

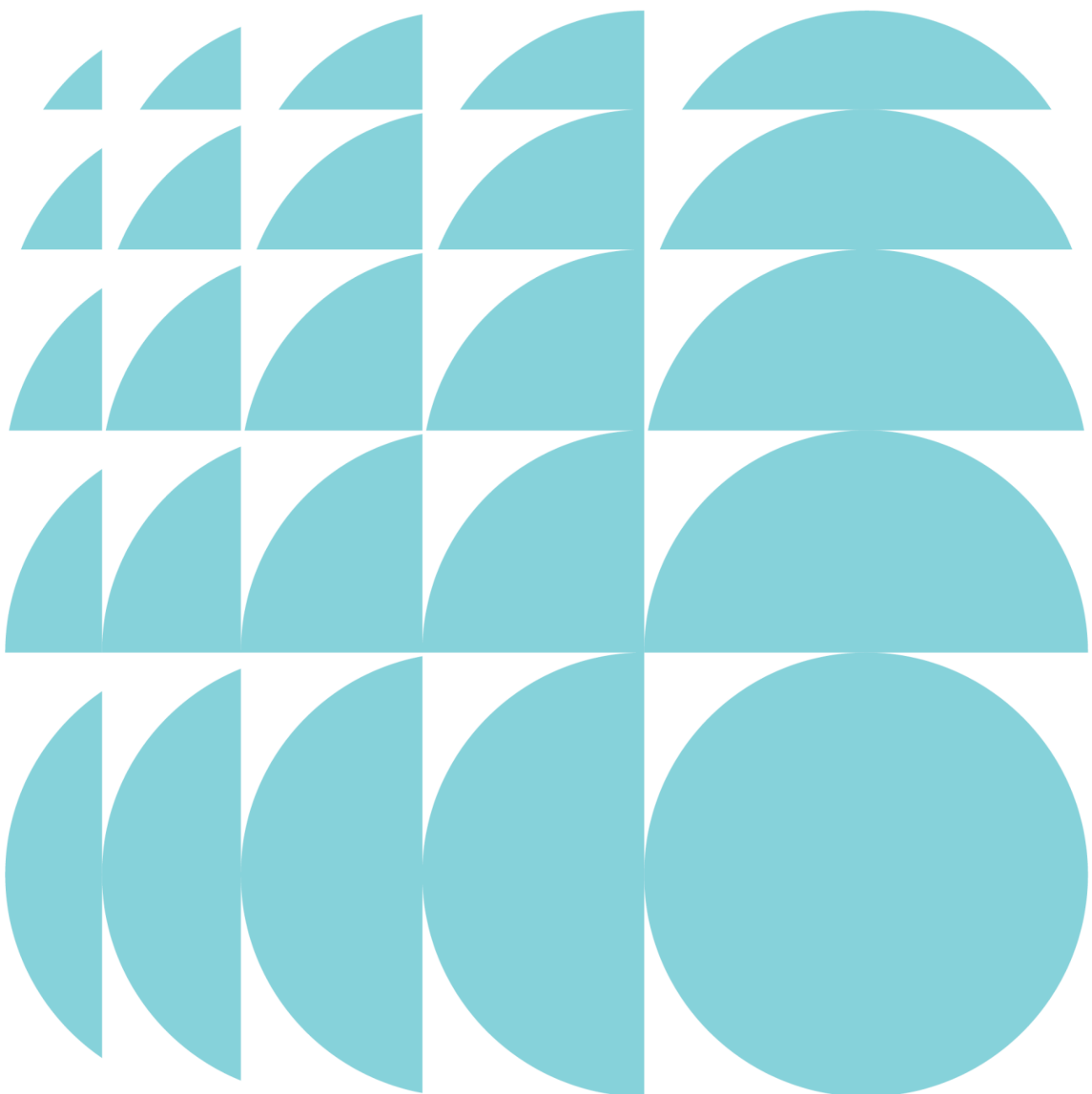
ETHOS URBAN

Response to Submissions

UTS City Campus, Broadway Precinct
GFA and Building Envelope Amendments

Submitted to Department of Planning and
Environment
On behalf of University of Technology Sydney

18 April 2019 | 218424



Alexis Cella	Director	ACella@ethosurban.com	+61 434 550 090
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This document has been prepared by:

This document has been reviewed by:

F. Hall

[Signature]

Chris Patfield	18.04.2019	Alexis Cella	18.04.2019
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Ethos Urban Pty Ltd
ABN 13 615 087 931.
www.ethosurban.com
+61 2 9956 6962

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I	Wind Tunnel Assessment Report <i>Arup</i>
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K	Harris Street Setback Options Study <i>BVN</i>
L	Updated Landscape Design Report <i>Arcadia Landscape Architecture</i>

1.0 Introduction

An Environmental Assessment Report (EAR) for modifications to the approved Concept Plan at UTS City Campus, Broadway Precinct, was publicly exhibited for a period of 32 days between 8 November 2018 and 10 December 2018 (MP08_0116 MOD 6).

In total, nine (9) submissions were received in response to the public exhibition of the EAR. This included one (1) submission from the public in addition to seven (7) submissions from the following government agencies:

- Government Architect NSW;
- City of Sydney Council;
- NSW Environment Protection Authority;
- Heritage Division;
- NSW Office of Environment and Heritage;
- Sydney Water (which made two separate submissions); and
- Transport for NSW.

The Department of Planning and Environment (DPE) has also prepared a letter setting out additional information or clarification required prior to final assessment of the modification application.

The proponent, University of Technology Sydney (UTS) and its specialist consultant team have reviewed and considered all issues raised.

This report, prepared by Ethos Urban on behalf of the proponent, sets out the responses to the issues raised in the submissions, and details the final modifications to the Concept Plan for which approval is now sought. The final proposed modifications include changes to address matters raised in the submissions.

The key issues raised in the submissions relate to:

- built form;
- overshadowing;
- wind;
- public domain; and
- public consultation.

This report provides a detailed response to these issues and outlines the proposed amendments to the exhibited Environmental Assessment Report. Where individual issues are not discussed in this report, a detailed response can be found in the table at **Appendix A**.

1.1 Amendments to Proposed Modification Application

A range of updated plans and documentation has been prepared to reflect the changes that have been made to the proposed modification application following public exhibition of the proposal and to address issues raised in the submissions.

