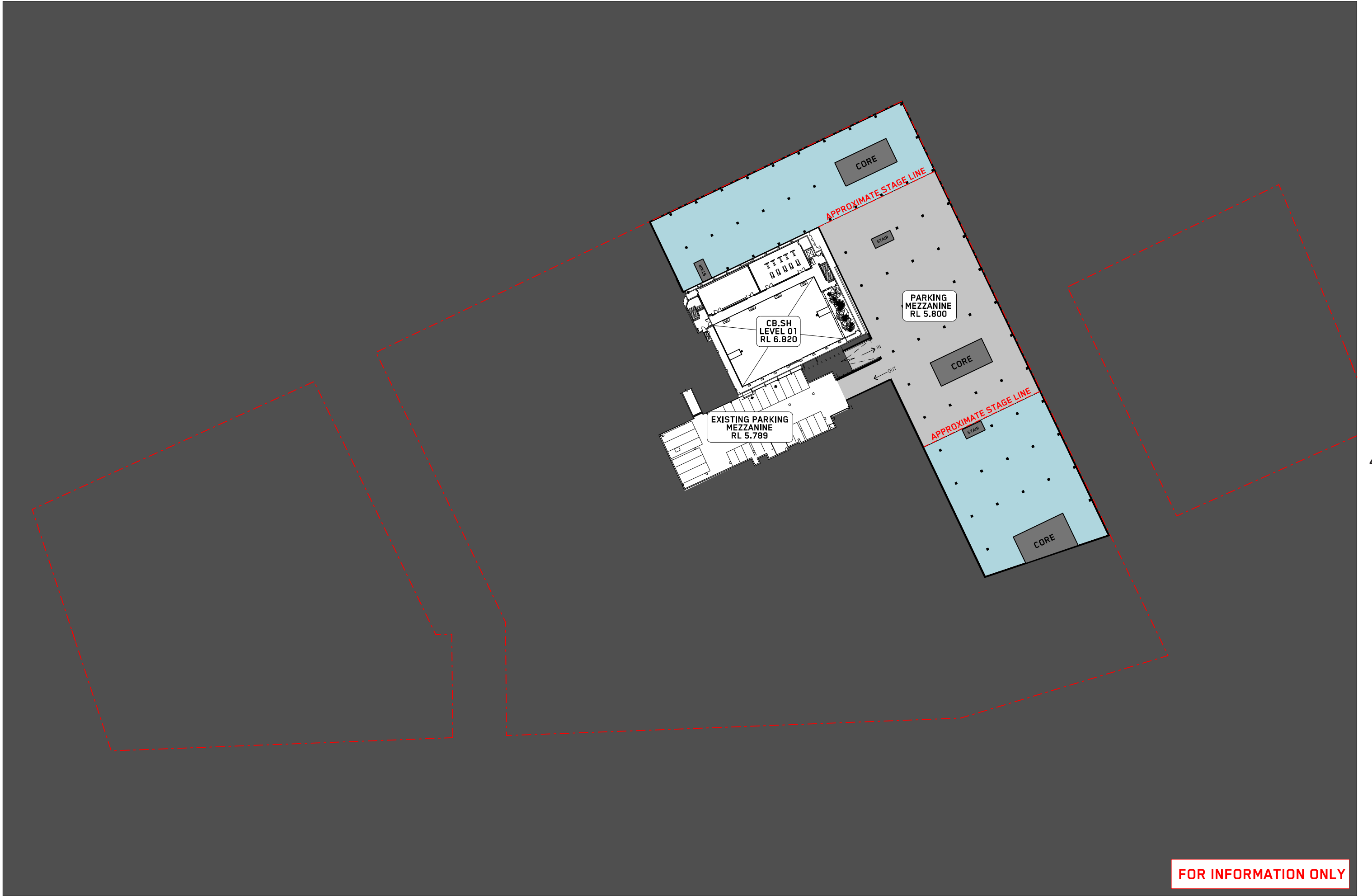
SCALE
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DRAWING
PROPOSED CONTROL ENVELOPE
NORTH-SOUTH SECTION 01

DRAWING NO	DATE	ISSUE
EN-SS-NS-01	18/04/2019	C



FOR INFORMATION ONLY



FOR INFORMATION ONLY



FOR INFORMATION ONLY



LEGEND				CLIENT	
NEW PUBLIC REALM	TEACHING	PARKING + PLANT	CIRCULATION HUB	UNIVERSITY OF TECHNOLOGY SYDNEY	
FRONT OF HOUSE	SKY GARDEN	EXISTING	CAMPUS BOUNDARY		

PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE

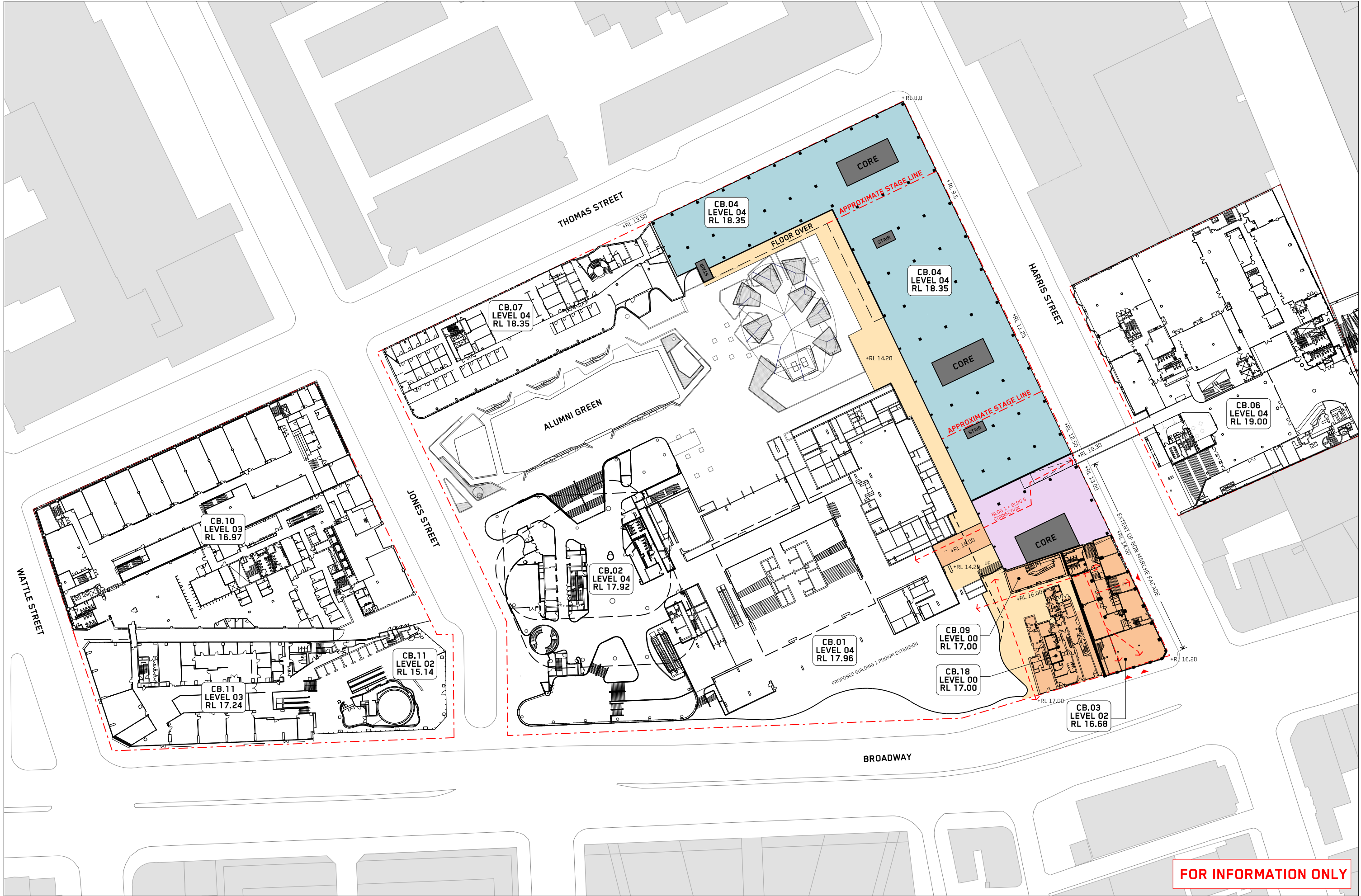
SCALE
1:500 at A1

DRAWING
INDICATIVE DESIGN CAMPUS LEVEL B1

DRAWING NO	DATE	ISSUE
ID-FP-CL-B1	02/07/2019	D



FOR INFORMATION ONLY



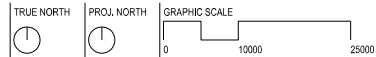
FOR INFORMATION ONLY



LEGEND			
NEW PUBLIC REALM	TEACHING	PARKING + PLANT	CIRCULATION HUB
FRONT OF HOUSE	SKY GARDEN	EXISTING	CAMPUS BOUNDARY

CLIENT
UNIVERSITY OF TECHNOLOGY SYDNEY

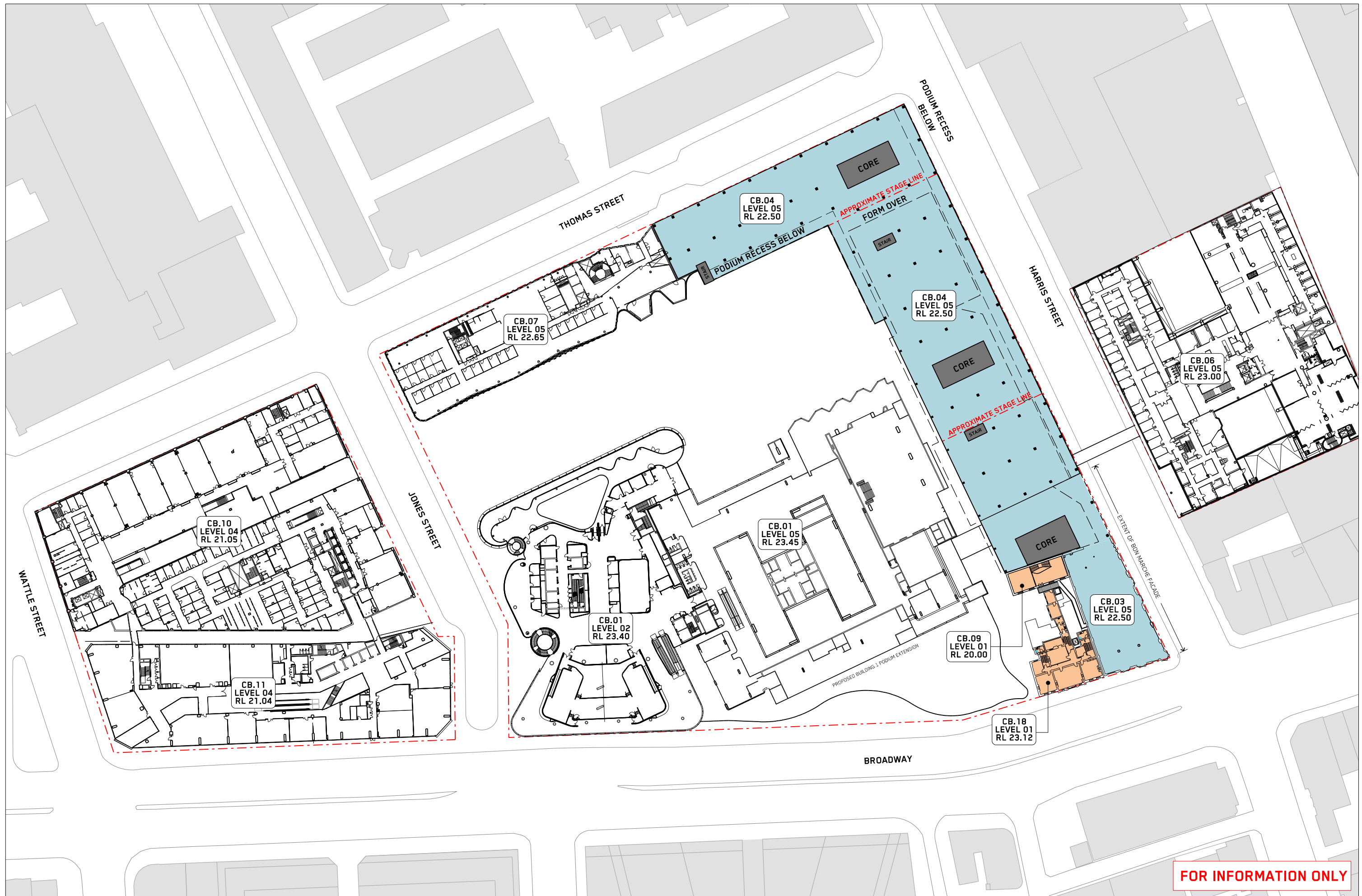
PROJECT
BON MARCHE & SCIENCE PRECINCT

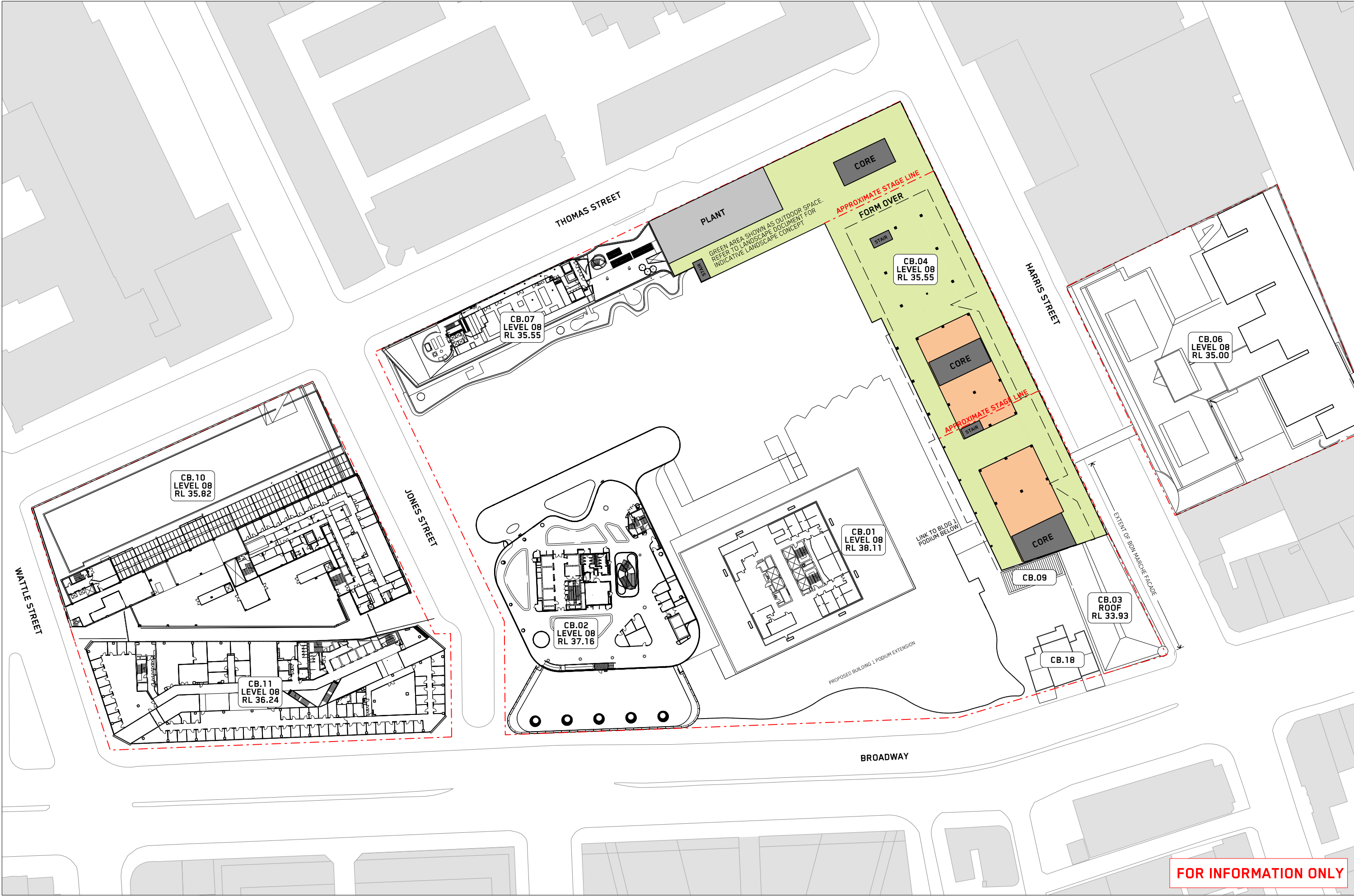


SCALE
1:500 at A1

DRAWING
INDICATIVE DESIGN
CAMPUS LEVEL 01

DRAWING NO	DATE	ISSUE
ID-FP-CL-01	18/04/2019	C





FOR INFORMATION ONLY



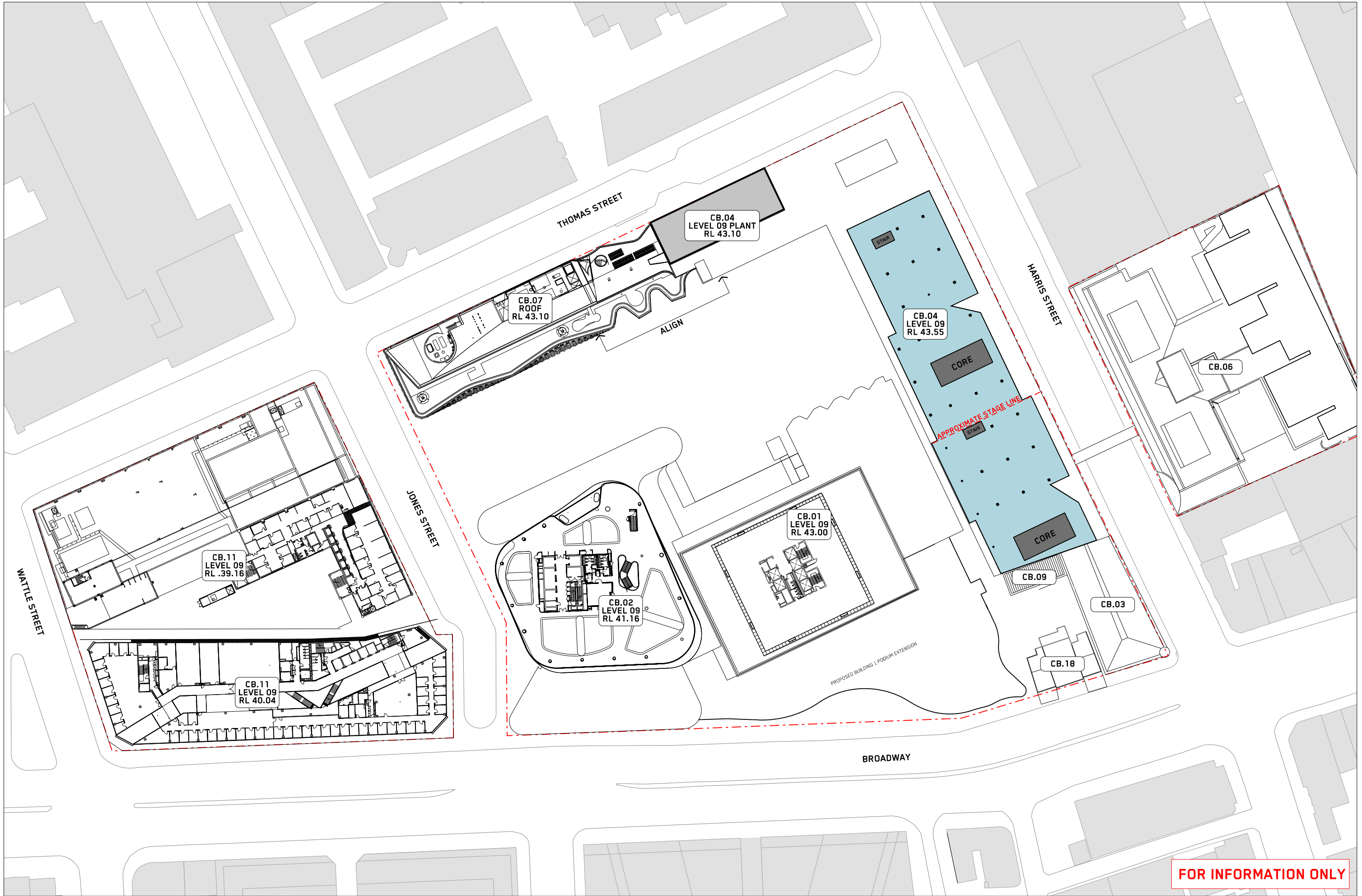
LEGEND		CLIENT	
NEW PUBLIC REALM	TEACHING	PARKING + PLANT	CIRCULATION HUB
FRONT OF HOUSE	SKY GARDEN	EXISTING	CAMPUS BOUNDARY
		UNIVERSITY OF TECHNOLOGY SYDNEY	

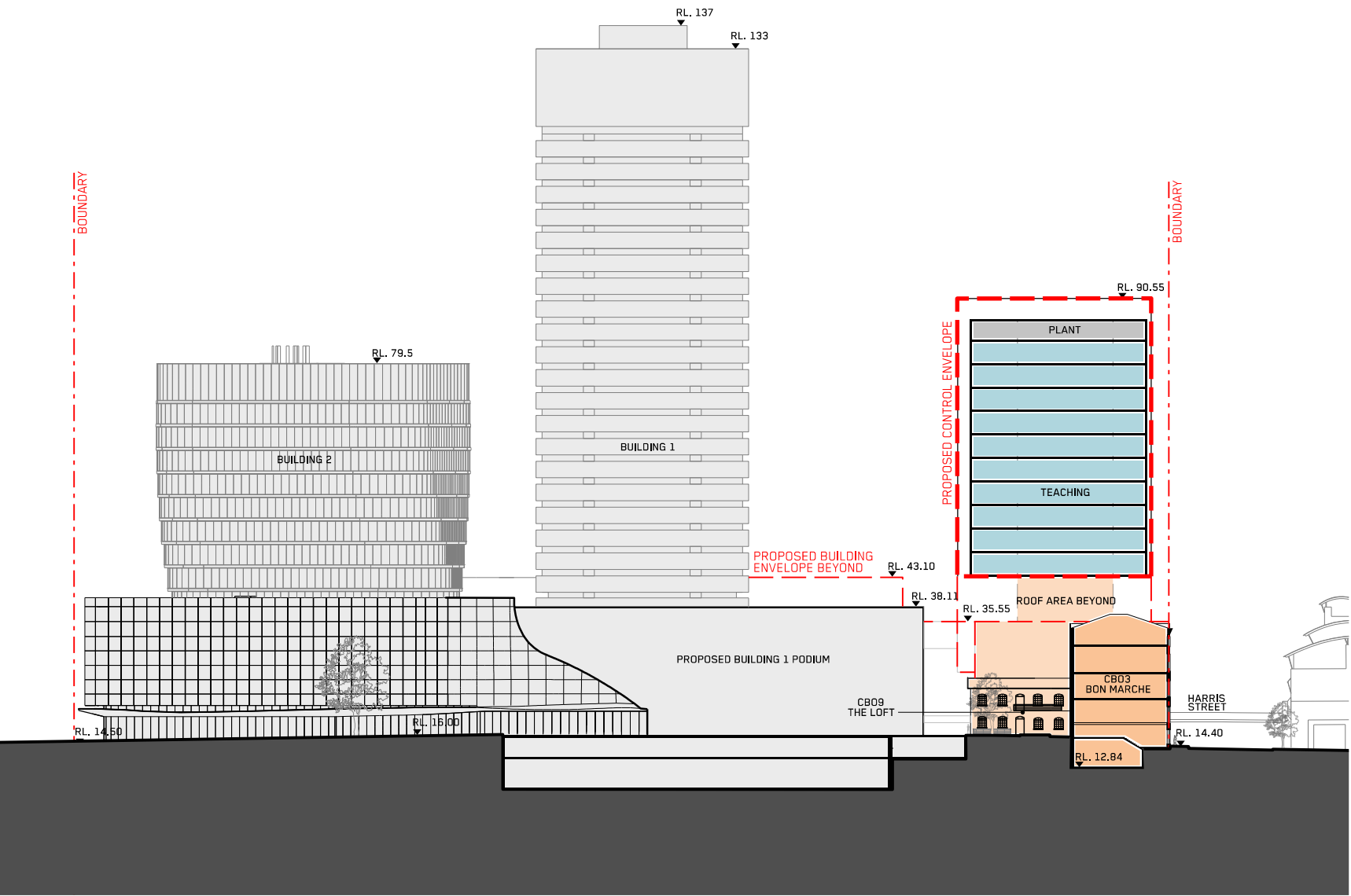
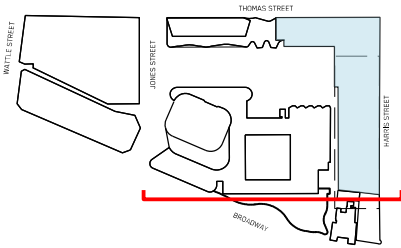
PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE

SCALE	DRAWING
1:500 at A1	INDICATIVE PLAN CAMPUS LEVEL 05

DRAWING NO	DATE	ISSUE
ID-FP-CL-05	18/04/2019	C

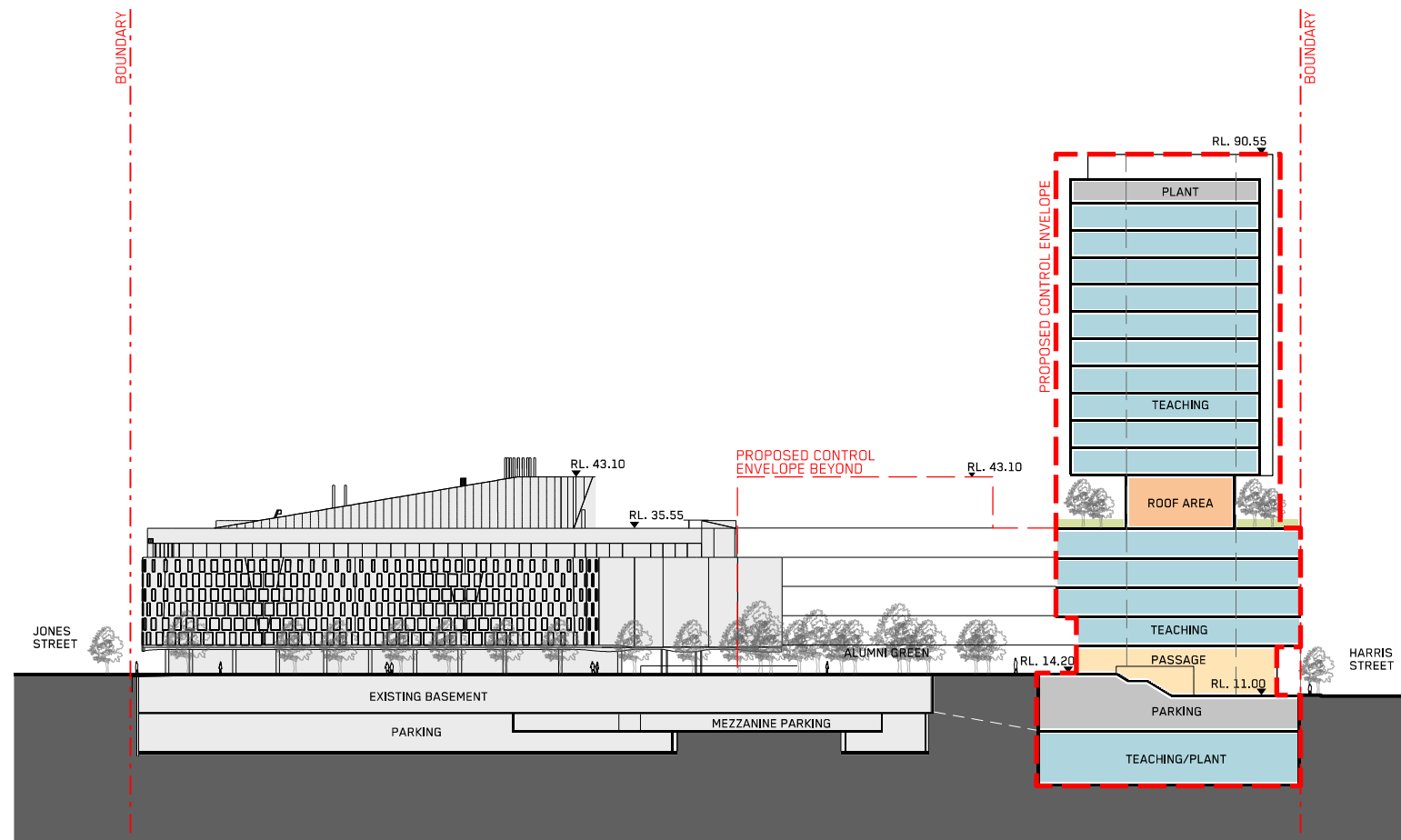
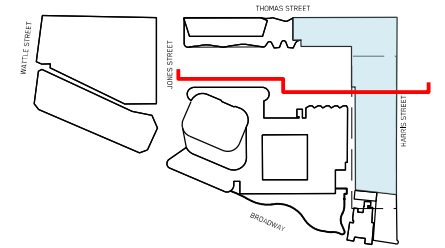




ROOF	RL 90.55
PLANT	RL 83.55
LEVEL 18	RL 79.50
LEVEL 17	RL 75.55
LEVEL 16	RL 71.55
LEVEL 15	RL 67.55
LEVEL 14	RL 63.55
LEVEL 13	RL 59.55
LEVEL 12	RL 55.55
LEVEL 11	RL 51.55
LEVEL 10	RL 47.55
LEVEL 09	RL 43.55
ROOF AREA	LEVEL 08
LEVEL 07	RL 31.25
LEVEL 06	RL 26.95
LEVEL 05	RL 22.50
LEVEL 04	RL 18.35
LEVEL 03	RL 14.20
LEVEL 2	RL 9.57
MEZ PARKING	RL 5.80
LEVEL 01	RL -2.00