The following consultants' reports and supporting information has been updated or further supplement the material originally submitted in support of the EAR:

- Detailed Response to Submissions, prepared by Ethos Urban;
- Updated Design Report, prepared by BVN;
- Updated Heritage Design and Impact Statement, prepared by Paul Davies Pty Ltd;
- Updated Conservation Management Plan, prepared by Paul Davies Pty Ltd;
- Revised Visual Impact Assessment, prepared by Architectus;
- Traffic and Transport Statement, prepared by TTPP;
- Communication and Engagement Report, prepared by KJA;
- Revised Sustainability Brief, prepared by UTS;
- Wind Tunnel Assessment Report, prepared by Arup; and
- Revised Design Excellence Strategy, prepared by Ethos Urban.

The revised supporting documentation enables the DPE to undertake an informed assessment of the amended proposal.

This report should be read in conjunction with the EAR prepared by Ethos Urban, dated 1 November 2018, as relevant.

2.0 Key Issues and Proponent's Response

This section of the report provides a detailed response to the key issues raised by the DPE and City of Sydney Council, relating to:

- built form;
- overshadowing;
- wind;
- public domain; and
- public consultation.

A response to each of the individual issues raised by the DPE and other authorities is provided in the table at **Appendix A**.

2.1 Built Form

2.1.1 Issue

Two primary issues have emerged regarding built form:

- Harris Street Setback; and
- the Apothecary cantilever.

Harris Street Setback

Following on from the submission by the City of Sydney, the DPE provided an analysis of the built form of Harris Street stating that there is a consistent street wall height of approximately 30m with any buildings taller than this height being setback from the elevation.

DPE requested the preparation of options exploring alternative setbacks along Harris Street above the parapet of the Bon Marche building. Each option is to be accompanied by appropriate visual analysis to determine the extent of the impact when viewed from the surrounding public domain.

Apothecary Cantilever

The City of Sydney and DPE have both raised concerns over the proposed cantilever over the existing two storey Apothecary building. The existing courtyard is proposed to be enclosed on all sides and the provision of a cantilevered building element further reduces the amenity of this space.

The DPE requests the proposed cantilever over the Apothecary building be removed.

2.1.2 Proponent's Response

Harris Street Setback

Due to concerns raised by the City of Sydney and DPE in relation to the heritage significance of the Bon Marche building, pedestrian circulation around the site and the amenity of Harris Street, it is proposed to increase setbacks to Harris Street including:

- 3.5m at ground level (refer to further discussion in **Section 2.4**); and
- 3m above podium.

Refer to **Figure 1** below.

Informing the 3m above podium setback to Harris Street was a study undertaken by BVN of different setback options, 0m, 3m and 6m (refer to **Appendix K**) along with Council's recommendation for a minimum 3m setback.

A zone of exploration is also proposed within the 3m above podium setback area to provide an opportunity/flexibility during the future competitive design process for designers to investigate whether any built form may be appropriate within this zone, subject to achieving acceptable urban design and public domain outcomes.

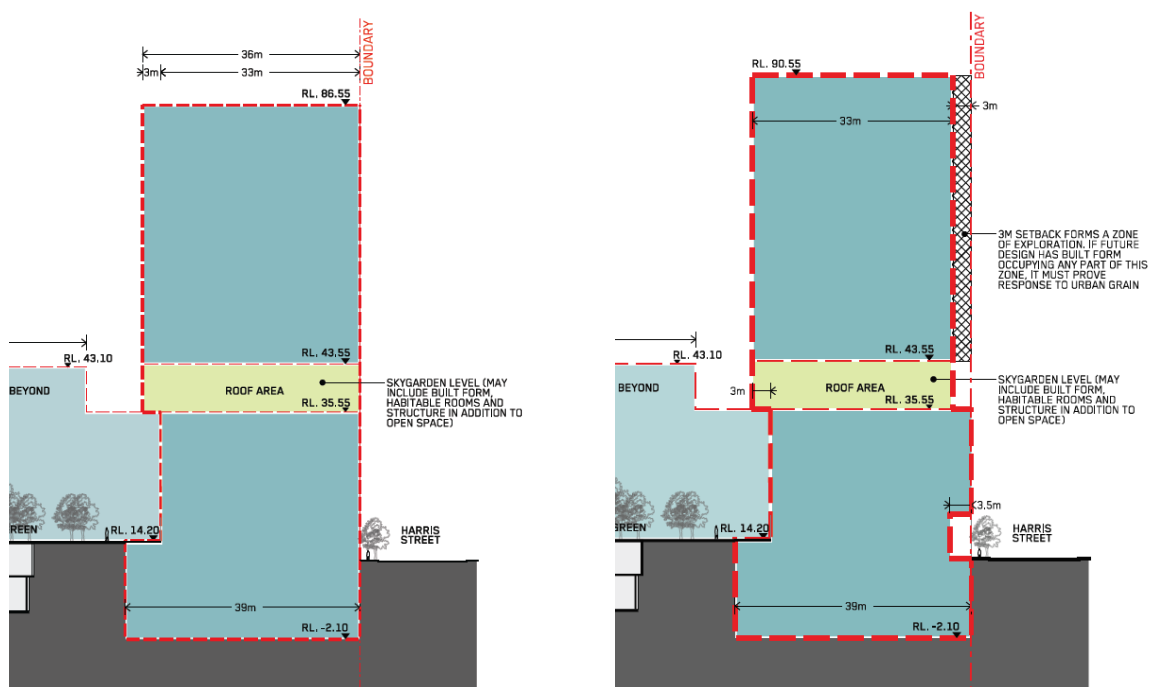


Figure 1 East-West Section as exhibited (left) and proposed (right), showing additional setback to Harris St and amended building height

Source: BVN

Apothecary Cantilever

Due to concerns raised by the City of Sydney and DPE regarding overshadowing and heritage issues, the proposed cantilever over the Apothecary building has been removed. Refer to **Figure 2** below and revised envelope drawings included at **Appendix B**.

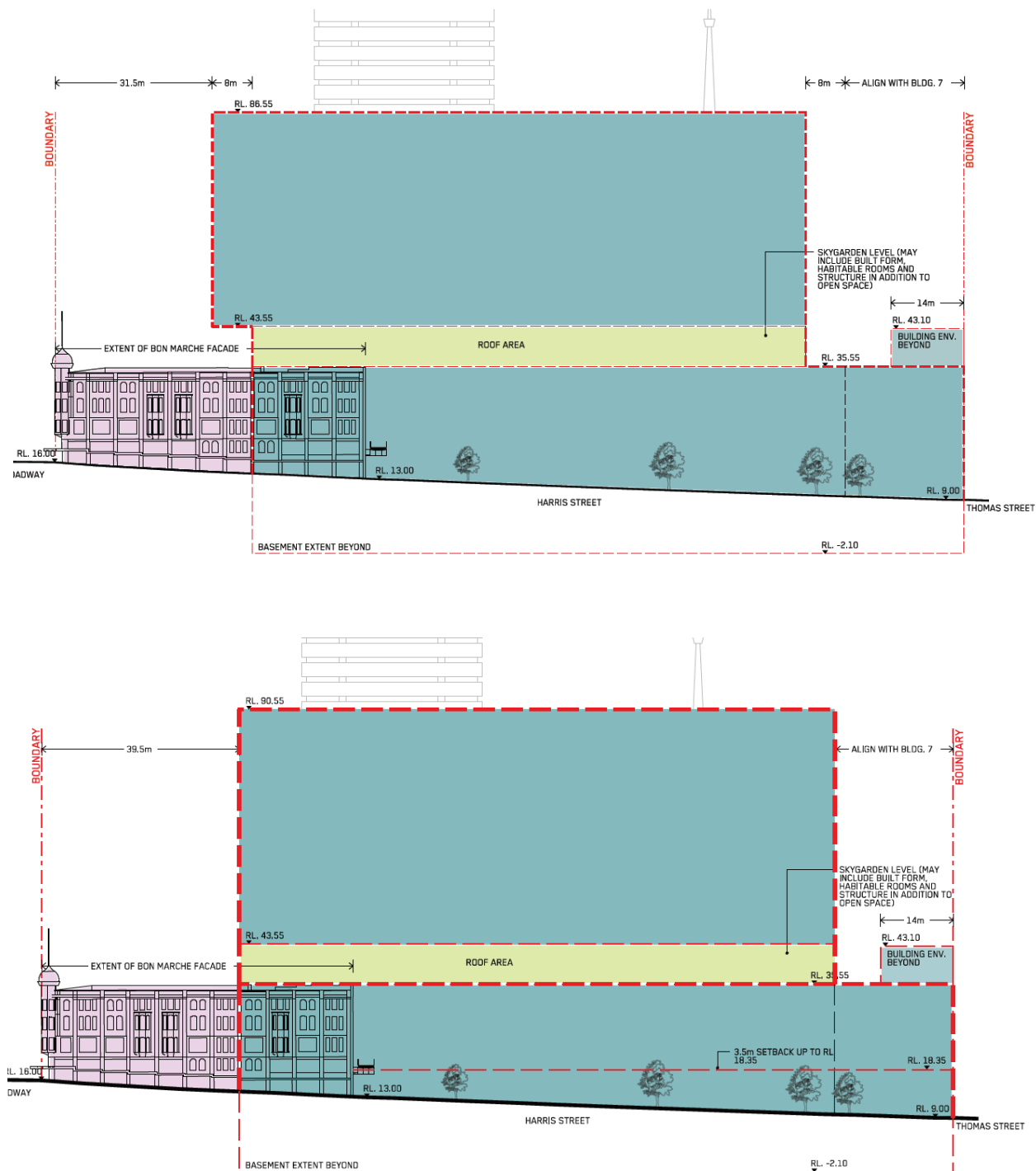


Figure 2 North South Section as exhibited (top) and proposed (bottom), showing cantilever to be removed
Source: BVN

2.2 Overshadowing

2.2.1 Issue

The DPE has noted the City of Sydney's comments regarding the potential overshadowing impacts on 16-18 Broadway. Given the extent of the proposed building envelope, the DPE is unlikely to support such a significant impact on the amenity of adjoining residential dwellings. The DPE requests further solar access analysis or building envelope amendments to ensure adequate levels of solar access is achieved for adjoining residential development.

2.2.2 Proponent's Response

Adjustments to the envelope have been made. A revised solar analysis of the amended envelope including with analysis of the impact on neighbouring multi-residential buildings is included within the Design Report at **Appendix B**.

The degree of change between what was existing and the impacts of the proposed amended building envelope are shown in Error! Reference source not found. below, with yellow representing complying surfaces (≥ 2 hours solar access) and red representing non-complying surfaces (≤ 2 hours solar access). The amended envelope results in an improved outcome for 16 – 18 Broadway, with additional shadows primarily falling onto the ground floor (retail).

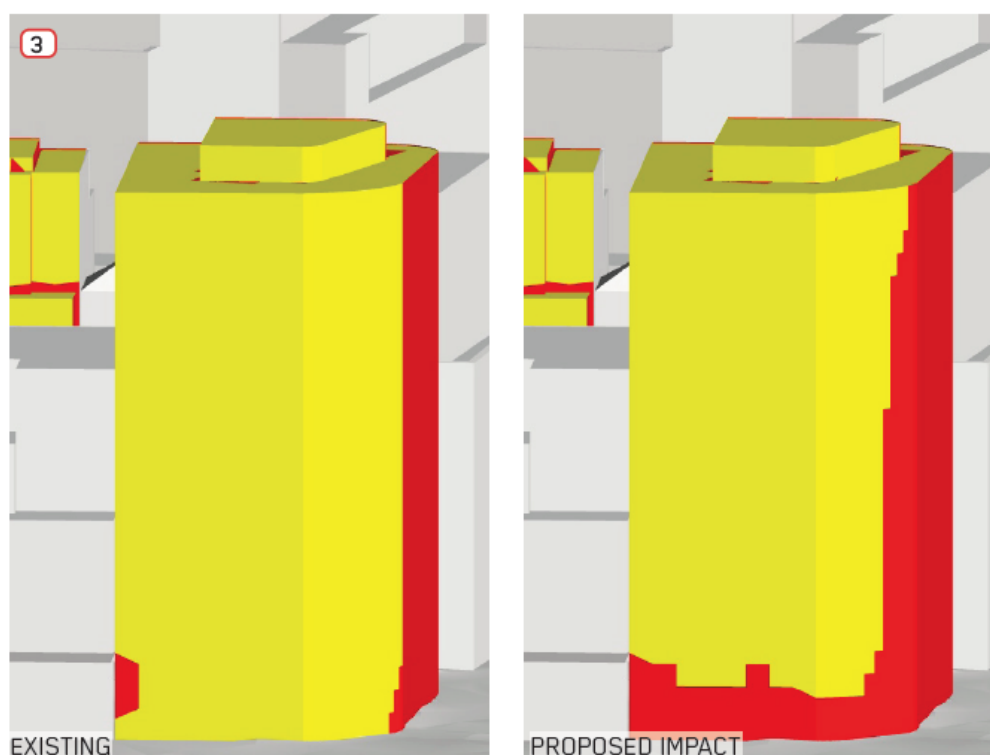


Figure 3 Existing and proposed solar access impact on 16-18 Broadway

Source: BVN

Furthermore, in relation to 16 – 18 Broadway, Development Consent ([D/2018/1184](#)) has been granted by City of Sydney on 11 April 2019 for alterations and additions to an existing shop top housing development and change of use of the residential component to hotel or motel accommodation.