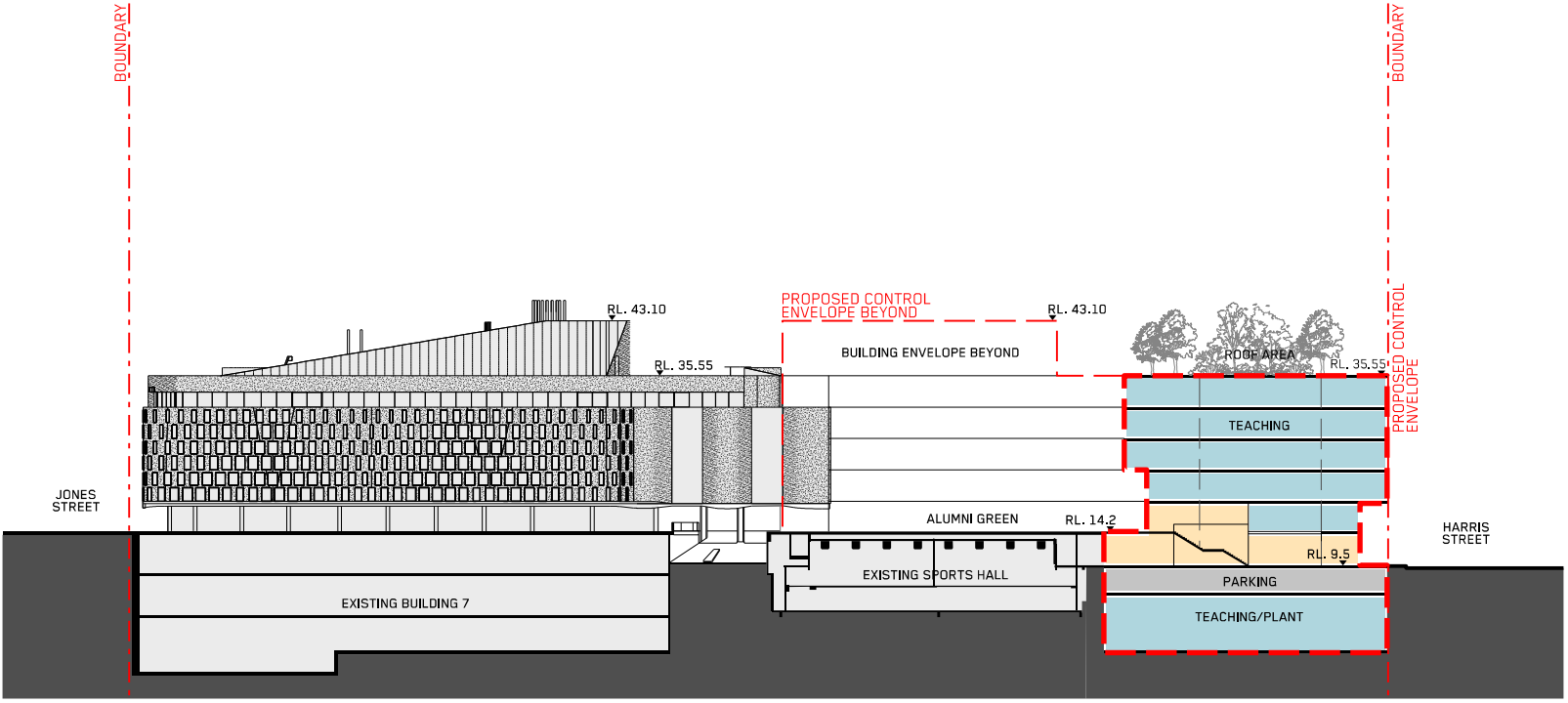
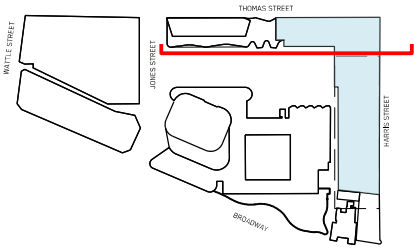
FOR INFORMATION ONLY





ROOF	RL 90.55
PLANT	RL 83.55
LEVEL 18	RL 79.50
LEVEL 17	RL 75.55
LEVEL 16	RL 71.55
LEVEL 15	RL 67.55
LEVEL 14	RL 63.55
LEVEL 13	RL 59.55
LEVEL 12	RL 55.55
LEVEL 11	RL 51.55
LEVEL 10	RL 47.55
LEVEL 09	RL 43.55
ROOF AREA	RL 35.55
LEVEL 08	RL 31.25
LEVEL 07	RL 26.95
LEVEL 06	RL 22.50
LEVEL 05	RL 18.35
LEVEL 04	RL 14.20
LEVEL 03	RL 9.57
LEVEL 02	RL 5.60
MEZ PARKING	RL -2.00

FOR INFORMATION ONLY



ROOF	RL 90.55
PLANT	RL 83.55
LEVEL 18	RL 79.50
LEVEL 17	RL 75.55
LEVEL 16	RL 71.55
LEVEL 15	RL 67.55
LEVEL 14	RL 63.55
LEVEL 13	RL 59.55
LEVEL 12	RL 55.55
LEVEL 11	RL 51.55
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LEVEL 09	RL 43.55
ROOF AREA	RL 35.55
LEVEL 08	RL 31.25
LEVEL 07	RL 26.95
LEVEL 06	RL 22.50
LEVEL 05	RL 18.35
LEVEL 04	RL 14.20
LEVEL 03	RL 9.57
MEZ PARKING	RL 5.80
LEVEL 01	RL -2.00

FOR INFORMATION ONLY



LEGEND	CLIENT
NEW PUBLIC REALM	UNIVERSITY OF TECHNOLOGY SYDNEY
FRONT OF HOUSE	
TEACHING	
SKY GARDEN	
PARKING + PLANT	
EXISTING	
CIRCULATION HUB	
CAMPUS BOUNDARY	

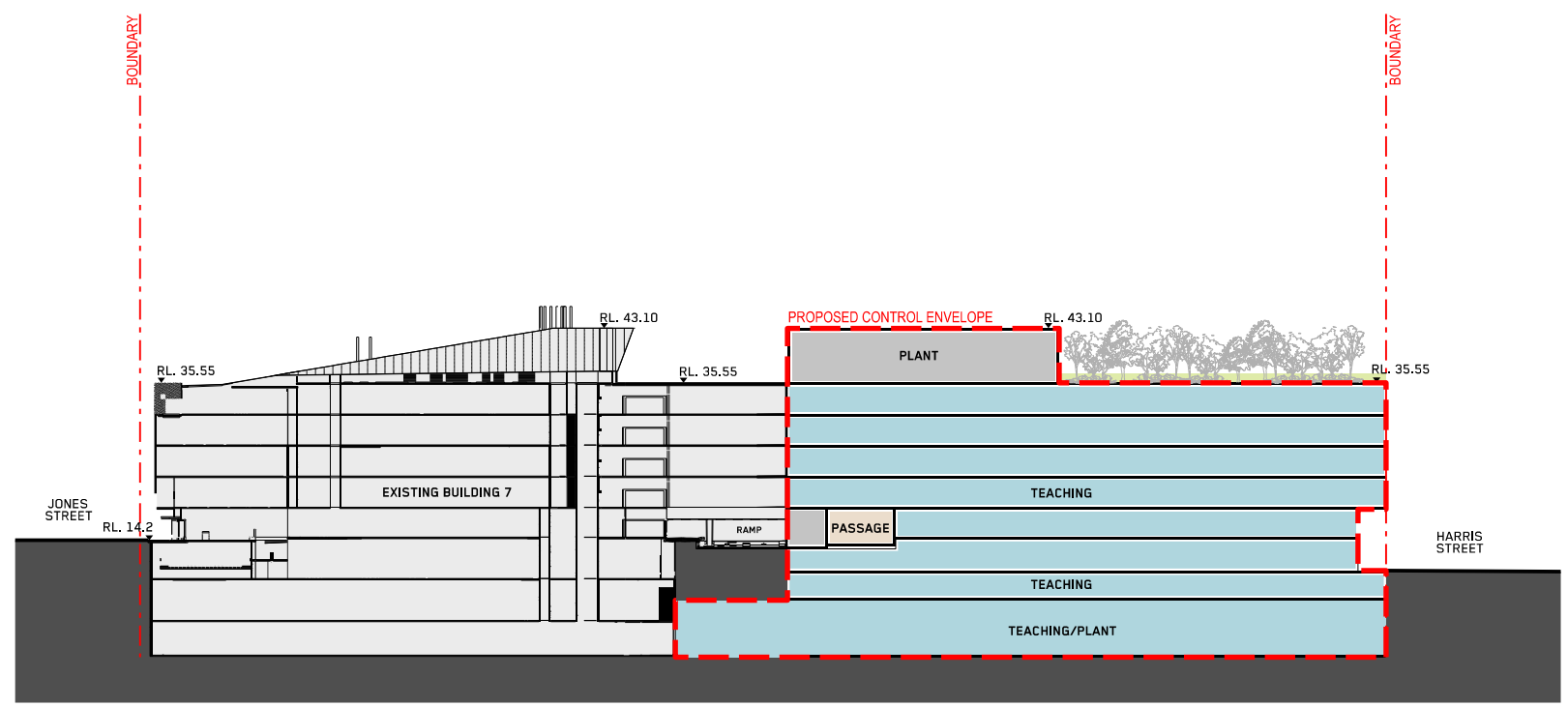
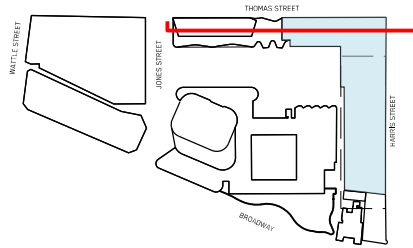
PROJECT
BON MARCHE & SCIENCE PRECINCT

TRUE NORTH	PROJ. NORTH	GRAPHIC SCALE
		0 10000 25000

SCALE
1:500 at A1

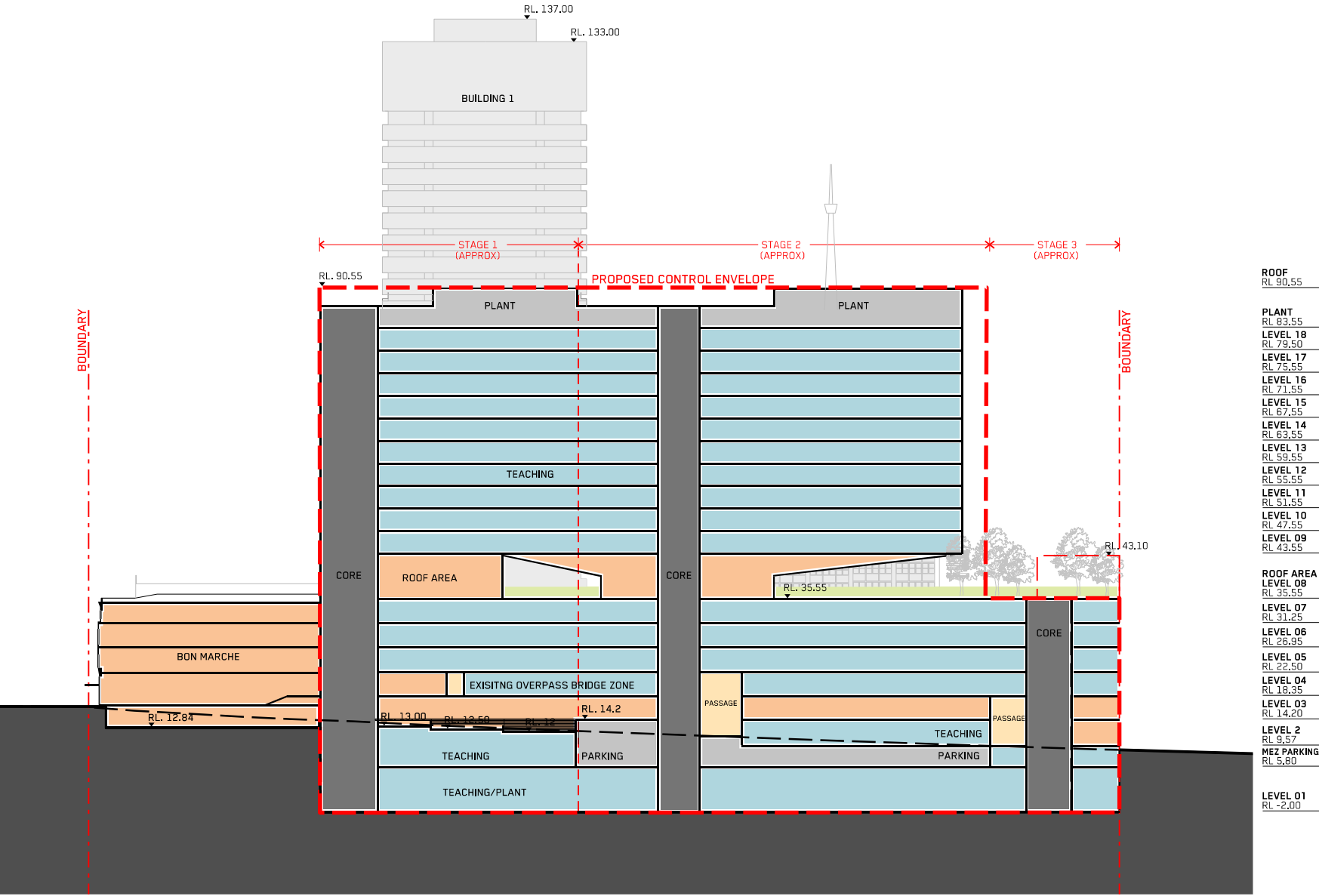
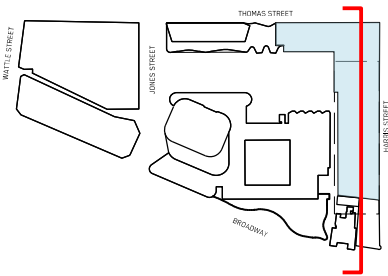
DRAWING
INDICATIVE DESIGN EAST-WEST SECTION 03

DRAWING NO	DATE	ISSUE
ID-SS-EW-03	18/04/2019	C



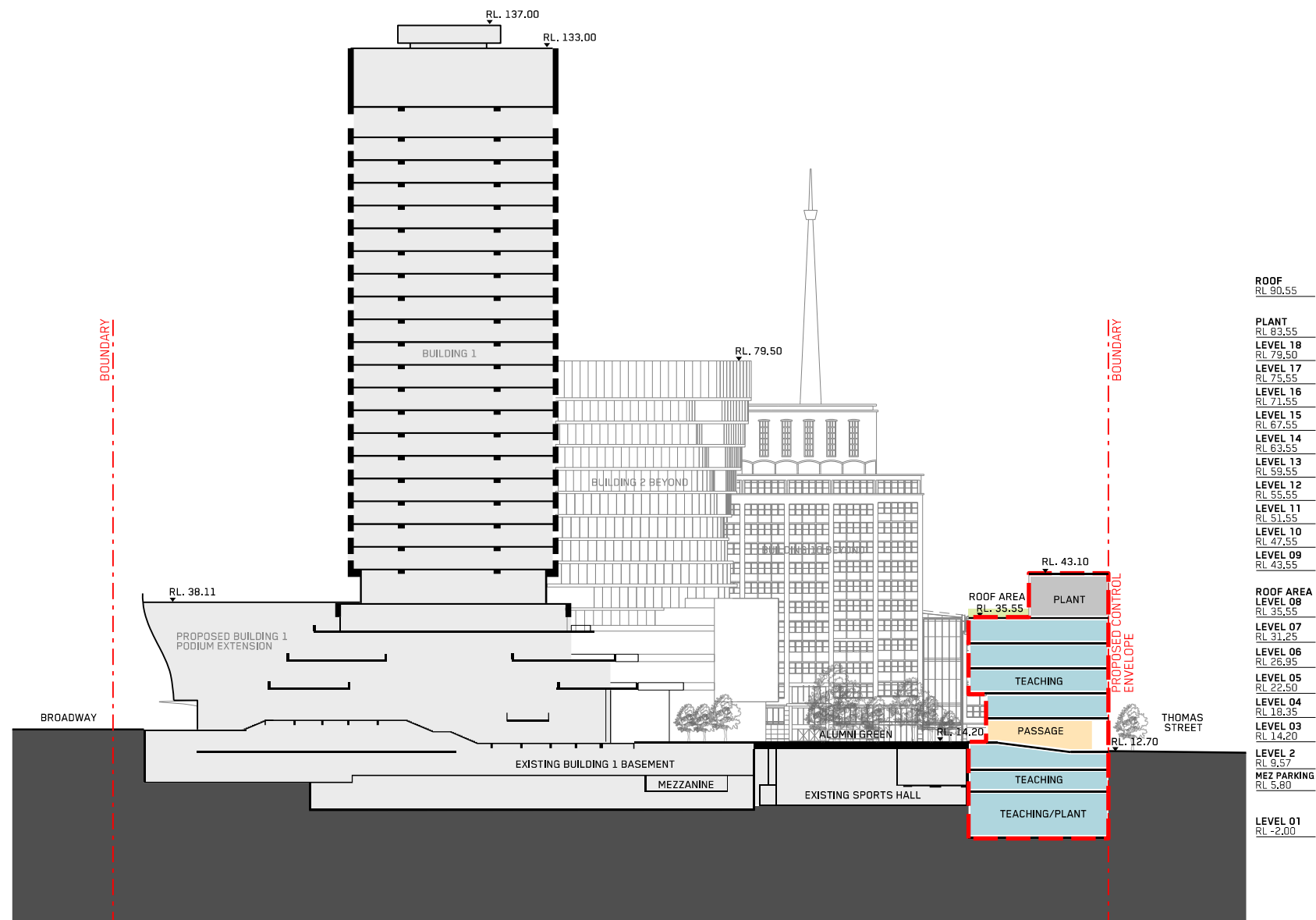
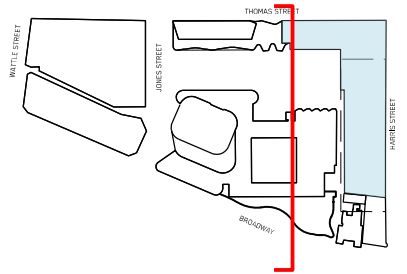
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PLANT	RL 83.55
LEVEL 18	RL 79.50
LEVEL 17	RL 75.55
LEVEL 16	RL 71.55
LEVEL 15	RL 67.55
LEVEL 14	RL 63.55
LEVEL 13	RL 59.55
LEVEL 12	RL 55.55
LEVEL 11	RL 51.55
LEVEL 10	RL 47.55
LEVEL 09	RL 43.55
ROOF AREA	RL 35.55
LEVEL 08	RL 35.55
LEVEL 07	RL 31.25
LEVEL 06	RL 26.95
LEVEL 05	RL 22.50
LEVEL 04	RL 18.35
LEVEL 03	RL 14.20
LEVEL 2	RL 9.57
MEZ PARKING	RL 5.90
LEVEL 01	RL -2.00