The proposal to remove the residential use will alter the solar access requirements for 16-18 Broadway. Hotel or motel accommodation is not subject to SEPP 65 or the provisions of the Apartment Design Guide, including the 2 hours solar access control.

2.3 Wind

2.3.1 Issue

The DPE requires further consideration and details to be able to assess wind impacts of the proposed envelopes, including wind tunnel testing and using more localised wind data.

2.3.2 Proponent's Response

An Environmental Wind Assessment has been prepared by Arup and is available at **Appendix I**. This report provides the results from wind tunnel testing and discussion on the impact of the proposed envelope on pedestrian wind comfort and safety in and around the proposed development. The wind tunnel testing has shown that the majority of locations around the site would be expected to be classified as suitable for pedestrian and walking type activities. With the inclusion of the development, certain areas become windier, and other calmer depending on the wind direction. These conditions would be considered suitable for the intended use of the space. All locations on the ground plane around the proposed development for all designs pass the safety criterion.

Refer to further analysis on the wind impacts of the proposed amended building envelope in **Section 4.3**.

2.4 Public Domain

2.4.1 Issue

The DPE requested further justification be provided or that the proposed Harris Street concept works be refined, having regard to Transport for NSW, Roads and Maritime and City of Sydney Council's comments. This should include alternative options to improve pedestrian movement and amenity if changes to traffic conditions on Harris Street are not supported.

2.4.2 Proponent's Response

The removal of a traffic lane on Harris Street is UTS' preferred response to issues regarding pedestrian movement and amenity on Harris Street. Notwithstanding, this would require support from RMS as a key stakeholder.

In their submission, RMS have noted that *'any capacity reduction along Harris Street would have an impact on the operation of the wider road network within and surrounding the CBD and is not supported'*.

It is proposed therefore that the reduction in the number of traffic lanes on Harris Street, proposed mid-block crossing and increase in the width of the existing pedestrian crossing will no longer be pursued at this time. It is also noted that the modification application is independent of these identified initiatives and that UTS's intention was to bring all the key authorities together and contribute to the long-term amenity of the Precinct.

In order to improve pedestrian movement and amenity in lieu of the lack of support for the exhibited Harris Street concept works, an expanded 3.5m setback at ground level is proposed along the length of the UTS Building 4 frontage on Harris Street, as illustrated in **Figure 4**. This wider setback is anticipated to substantially improve the pedestrian capacity and circulation throughout the precinct.



Figure 4 Proposed ground level setback to Harris Street to enhance pedestrian amenity

Source: BVN

2.5 Public Consultation

2.5.1 Issue

The DPE has requested details of the outcome of the public consultation referenced in the Communication and Consultation Report prepared by KJA, dated 31 August 2018.

2.5.2 Proponent's Response

A Communication and Engagement Report has been prepared by KJA and is provided at **Appendix G**.

The community engagement process included:

- community notification including distribution of a community notification/letter to 4,500 neighbouring business and residents via letter box drop;
- communication with neighbouring stakeholders including Frasers Property (Central Park), TAFE NSW and the ABC;
- two community information sessions held in November 2018 featuring project display boards and project staff;
- an existing email address was used to provide a central contact points for enquiries; and
- information about the proposed modification was provided on the existing UTS Masterplan website.

Feedback from the community and adjacent stakeholders has been limited. There were no calls or emails received in response to the notification distributed via letterbox drop and only three people attended the two community drop-in sessions. Based on the limited feedback, no changes to the proposal have been made as a result of the community engagement process.

3.0 Proposed Amended Modification

Since public exhibition of the proposal, amendments have been made to the proposed modification application. The amendments are in response to the issues and comments raised by the DPE and Council.

The following section presents a brief updated description of the amended modification application for which approval is sought.

3.1 Overview of Proposed Modifications

The amended Section 75W application seeks the following modifications to the approved Concept Plan:

- Conceptual demolition of existing Building 4, and rear section of Building 3,
- Conceptual modification to heritage items, Building 3, Building 9, and Building 18;
- Creation of a new building envelope for Building 4 and Building 3 (part), resulting in a maximum height of RL 90.55, an increase of approximately 49m above existing Building 4 and approximately 54m above existing Building 3;
- Corresponding increase in GFA for Building 4 and Building 3, comprising an additional increase of up to 36,500m² (with a limit of 26,500m² additional GFA above ground);
- Consequential amendments to the Urban Design Quality Controls/Principles to guide the future development of the Bon Marche and Science Precinct; and
- Indicative landscape and public domain concept for the precinct.



Figure 5 Proposed amended envelope looking north-west

Source: BVN

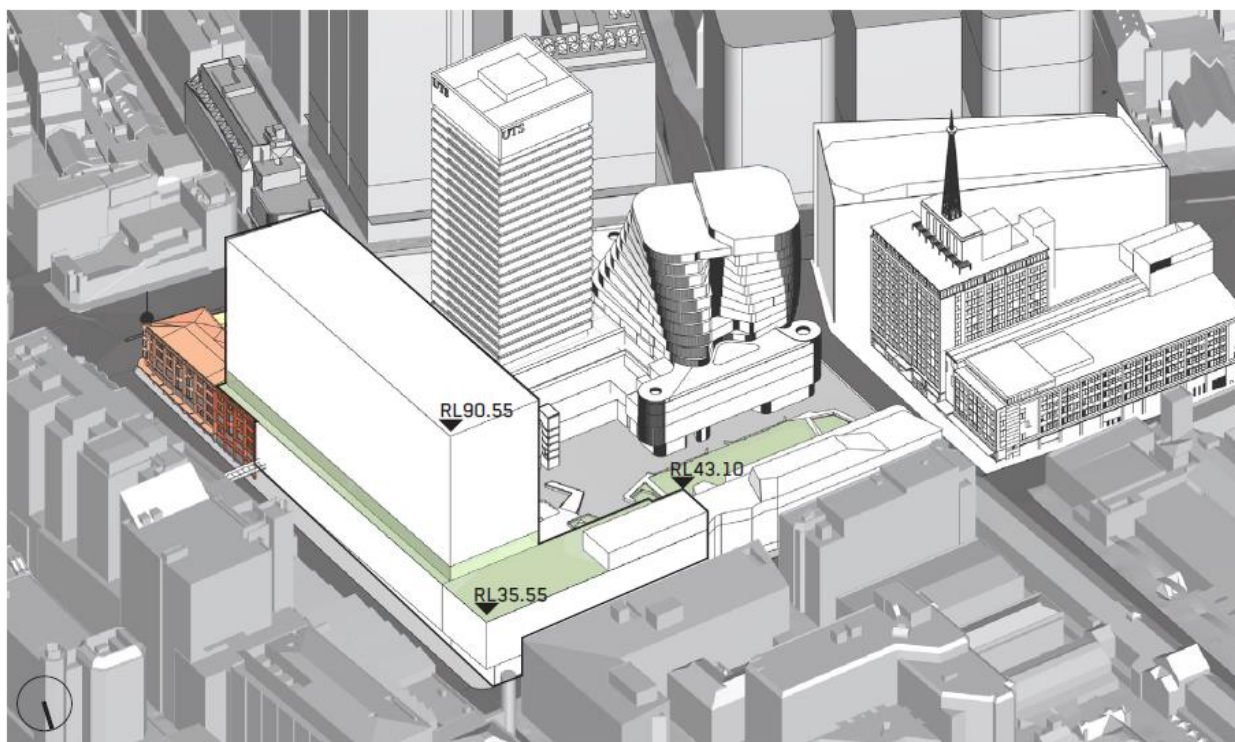


Figure 6 Proposed amended envelope looking south-west

Source: BVN

3.2 Key Changes to the Proposal as Exhibited

As discussed in **Section 2**, the Response to Submissions process has resulted in the proposal that was exhibited being amended to that now proposed in the following ways:

- increased setbacks are proposed to Harris Street including:
 - 3.5m at ground level; and
 - 3m above podium.
- removal of Apothecary building cantilever and consequential adjustment of envelope north towards Thomas Street;
- increase (of 4m) to maximum building height (RL 90.55).

Overall there has been a re-balancing of the envelope to meet the competing requirements of UTS, the Council and Department of Planning, with a GFA neutral outcome able to be achieved as a result of the amendments to the envelope.

Amendments to the indicative building design and indicative landscape/public domain improvements have also been made in order to reflect the revised envelope and address comments raised during the exhibition period, included at **Appendix B** and **Appendix L** respectively.

3.3 Proposed Modifications to the Approval

The above modifications necessitate amendments to the Concept Plan Approval. Words proposed to be deleted are shown in ~~**bold italics strike through**~~ and words proposed to be inserted are shown in **bold italics**.

SCHEDULE 2 PART A – ADMINISTRATIVE TERMS OF APPROVAL

A1 DEVELOPMENT DESCRIPTION

Except as modified by this approval, Concept Plan approval is granted only to the carrying out of development solely within the Concept Plan area as described in the document titled “Environmental Assessment Report UTS City Campus Broadway Precinct Concept Plan” dated May 2009, as amended by the “Preferred Project Report UTS City Campus, Broadway Precinct Concept Plan” dated October 2009, as modified by “Section 75W to Concept Plan (MP08_0116) UTS City Campus, Broadway Precinct GFA and Building Envelope Amendments” dated July 2015, and as amended by the “the Response to Submissions Section 75W to Concept Plan (MP08_0116)” dated November 2015, prepared by JBA Urban Planning Consultants, and as **amended by “Section 75W to Concept Plan (MP08_0116) UTS City Campus, Broadway Precinct GFA and Building Envelope Amendments” dated November 2018, prepared by Ethos Urban and as amended by the “Response to Submissions” prepared by Ethos Urban dated April 2019** including:

- (a) New Broadway Building and Thomas Street Building, with a combined GFA of 44,650 sqm;
- (b) Expansion of Building 1 podium (4,050 sqm) and new Building 2 (60,357 sqm), with a combined GFA of 64,407 sqm;
- (c) Expansion of Building 6 for the provision of student housing, with an additional 25,250 sqm GFA;
- (d) **Expansion of Building 4 and Building 3 (part), with an additional 36,500 sqm GFA (with a limit of 26,500 sqm located above ground);**
- (e) Modifications to Buildings 3, ~~4 and 9~~, 10 and 18;
- (f) Modifications to Alumni Green, with a new Multi-Purpose Sports Hall and book vault beneath;
- (g) Public domain improvements to Broadway and Thomas, Harris, Wattle and Jones Streets.

Reason: This condition is proposed to be updated to reflect the additional GFA and amendment to the Building 4 and Building 3 (part) envelope sought under this modification. A limit on the amount of GFA to be located above ground has been provided in order to address concerns raised by the DRP around ensuring flexibility within the envelope to accommodate sculpting and articulation. Further modifications are proposed to Buildings 3, 9 and 18. Reference to this Response to Submissions Report is also being provided for.

A2. DEVELOPMENT IN ACCORDANCE WITH PLANS AND DOCUMENTATION

- (a) The development shall generally be in accordance with the following plans and documentation (including any appendices therein):

“Environmental Assessment Report UTS City Campus, Broadway Precinct Concept Plan” dated May 2009, and as amended by the Preferred Project Report UTS City Campus Concept Plan” dated October 2009 and as modified by “Section 75W to Concept Plan (MP08_0116) UTS City Campus, Broadway Precinct GFA and Building Envelope Amendments” dated July 2015, and as amended by the “the Response to Submissions Section 75W to Concept Plan (MP08_0116)” dated November 2015, prepared by JBA Urban Planning Consultants, and as **amended by “Section 75W to Concept Plan (MP08_0116) UTS City Campus, Broadway Precinct GFA and Building Envelope Amendments” dated November 2018, prepared by Ethos Urban and as amended by the “Response to Submissions” prepared by Ethos Urban dated April 2019.**

Reason: This condition is proposed to be updated to reflect the additional GFA and amendment to the Building 4 and Building 3 (part) envelope sought under this modification. Further modifications are proposed to Buildings 3, 9 and 18. Reference to this Response to Submissions Report is also being provided for.

3.4 Proposed modifications to the Statement of Commitments

Modifications are required to the approved Statement of Commitments. These have been revised addressing comments raised by Council along with updates to ensure the commitments are current and accurate. Words proposed to be deleted are shown in ~~bold italics strike-through~~ and words to be inserted are shown in **bold italics**.

Design Excellence

The proponent will adopt the design excellence ~~process strategy~~ at ~~Section 3.9 Appendix J~~ of the ~~EAR Response to Submissions for the Section 75W Modification Application (Mod 6)~~ and incorporate the design quality controls at Section ~~3.10~~ **3.6** of the ~~EAR Response to Submissions for the Section 75W Modification Application (Mod 6)~~ and ~~Section 3.1.3 of the PPR~~ for new development on the site.