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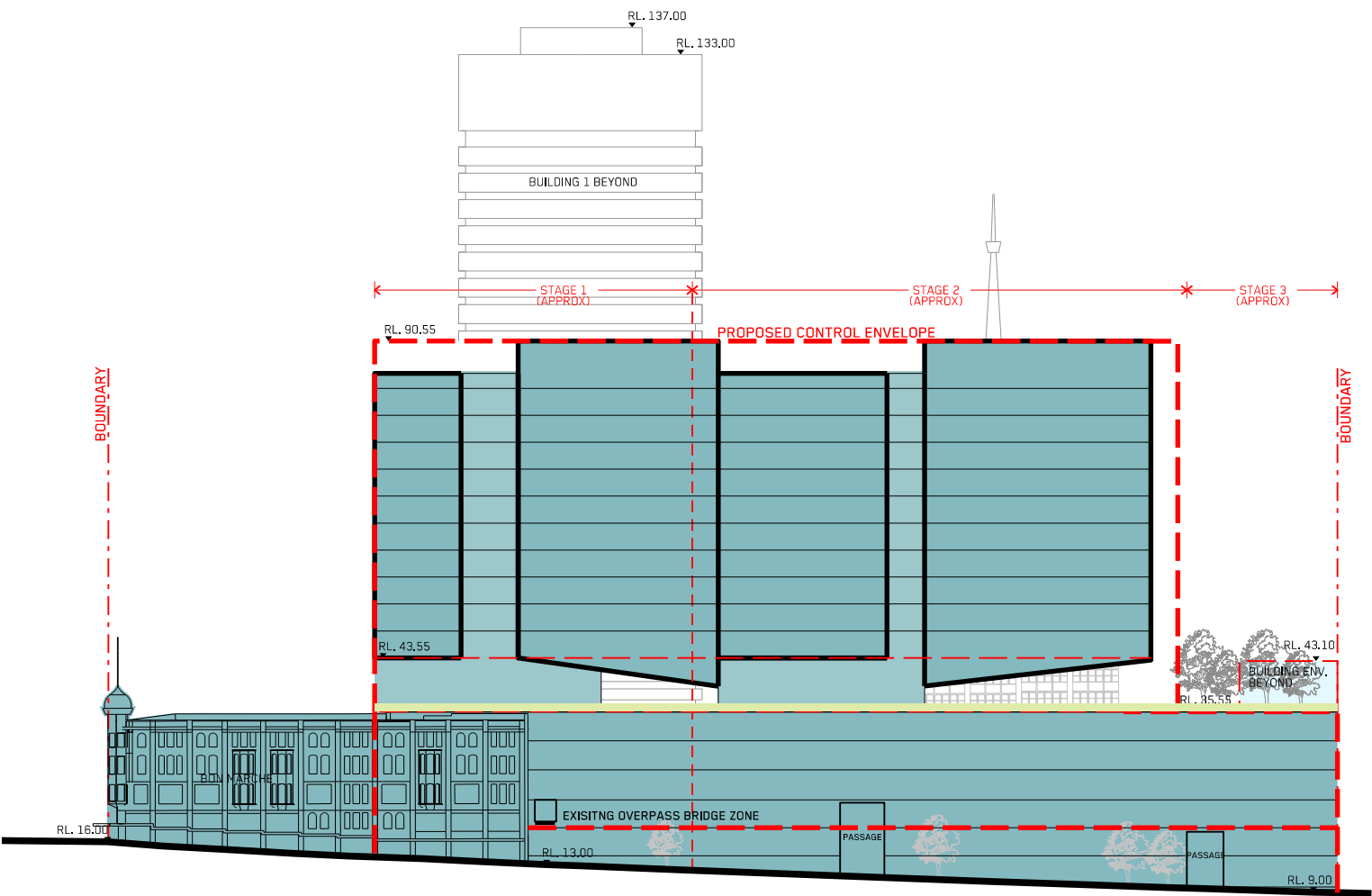
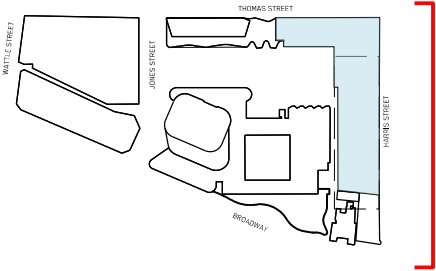
FOR INFORMATION ONLY





ROOF	RL 90.55
PLANT	RL 83.55
LEVEL 18	RL 79.50
LEVEL 17	RL 75.55
LEVEL 16	RL 71.55
LEVEL 15	RL 67.55
LEVEL 14	RL 63.55
LEVEL 13	RL 59.55
LEVEL 12	RL 55.55
LEVEL 11	RL 51.55
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ROOF AREA	RL 35.55
LEVEL 08	RL 31.25
LEVEL 07	RL 26.95
LEVEL 06	RL 22.50
LEVEL 05	RL 18.35
LEVEL 04	RL 14.20
LEVEL 03	RL 9.57
LEVEL 02	RL 5.60
MEZ PARKING	RL -2.00
LEVEL 01	RL -2.00

FOR INFORMATION ONLY



ROOF
RL 90.55
PLANT
RL 83.55
LEVEL 18
RL 79.50
LEVEL 17
RL 75.55
LEVEL 16
RL 71.55
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RL 67.55
LEVEL 14
RL 63.55
LEVEL 13
RL 59.55
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RL 26.95
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RL 22.50
LEVEL 04
RL 18.35
LEVEL 03
RL 14.20
LEVEL 2
RL 9.57
MEZ PARKING
RL 5.80
LEVEL 01
RL -2.00

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SHADOW ANALYSIS

ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS

Careful control of solar impact to residential properties has been analysed and implemented.

Due regard to the protection of residential amenity (in particular solar access) has been taken in developing the control envelope for the Bon Marche and Science Precinct. The key surrounding residential building potentially affected by the proposed new built form is One Central Park (Block 2). Consistent with the objectives of SEPP 65 and the site specific amenity controls that apply to the Central Park site (which includes assessment of solar access from 7.30am – 4.30pm), the proposed envelope ensures minimal impact to the solar access of existing adjacent apartments.

A cumulative analysis of One Central Park (Block 2) has been undertaken illustrating the required solar access to residential units' façades (above podium level in One Central Park) has not been compromised from the existing scenario. In addition, the shadow cast over every hour between 730am and 4.30pm during the Winter Solstice also illustrates the minimal impact of shadowing from the proposed control envelope.

Careful consideration of solar access to the public open space of Alumni Green has also been investigated. The proposed envelope ensures minimal solar impact to the open space and preserves the outdoor amenity of Alumni Green and the new podium levels to Building 2. As shown, at certain times of the day, with a proposed reduced Building 4 podium height, sun access is in fact improved from the existing scenario.

CUMULATIVE IMPACT - METHOD OF ASSESSMENT

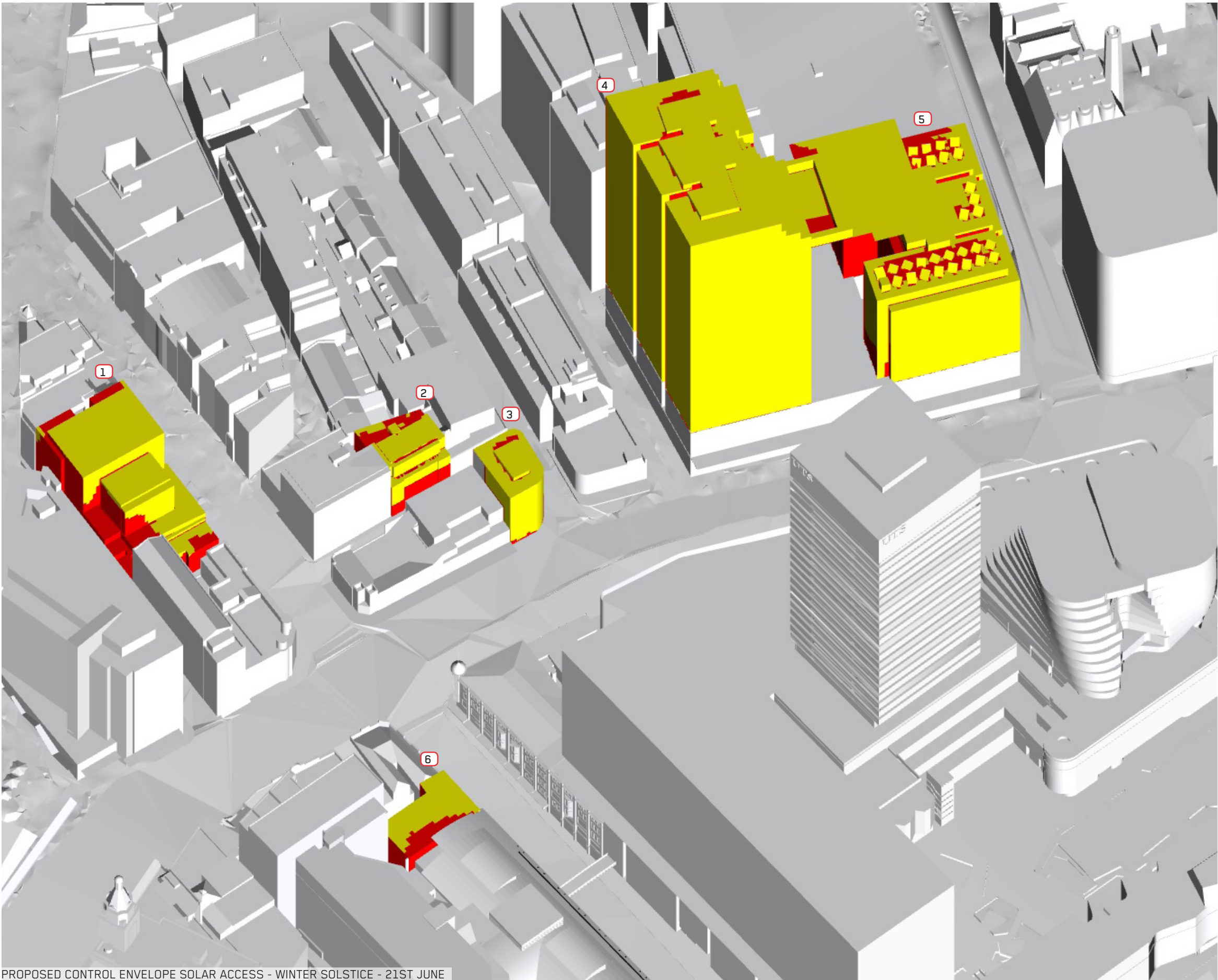
- The solar access script used relies on latitude and longitude extracted from a weather file to calculate the path of the Sun.
- The date and time parameters are adjusted to the desired analysis period – in this case, 2 hours of direct sunlight between 7.30am-4.30pm on June 21 for One Central Park (Central Park Concept Plan Approval requirements), and 2 hours of direct sunlight between 9.00am-3.00pm on June 21 for the other surrounding developments analysed.
- The program identifies the objects (eg. One Central Park) that are to be analysed, and the rest are classified as context.
- The program registers when the Sun's rays are blocked by an object (either surrounding context or One Central Park) and calculates the aggregate time of direct sun exposure on the facade between 7.30am – 4.30pm on June 21 for One Central Park and 9.00am - 3.00pm on June 21 for other analysed surrounding developments..
- Complying surfaces (≥2 hours) and non-complying surfaces(<2 hours) are then split and coloured