The appointed architects for the Building 1 Podium Extension and Building 2 are Lacoste + Stevenson and fjmt. The design of Building 2 is to incorporate the design quality controls at Section 3.5 of the Response to Submissions for the Section 75W Modification Application (Mod 5).

The design for the proposed Building 4 (in addition to the part of Building 3 included in the new envelope) is to be the result of a competitive design process/es in accordance with Appendix J of the Response to Submissions for the Section 75W Modification Application (Mod 6). The design of the new building is to address the seven design principles outlined in the BVN Architecture Design Report dated April 2019 and incorporate the design quality controls at Section 3.6 of the Environmental Assessment Report for the Section 75W Modification Application (Mod 6).

Heritage

To minimise impacts on the heritage significance of buildings on and around the site, the proponent will implement the following measures:

- Prepare an interpretation plan that communicates the heritage significance of relevant components of the site.
- Undertake photographic archival recording prior to the commencement of demolition works.
- Limit the built form of the proposed Broadway Building to maintain distant views of the Building 10 radio tower from the south and west.
- Ensure that demolition of Building 11 (the Bradshaw Building) is contingent on the architectural design of the Broadway Building achieving design excellence.
- Undertake archaeological investigations conducted in accordance with an Archaeological Research Design prior to, or in conjunction with, ground disturbance of areas with historical archaeological potential.
- ***Ensure that development of Building 4 (in addition to part of the Building 3 site that is included in the new envelope) addresses the recommendations of the Heritage Design + Impact Statement (April 2019) and Conservation Management Plan (April 2019) prepared for Building 3 (the 'Bon Marche' Building) and Building 18 ('Three Terraces and Former Apothecary').***

Traffic, Transport and Access

To facilitate cycling and the use of public transport, the proponent will undertake the following:

- Prepare a Transport Access Guide to promote the use of public transport to staff and students;
- Investigate opportunities for the consolidation of bus shelters along Broadway in consultation with the State Transit Authority and the City of Sydney; and
- ~~Provide facilities for cyclists.~~ ***Provide attractive bicycle parking and end of trip facilities for students and staff that are secure and visible in accessible locations.***

To manage any impacts on traffic and pedestrian movements during construction, the proponent will require the preparation of Construction Traffic Management Plans for every development on the site.

UTS will consult with Sydney Metro during detailed design of the Broadway Building in relation to any potential impacts on the West Metro tunnel alignment.

UTS will consult with City of Sydney Council in relation to provision of a pickup/set down zone along Thomas Street.

Visual Impacts

To minimise visual impacts, the proponent will implement the following:

- Use architectural treatment of facades to break down the perceived scale and massing of new buildings; and
- Retain street trees or provide additional mature plantings to improve the streetscape.

The proponent will undertake a reflectivity assessment of the architectural feature proposed for the Broadway Building during detailed design.

Solar Access

The proponent will undertake a detailed shadow impact study of **Building 4 and Building 3 (part) the Broadway Building** during detailed design.

Wind

The proponent will incorporate the following measures into the detailed design of buildings to mitigate any adverse effects on wind conditions:

- Undertake detailed wind impact assessments for each new building during the detailed design stage;
- Articulate the facades of Buildings 1 and 2 and the Broadway Building to ameliorate the impacts of westerly winds at ground level on Broadway;
- Plant mature trees and shrubs, and provide colonnades or awnings along the boundaries of Alumni Green; and
- Locate pedestrian entrances to new buildings along internal pedestrian links to intercept strong wind flows.

Landscape Design

UTS will undertake the following in relation to landscaping on the site:

- The removal of any significant trees will be subject to an arborist's report.
- Sustainable design principles will be incorporated into the landscape design, including selection of plants with low irrigation requirements and minimising the use of potable water.

Contamination

To identify any adverse impacts associated with potentially contaminating activities on the site, the proponent will undertake the following:

- A Stage 2 Environmental Assessment that includes soil and groundwater sampling;
- Waste classification for offsite disposal of soil and bedrock; and
- A Hazardous Building Material Survey for buildings that are to be refurbished and demolished.

Management and mitigation, if required, will be a function of the outputs of these investigations.

Ecologically Sustainable Development

UTS will adopt the following sustainability targets for the site:

- ~~6 star Green Star Education target for the new Thomas Street Building;~~
- **A minimum 5 star Green Star Design + As-Built rating is targeted for new buildings;**
- **A minimum 4 star Green Star Design + As-Built equivalent rating is targeted for major refurbished buildings;**

- ~~5 star Green Star Education target for the new Broadway Building, extended Building 1 podium and new Building 2;~~
- ~~4 star Green Star for major refurbished buildings;~~
- ~~A 0.02% annual improvement Reduction in-overall water campus water consumption intensity (kL/m2 GFA) by up to 20 percent by 2010 (based on 2002 levels);~~
- ~~A target of 30% reduction in greenhouse gas emissions based on 2007 levels by 2020-21; and~~
- Meet or exceed the requirements of Section J of the Building Code of Australia for energy efficiency in building fabric and environmental systems.

To meet these targets, UTS will:

- ~~Ensure that the building is designed and constructed according to climate responsive design principles;~~
- ~~Ensure that energy and water efficient fixtures and equipment are installed in the proposed Building 4 and Building 3 (part);~~
- ~~Ensure the new Building 6 Tower for student accommodation meets the energy and potable water targets for residential flat buildings;~~
- ~~Work with the proponents of the nearby Frasers Broadway development to investigate opportunities to incorporate complementary sustainability projects on both sites;~~
- Adopt water sensitive urban design principles, such as stormwater reuse and rainwater capture across the campus; and
- Adopt practices to minimise construction waste including recycling a minimum of and operational waste including reuse 80% of demolition and construction waste and investigate strategies.
- ~~Adopt practices to improve operational waste recycling rates, including extending the organic waste system to the proposed Building 4 and Building 3 (part) and undertaking an educational campaign.~~

In addition, UTS will investigate the following ESD initiatives as part of the Concept Plan:

- ~~The addition of solar panels to the roof of the new building, as well as battery storage;~~
- ~~The supply of chilled water (for air-conditioning) and recycled water (for toilet flushing and landscape irrigation) to the new building from the Central Park Central Plant and Water Factory respectively;~~
- ~~Integrating a 1.2-1.5 megawatt trigeneration plant into the UTS City Campus utilities system The signing of direct Power Purchase agreements with NSW solar farms to supply around 50% of UTS electricity needs from renewable energy;~~
- ~~Installing a bio-digester plant in Building 2 to reduce operational waste Installing two organic waste composters in Building 10 and Building 8 which process all the organic waste from staff areas and café tenancies across campus;~~
- ~~Supply of Building 2 with chilled water from Central Park's Central Thermal Plant; and~~
- ~~Installing blackwater recycling system with sewer mining capacity (to enable black water to be used for chiller and toilet flushing purposes)~~
- ~~Supply of Building 2's toilet, bathroom and irrigation needs with recycled water from Central Park's Water factory; and~~
- ~~Supply Building 1 and Building 10's cooling towers with recycled water.~~

~~Ultimo Pedestrian Network The Goods Line South~~

UTS will undertake the following in relation to upgrading the area of the ~~Ultimo Pedestrian Network the Goods Line South~~ to the east of Building 6:

- In consultation with the ~~Sydney Harbour Foreshore Authority Property NSW~~, the Sydney Institute of TAFE, RailCorp, the Council of the City of Sydney and a representative of ~~DOP-DP&E~~, investigate options to activate the area and improve its aesthetic appeal, to be completed by the end of ~~2010~~ 2020.

- ◆ ~~Develop a strategy to implement the preferred option by the end of 2011 for approval by DOP.~~
- ◆ ~~Implement any agreed works in 2012.~~

3.5 Proposed Modifications to Urban Design Principles

Modifications are required to the approved Statement of Commitments. Words proposed to be deleted are shown in ~~**bold italics strike through**~~ and words to be inserted are shown in **bold italics**.

High quality design

Achieve design excellence. UTS is committed to achieving design excellence on the campus through a design competition process or direct appointment of a renowned architect with a record of achieving design excellence.

Multiple development opportunities

Transform multiple, disparate development sites into new education facilities that meet UTS's long-term needs. Development should be staged as the University's needs for additional student accommodation and educational, cultural and recreation services are refined over time.

Improved permeability

Capitalise on the site's urban character and maintain the informal transition between the campus and the remainder of the city by creating multiple entrances to the site, rather than a single front door. Each new building should be oriented to facilitate active uses on internal and external streets and provide new, or improved existing connections through and beyond the site.

The centre of the campus

Establish the centre of the campus as its academic, social and ceremonial heart. It encompasses the learning commons, which accommodates an expanded library, Great Hall, student services and social facilities. Services for staff and students are to be integrated with the centre of the campus to provide linkages and reinforce UTS's core.

New identity and entrances

Transform the Broadway frontage of the site into a new "front door" to the campus. The creation of this new identity will be achieved through a new building constructed along Broadway between Jones Street and Wattle Streets together with the extension and integration of Building 1 and Building 2 podiums and additional floors above the Building 2 podium – completing a relationship on form with One Central Park. The extension of Buildings 1 and 2 will create a new multi storey entrance to the campus. Active uses at and below ground level will invite the community into the campus. ***The redevelopment of Building 4 (in addition to part of the Building 3 site that is included in the new envelope) is to provide new direct access points to Alumni Green, including opening up the north east corner towards the Haymarket Precinct.***

Integration and connection

Improving the legibility of the campus by locating and emphasising major gateways and creating new internal and external streets. Multiple north-south and east-west pedestrian "streets" will facilitate safe and attractive circulation across the campus and to the remainder of the city. Improved functional relationships will result from relocation of faculties into new and refurbished buildings.

Cultural and recreational hubs

Locate new cultural and recreational hubs across the campus. They include a purpose-designed facilities such as an art gallery, multi-purpose sports hall, cafes and retail outlets.

Improved open spaces

Create new, useable open spaces that will receive solar access throughout the year. Alumni Green will provide a prominent landscaped entrance to the campus from Jones Street, while new entrances through Building 6 will facilitate an accessible path from The Goods Line into the campus. Opportunities for useable open green roof spaces are to be explored.

Sustainability

Achieve a high level of environmental performance for new and existing buildings on the site. All new construction on the campus will target a **minimum 5 star Green Star** rating using the **Education Green Building Council of Australia's Design + As-Built Tool prepared by the Green Building Council of Australia**. Existing buildings that are to be refurbished will target a **minimum 4 star equivalent Green Star rating, rating of 4 stars using the Education Tool**.

Access

Capitalise on the site's excellent connections to public transport and pedestrian links to locality and beyond. New accessible pedestrian connections will be created across the campus to improve permeability, the existing quantum of on-site car parking will be maintained, and deliveries will be rationalised through dedicated entrances off Thomas Street.

3.6 Proposed Modifications to Design Quality Controls

As no future development was envisaged under the Concept Plan approval as modified for Building 4 or Building 3, no Design Quality Controls specific to this building have been drafted. The following controls are therefore proposed in relation to Building 4 and Building 3 (part).

Building 4 and Building 3 (part)

- Limit the height of the podium building to approximately RL 35.55 for the entire proposal.
- Limit the height of the additional floors above the redeveloped podium to RL 90.55.
- Provide permeability of the ground plane to connect Harris Street and Alumni Green.
- Provide prominent and clear pedestrian entries off Broadway, Harris Street and Thomas Street.
- Provide pedestrian protection along the length of the Harris Street frontage.
- Incorporate design solutions to address wind conditions in the locality.
- Minimise overshadowing impacts on the public domain and adjacent residential development.
- Maximise opportunities for view sharing where feasible within the limits of the site's Global Sydney CBD location.
- Explore opportunities to provide visual extensions to Alumni Green through the provision of green spaces on upper level terraces and roof spaces.
- Respect the existing Building 1 tower.
- Respect the heritage significance of the Bon Marche Building, the Terraces and former apothecary.
- Establish an appropriate relationship and setback to the Bon Marche building to support its appreciation and setting from wider viewpoints.

4.0 Additional Information and Assessment

The following section provides further environmental assessment of the changes to built form as exhibited, including removal of the apothecary cantilever, setback changes to Harris Street, and building height.

4.1 Visual and View Analysis

Additional visual analysis has been undertaken in the revised Visual Impact Assessment prepared by Architectus at **Appendix E**. The Assessment found that in comparing the visual impact of this proposal against the proposal as exhibited, the impacts are very similar from the majority of viewpoints. There are no changes to the previous assessment with regard to the proposed increase of the Harris Street setback, with the most significant changes being the following:

- one assessed private view (P6) relating to several levels of apartments in this building has reduced in assessed impact from moderate-high to moderate. This is primarily due to the increased setback from Broadway that allows for greater retention of the existing view corridor of this dwelling along Broadway (associated with the removal of the Apothecary Cantilever – refer to **Figure 7**); and
- due to the additional height of the building, one additional apartment in One Central Park is likely to be highly impacted by the proposal where the proposal sits in front of the existing skyline view (P1 and P2) – refer to **Figure 8**).