EXISTING SOLAR ACCESS - WINTER SOLSTICE - 21ST JUNE

SHADOW ANALYSIS

ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS



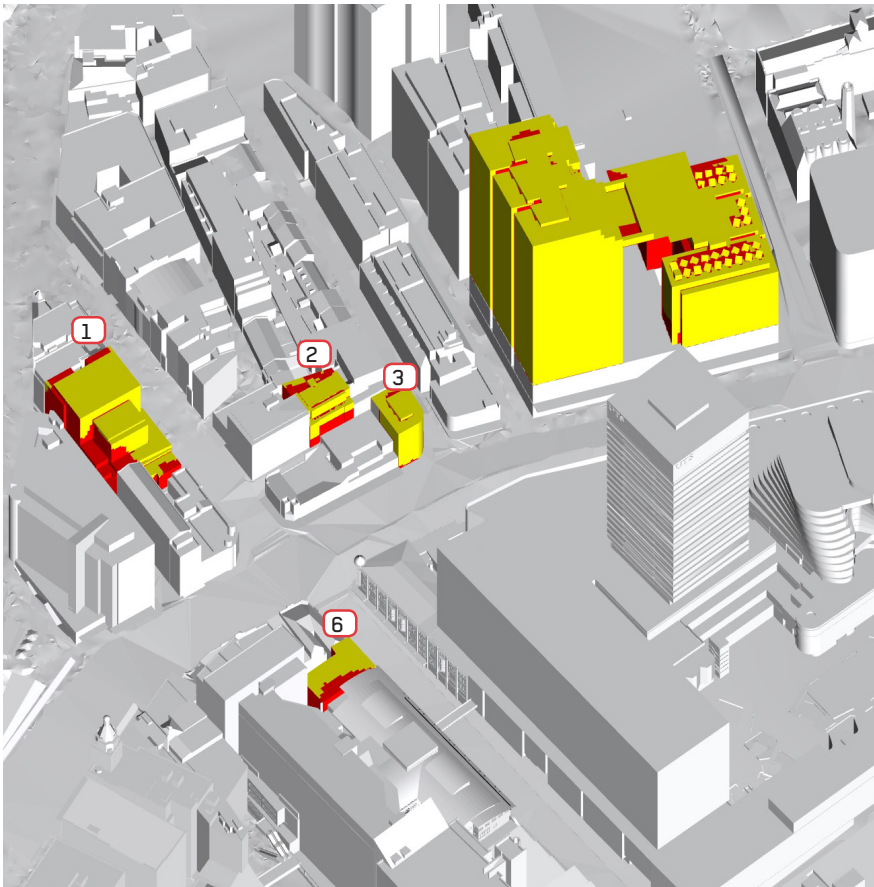
PROPOSED CONTROL ENVELOPE SOLAR ACCESS - WINTER SOLSTICE - 21ST JUNE

SHADOW ANALYSIS

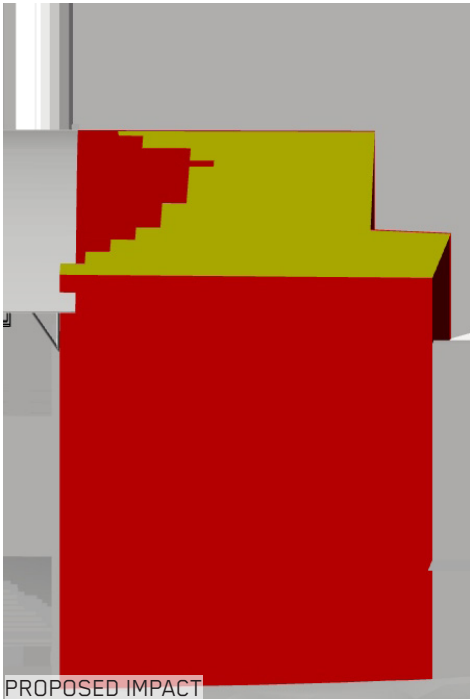
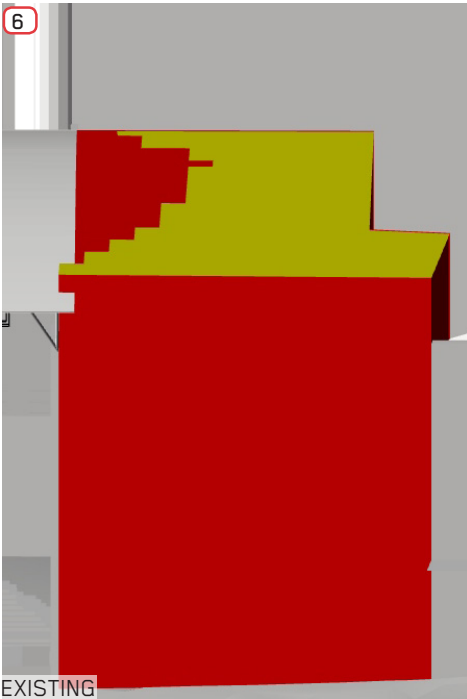
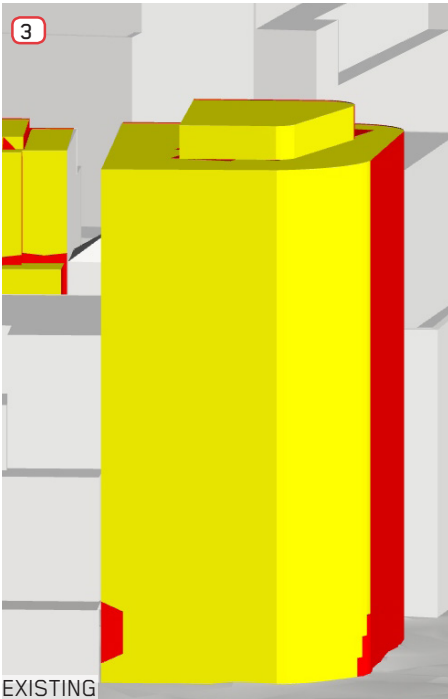
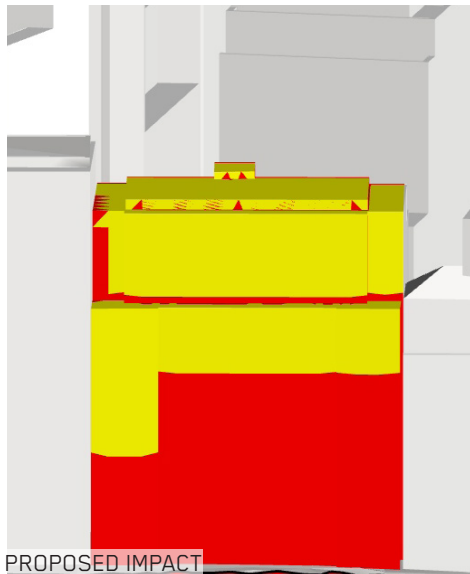
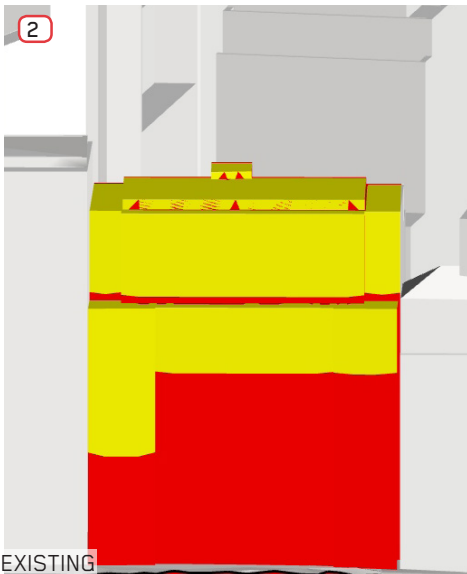
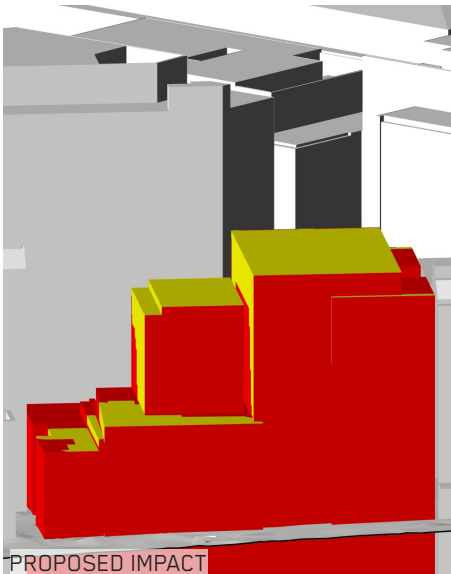
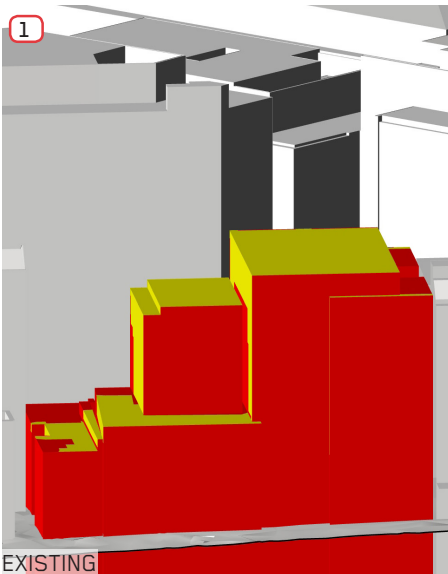
ONE CENTRAL PARK AND NEIGHBOURING MULTIRESIDENTIAL DEVELOPMENTS

CUMULATIVE SOLAR IMPACTS ON NEIGHBOURING MULTI-RESIDENTIAL BUILDINGS

The following diagrams demonstrate the solar impacts of the proposal on neighbouring multi-residential developments. The before and after cumulative solar impact diagrams show that the proposal has little effect on the ability of neighbouring buildings to achieve 2 hours of direct solar access during mid winter.

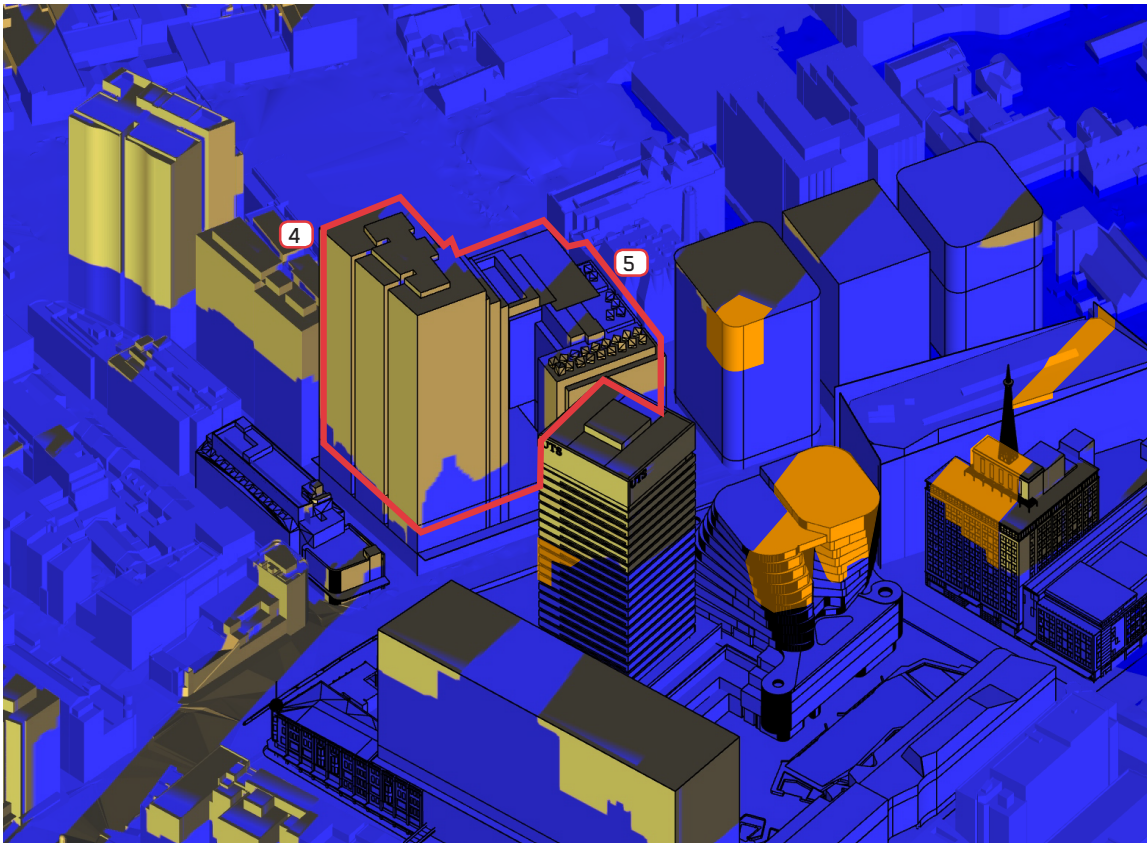


- COMPLYING SURFACES (≥2HRS SOLAR ACCESS)
- NON-COMPLYING SURFACES (<2HRS SOLAR ACCESS)

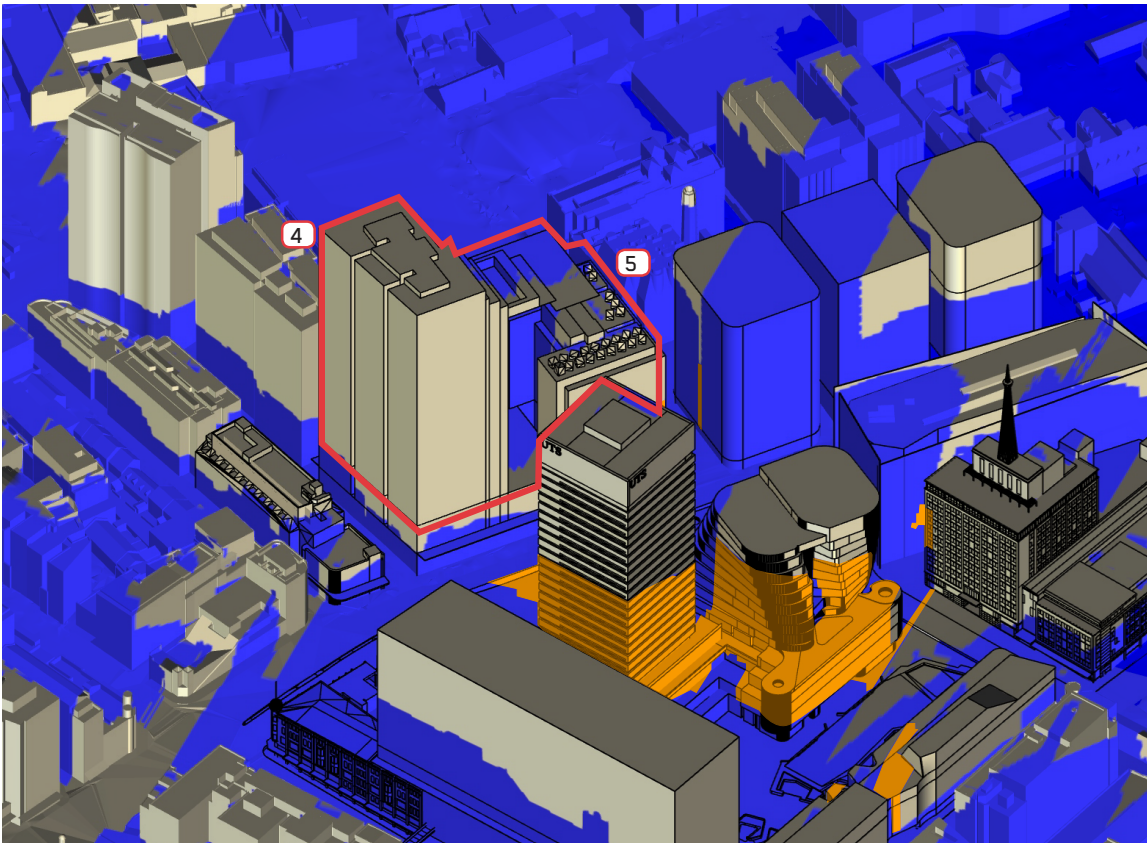


SHADOW ANALYSIS

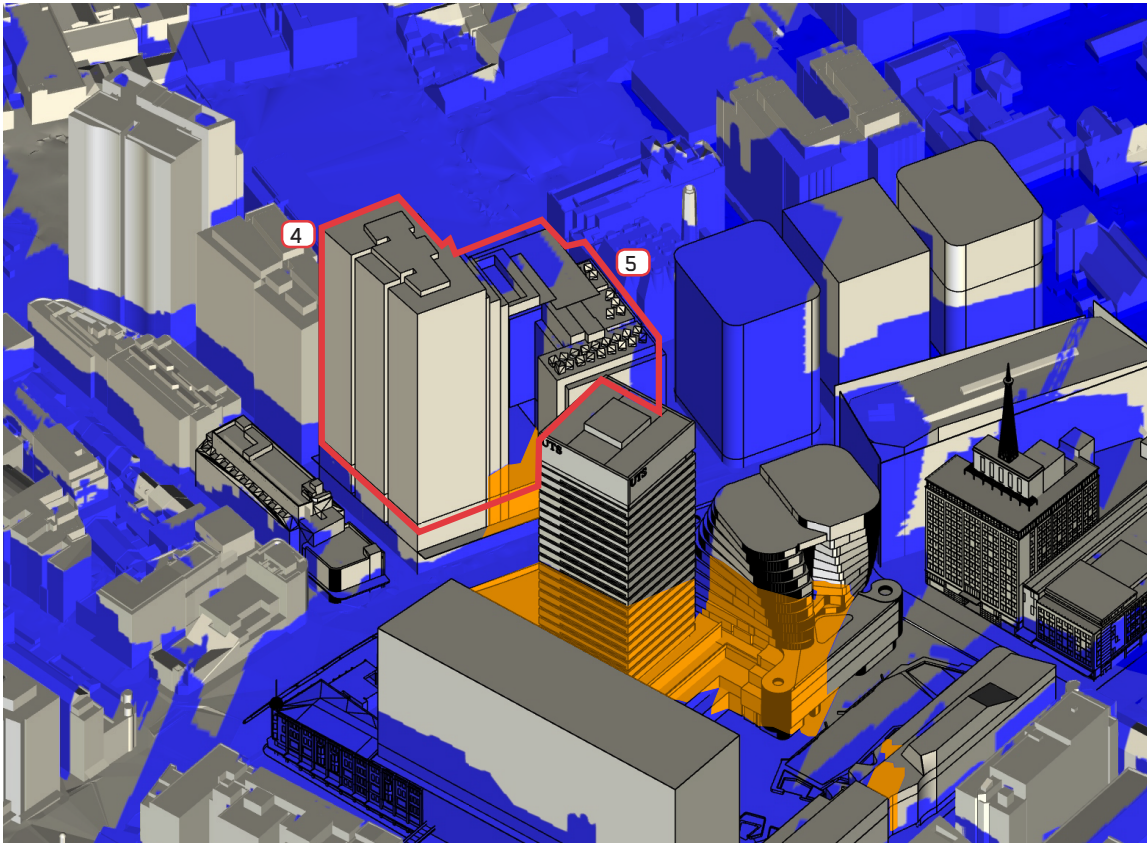
ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE



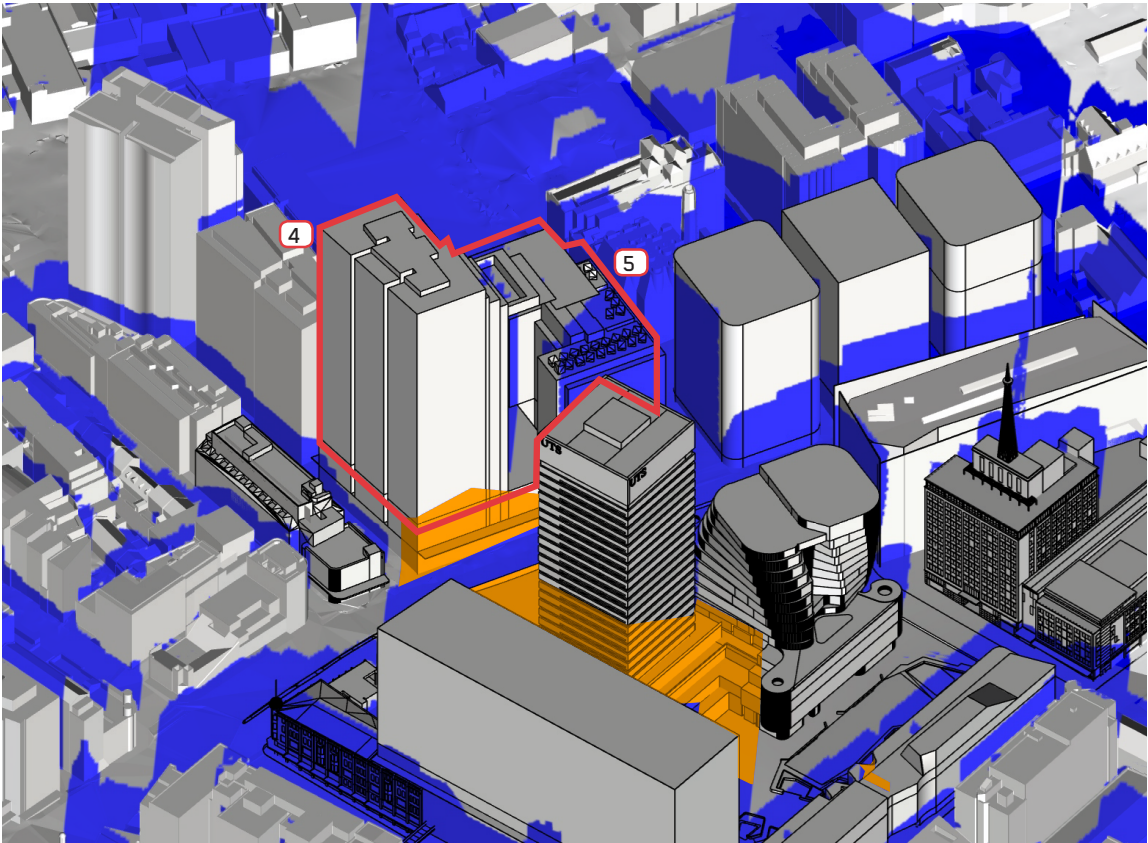
7:30 AM



8:30 AM



9:00 AM



10:00 AM

LEGEND:

RESIDENTIAL BUILDINGS

4 BLOCK 1 CENTRAL PARK

5 BLOCK 2 CENTRAL PARK

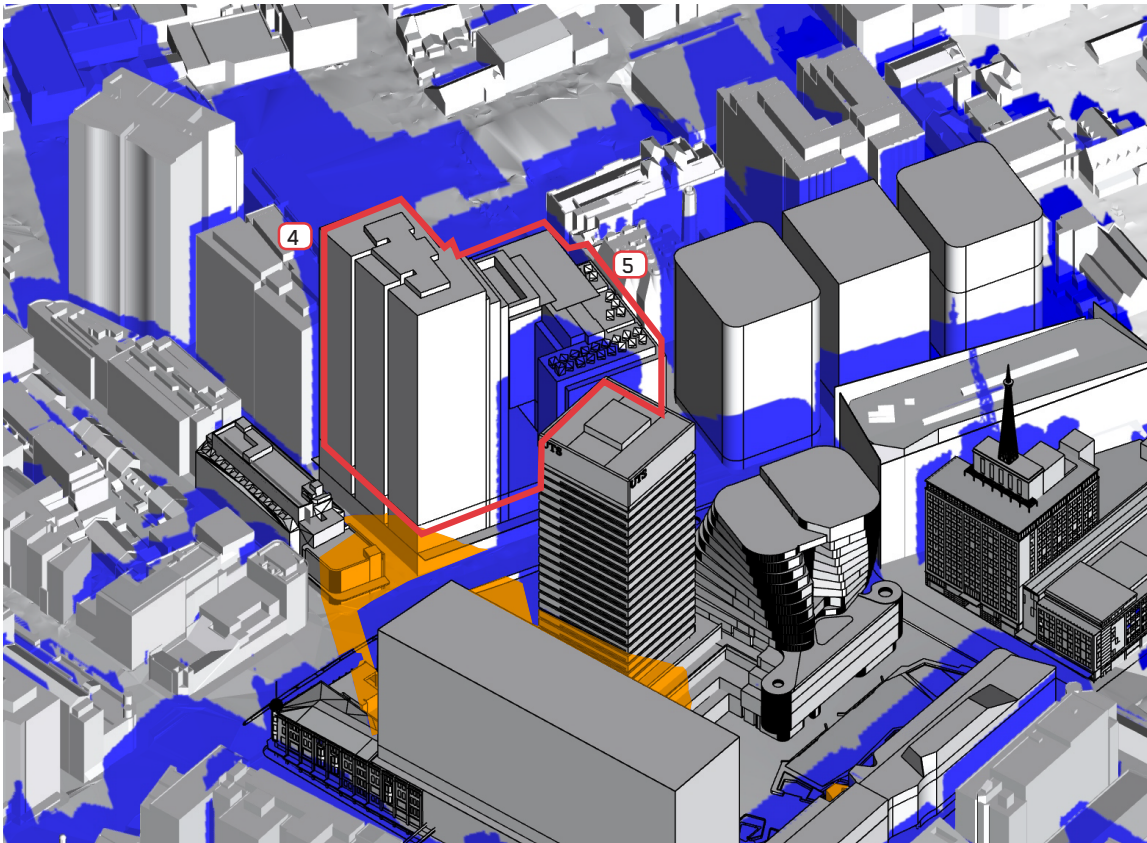
EXISTING SHADOW CAST

ADDITIONAL SHADOW CAST BY PROPOSED BUILDING CONTROL ENVELOPE

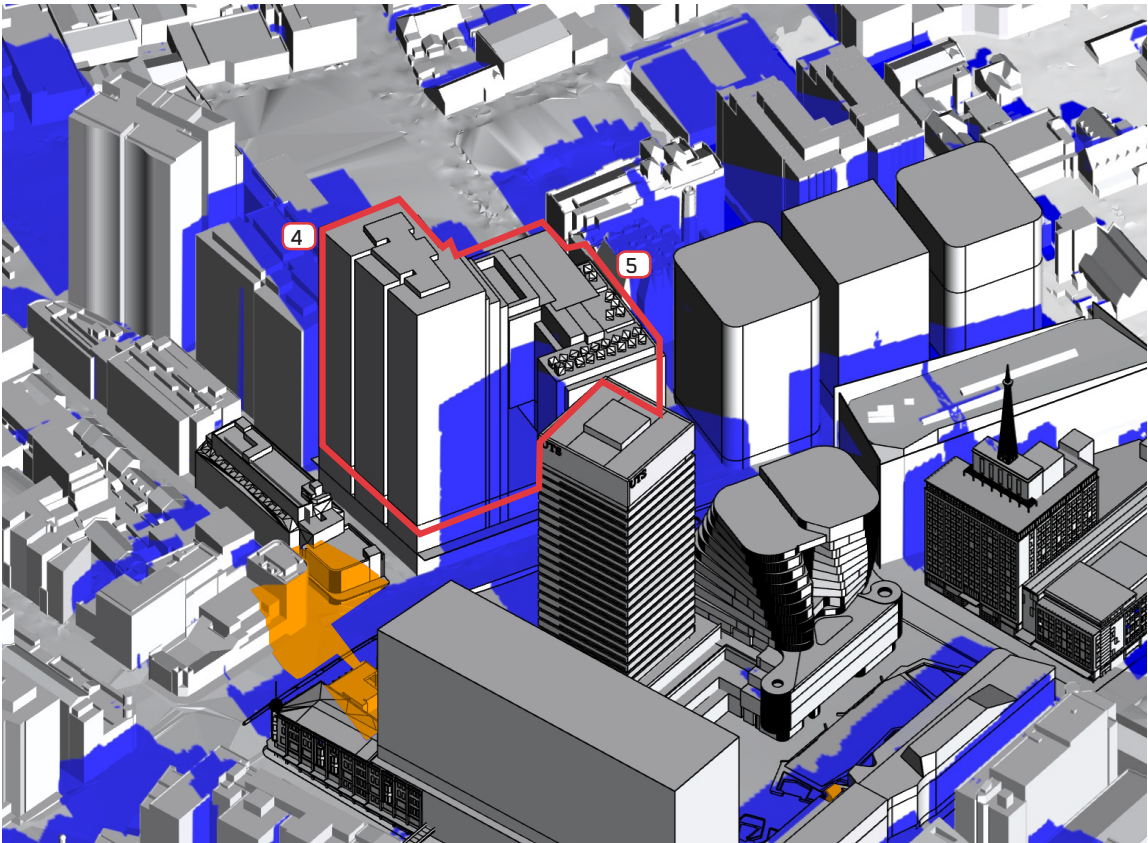
SHADOW ANALYSIS

ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE

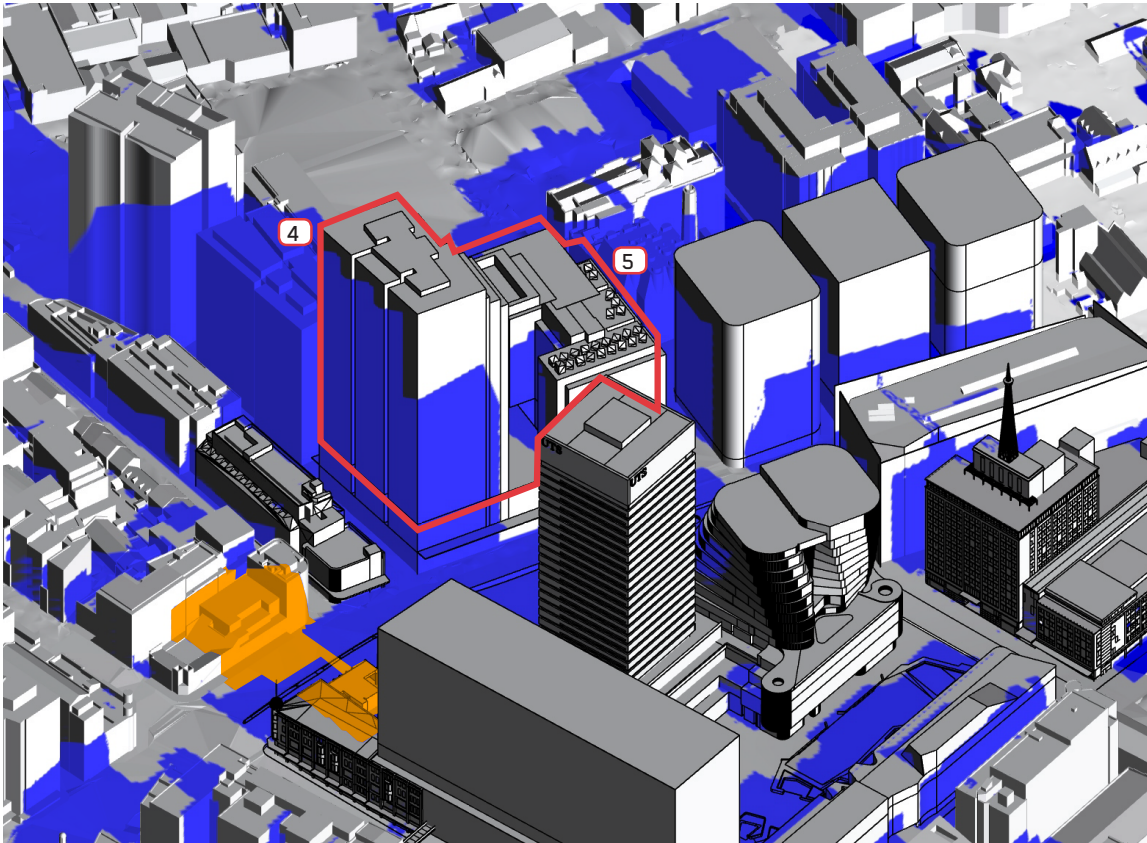
62



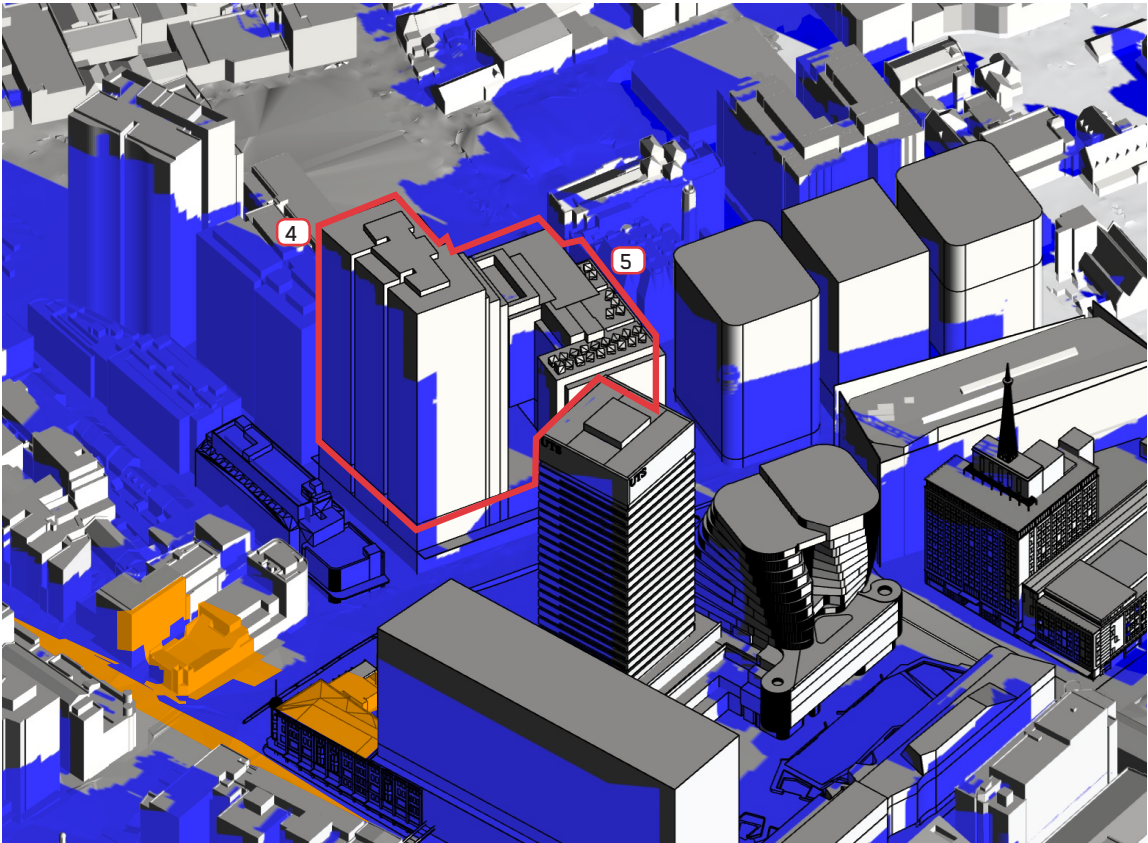
11:00 AM



12:00 PM



1:00 PM



2:00 PM

LEGEND:

RESIDENTIAL BUILDINGS

4 BLOCK 1 CENTRAL PARK

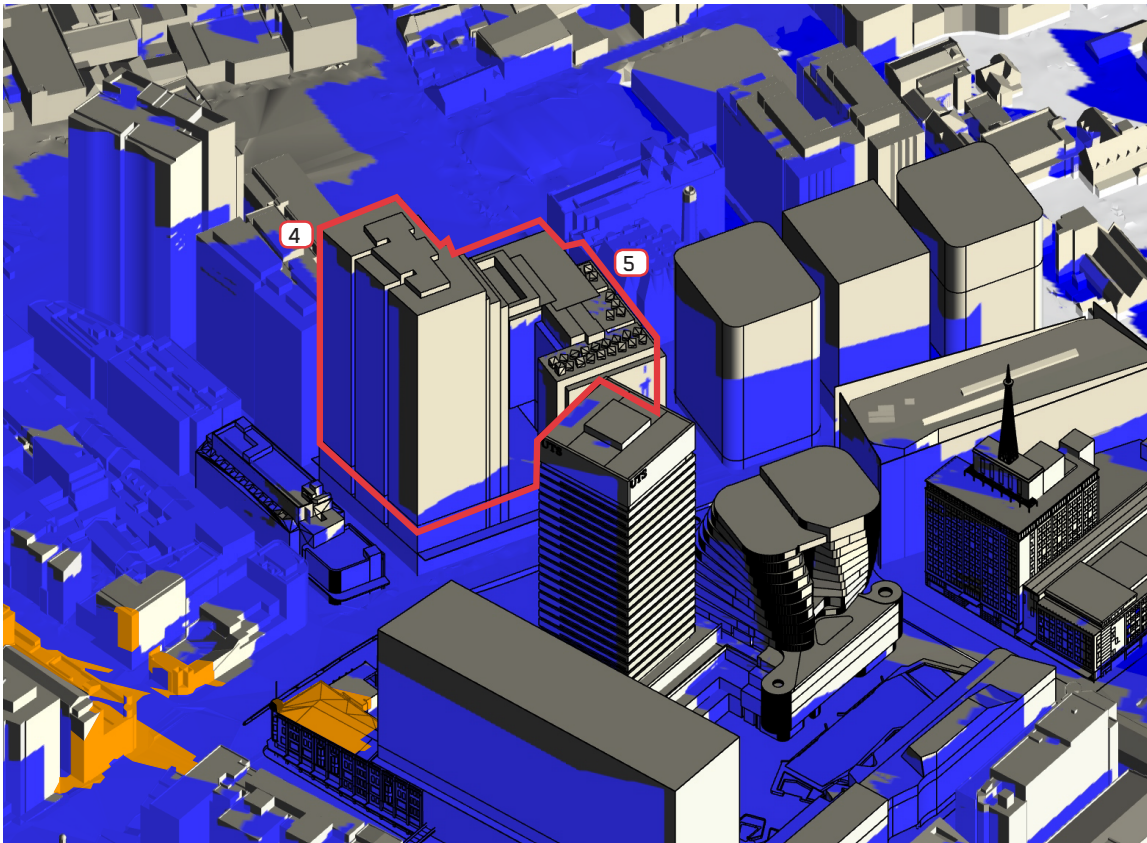
5 BLOCK 2 CENTRAL PARK

EXISTING SHADOW CAST

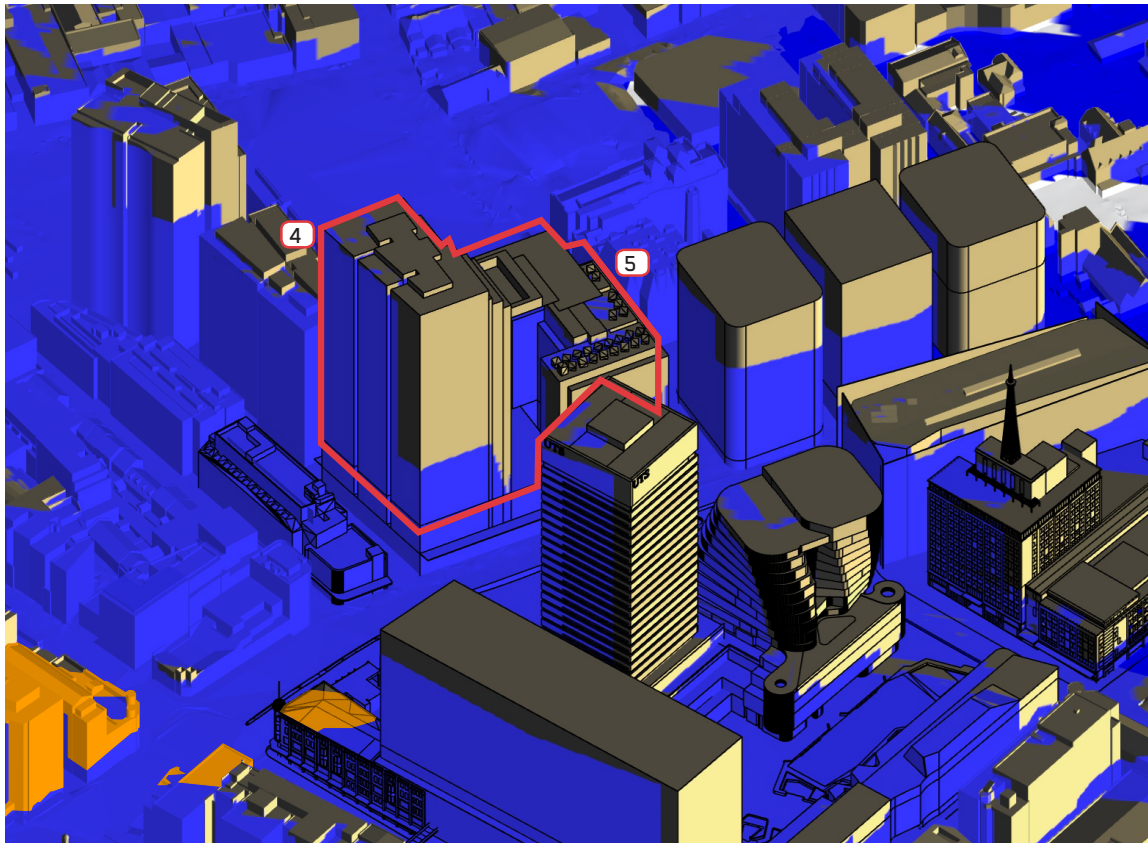
ADDITIONAL SHADOW CAST BY PROPOSED CONTROL ENVELOPE

SHADOW ANALYSIS

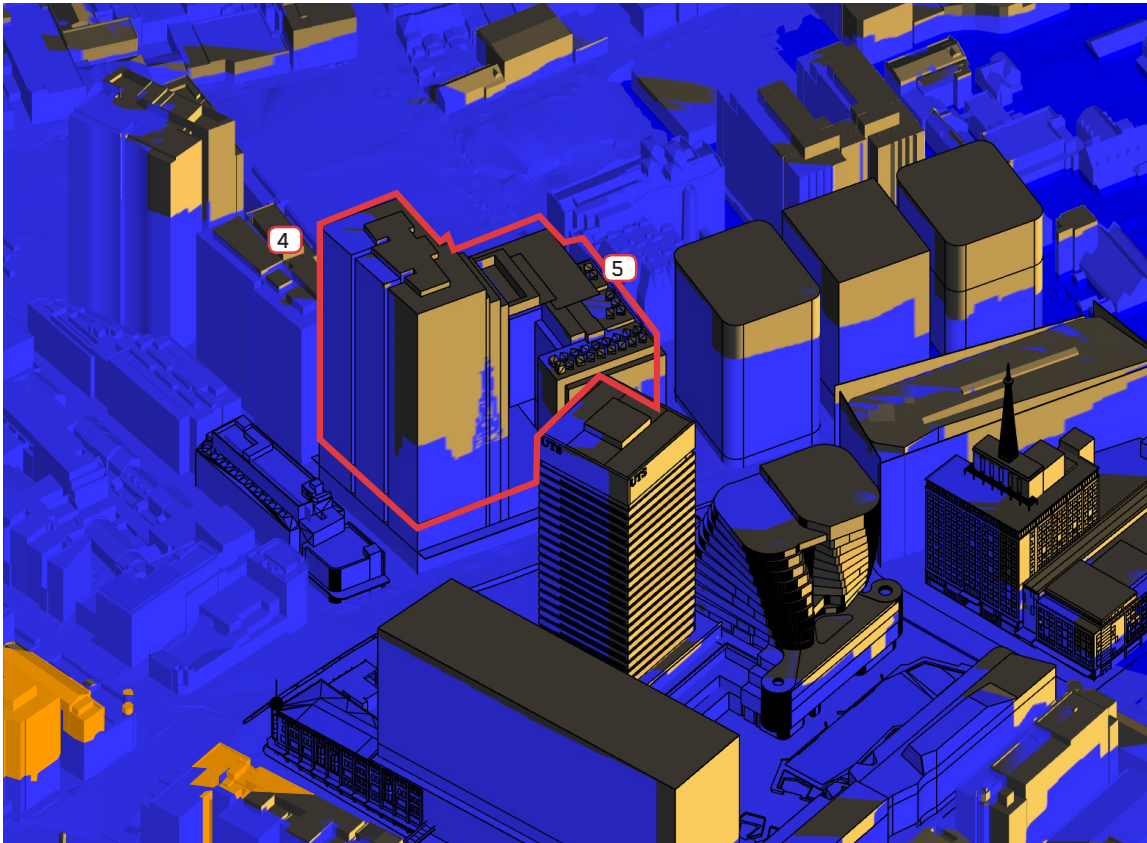
ONE CENTRAL PARK SHADOW ANALYSIS - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE



3:00 PM



4:00 PM



4:30 PM

LEGEND:

RESIDENTIAL BUILDINGS

4 BLOCK 1 CENTRAL PARK

5 BLOCK 2 CENTRAL PARK

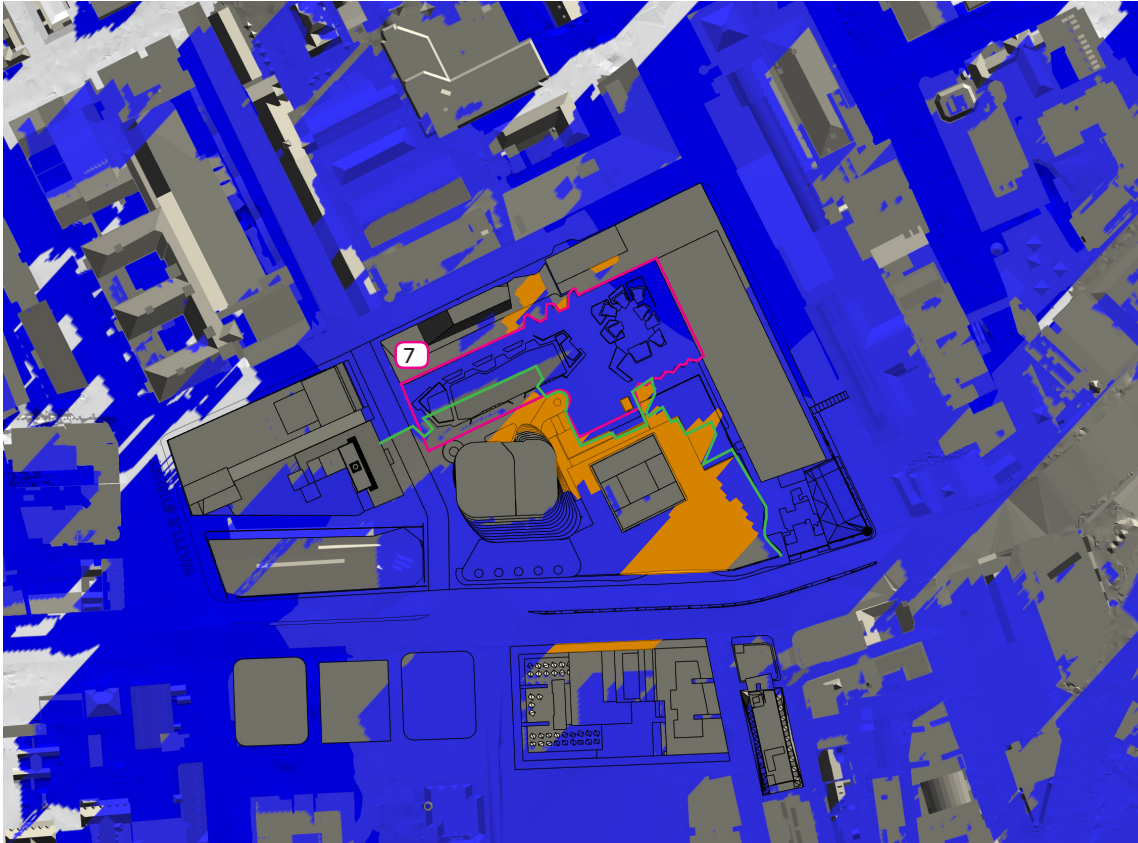
EXISTING SHADOW CAST

ADDITIONAL SHADOW CAST BY PROPOSED CONTROL ENVELOPE

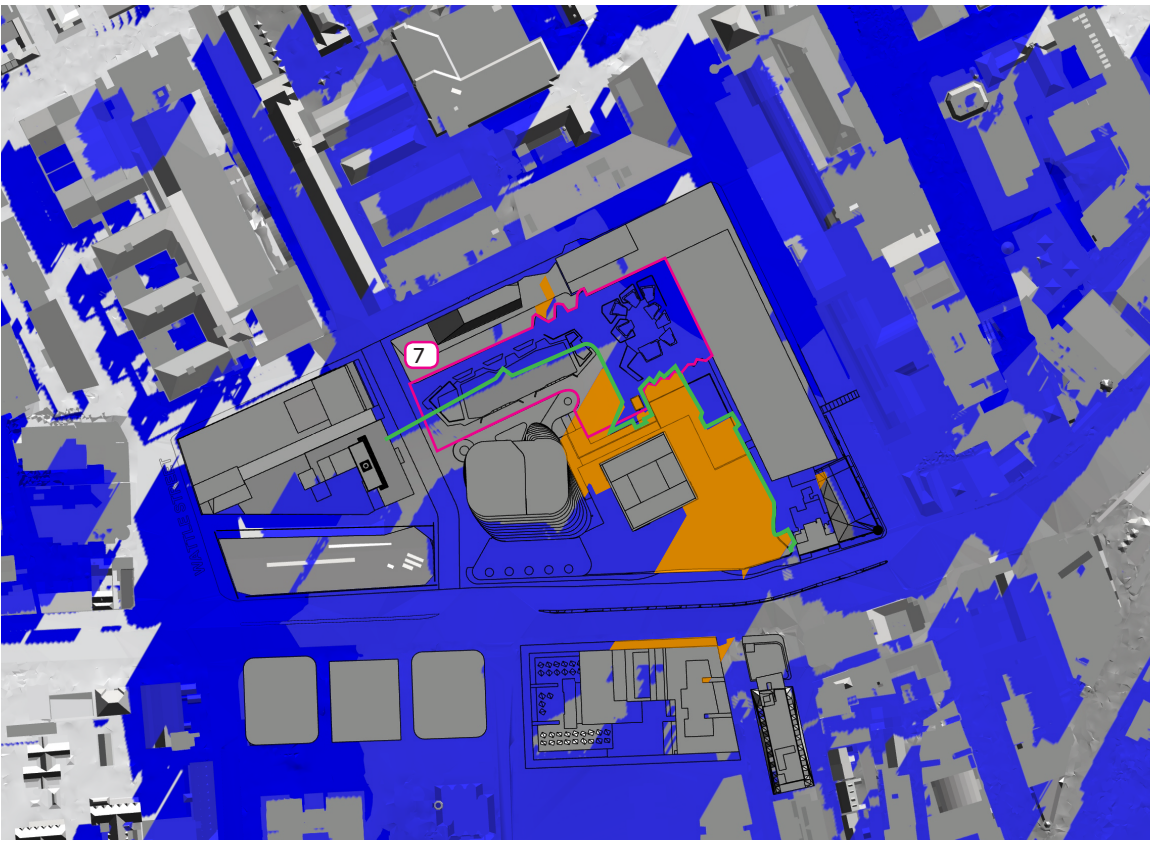
SHADOW ANALYSIS

ALUMNI GREEN - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE

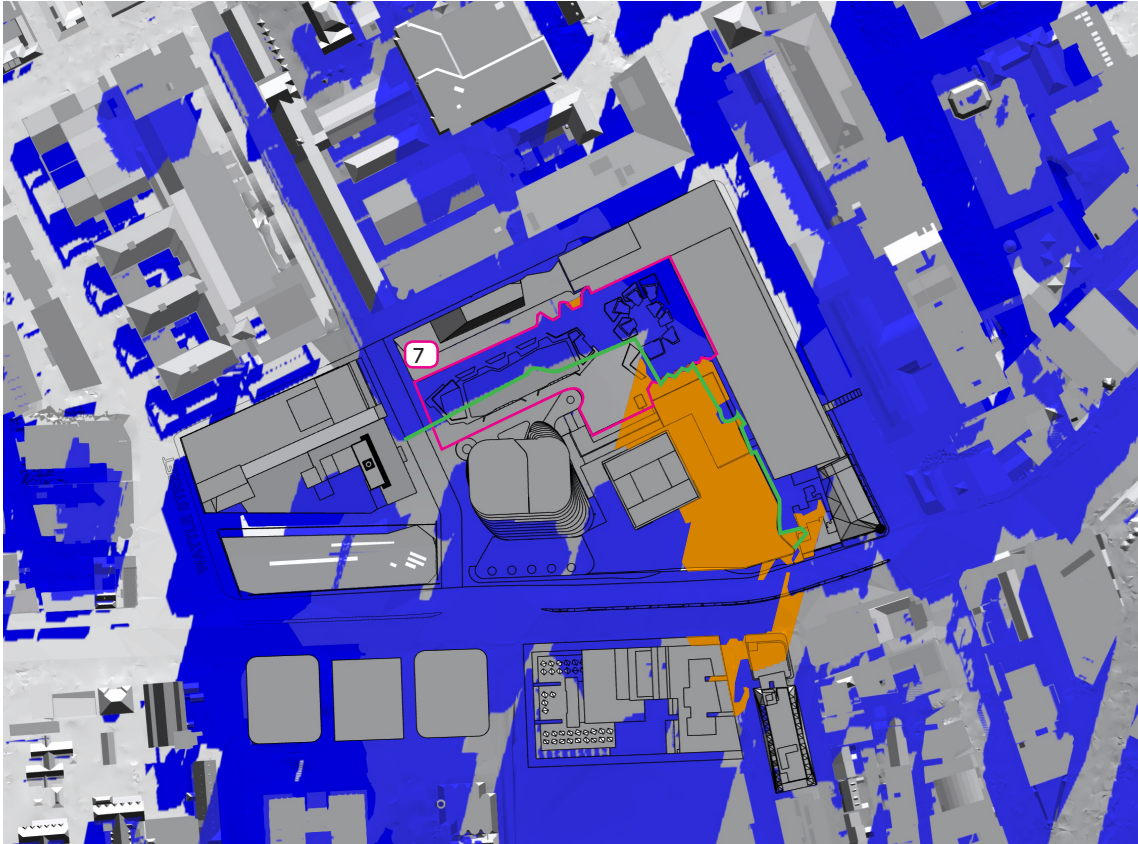
64



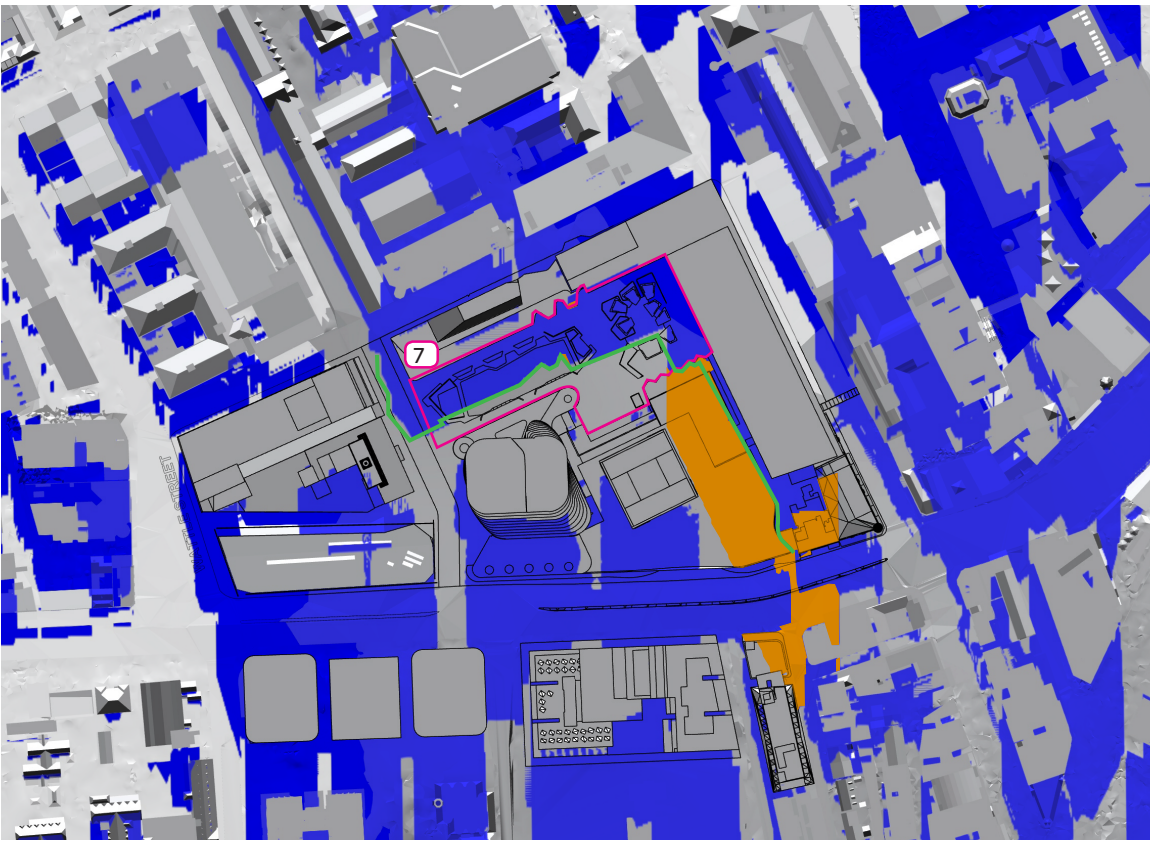
9:00 AM



10:00 AM



11:00 AM

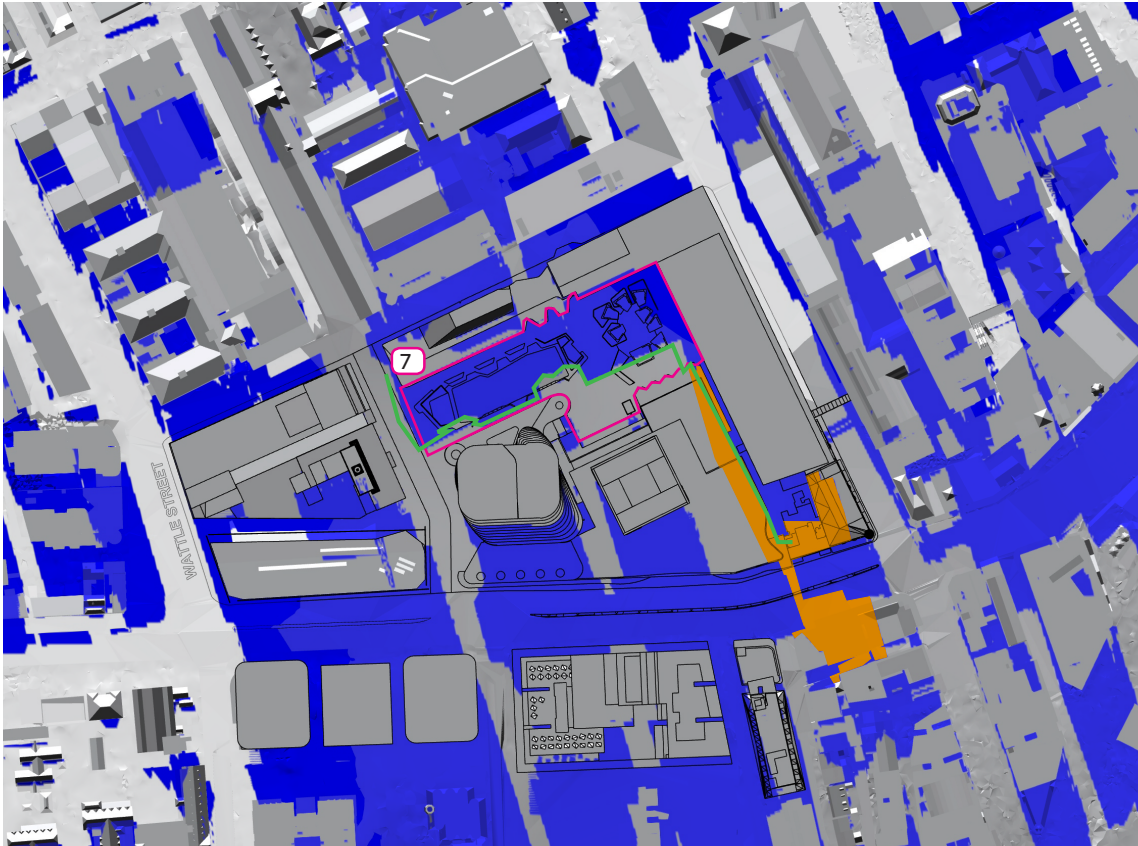


12:00 PM

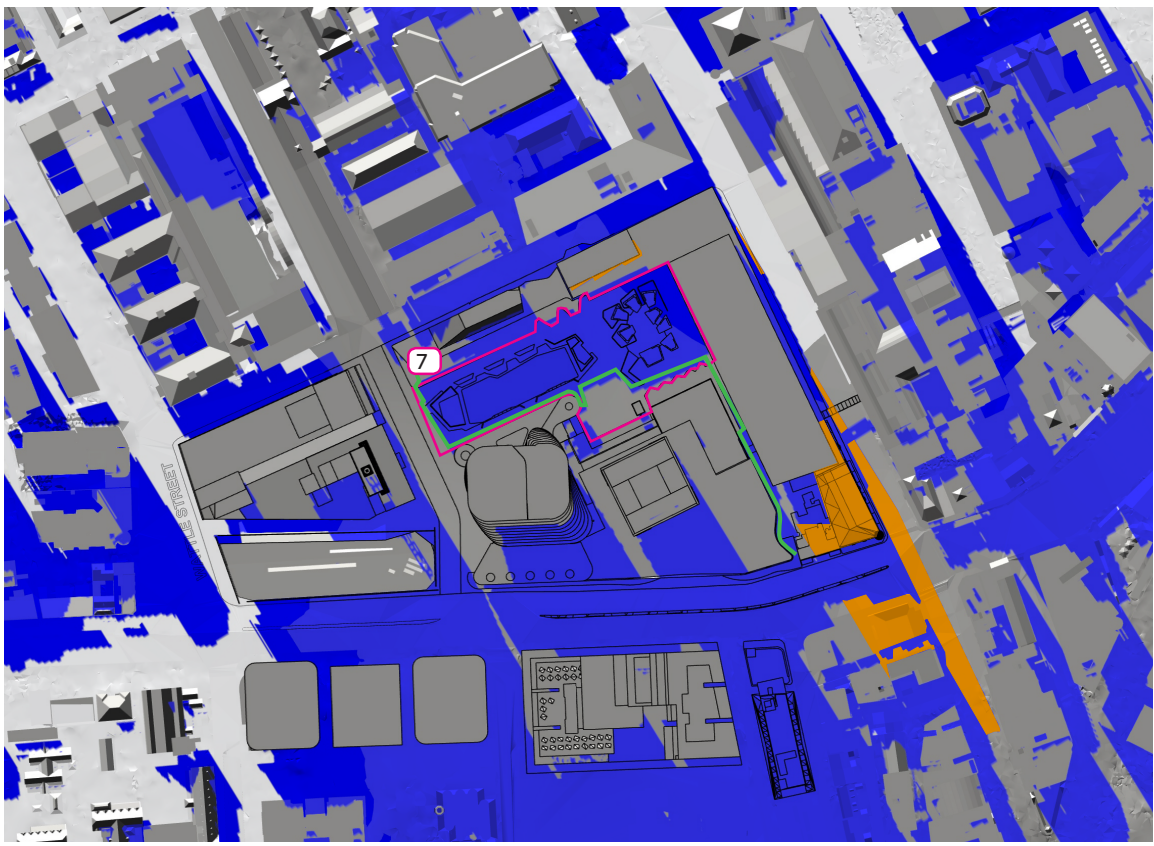
- LEGEND:
- 7 ALUMNI GREEN
 - EXISTING SHADOW CAST
 - ADDITIONAL SHADOW CAST BY PROPOSED CONTROL ENVELOPE
 - EXISTING SHADOW LINE

SHADOW ANALYSIS

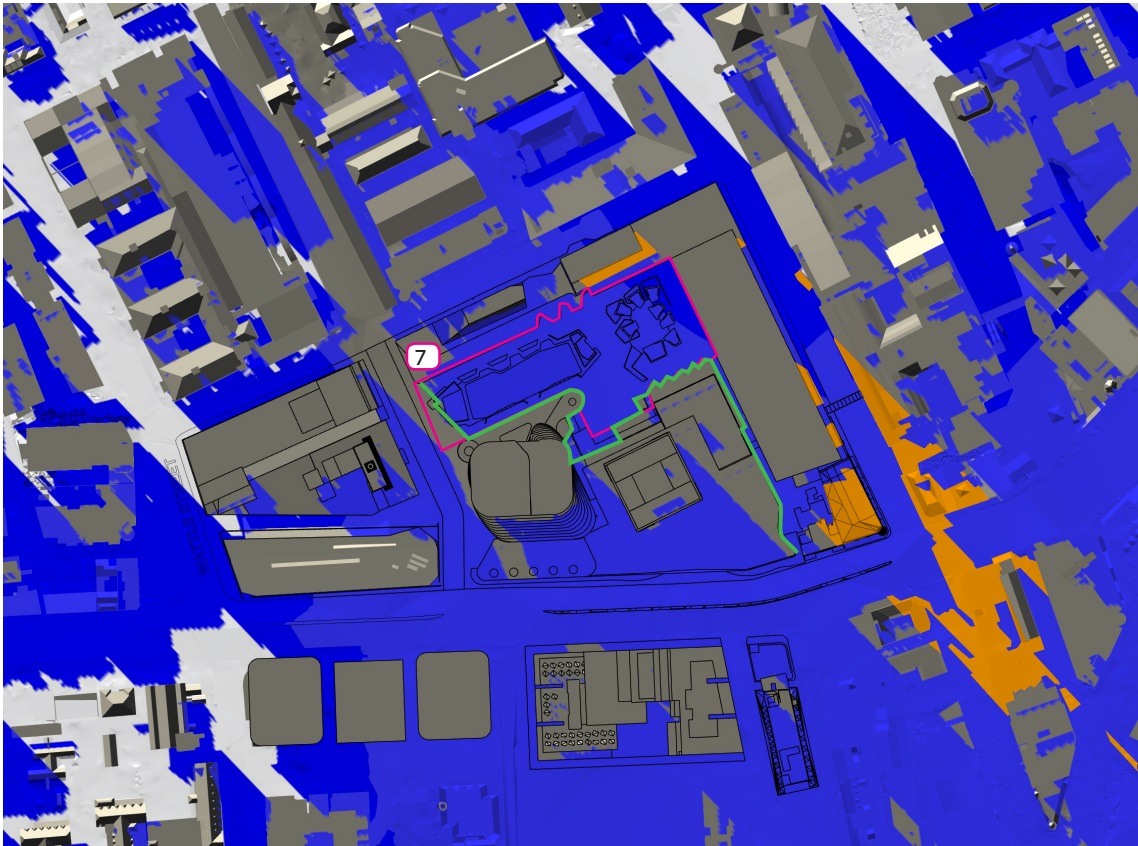
ALUMNI GREEN - PROPOSED CONTROL ENVELOPE - WINTER SOLSTICE - 21ST JUNE



1:00 PM



2:00 PM



3:00 PM

- LEGEND:
- 7 ALUMNI GREEN
 - EXISTING SHADOW CAST
 - ADDITIONAL SHADOW CAST BY PROPOSED CONTROL ENVELOPE
 - EXISTING SHADOW LINE