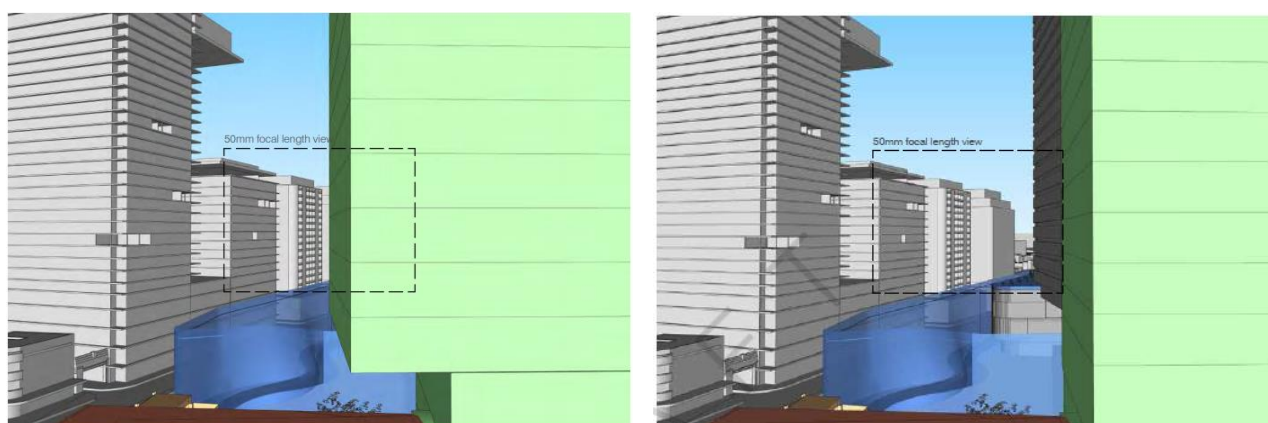


Figure 7 Private view P6 as exhibited (left) and currently proposed (right)

Source: Architectus

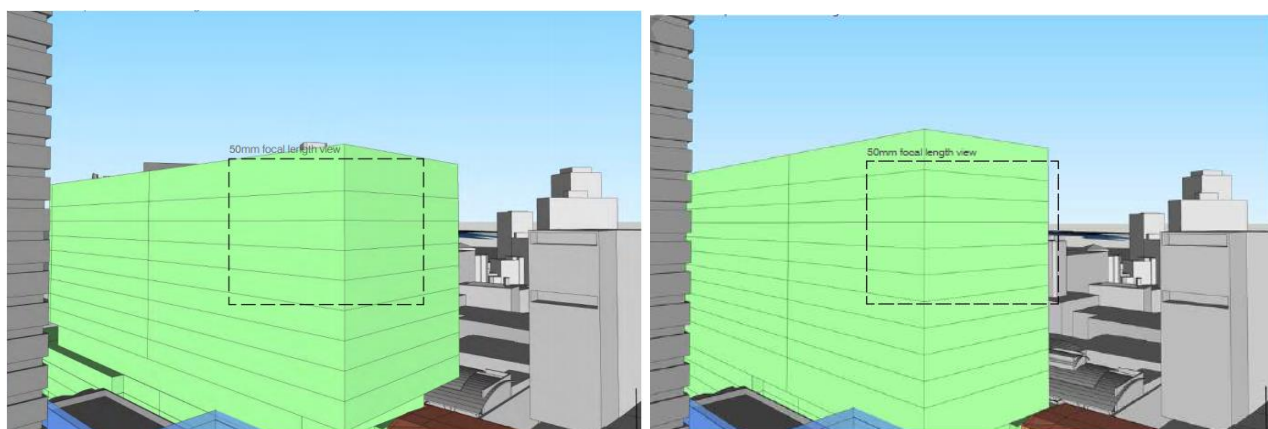


Figure 8 Private View P2 as exhibited (left) and currently proposed (right)

Source: Architectus

The overall assessment of the visual impact and reasonableness of the proposal remains consistent with that of the proposal as exhibited.

4.2 Wind

An updated Environmental Wind Assessment has been prepared by Arup and is available at **Appendix I**. The report includes analysis on wind tunnel testing, which was required to be undertaken as a result of DPE's comments as discussed in **Section 2.3**. The testing was conducted in three configurations: existing (see results at **Figure 9**), proposed control envelope (see results at **Figure 10**) and potential articulated scheme (see results at **Figure 11**).

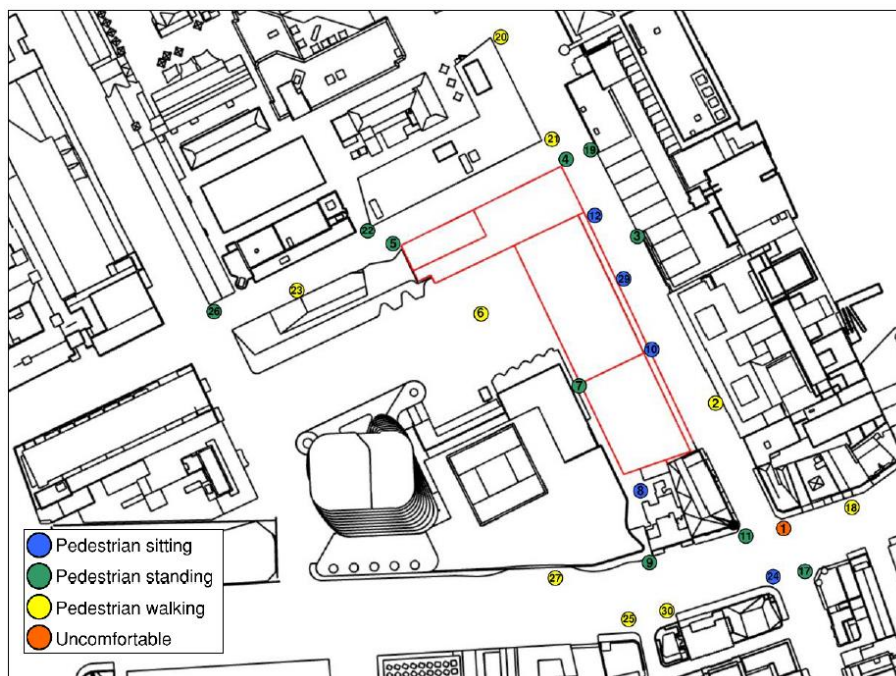


Figure 9 Existing design: Pedestrian wind speed measurement location with comfort ratings

Source: Arup

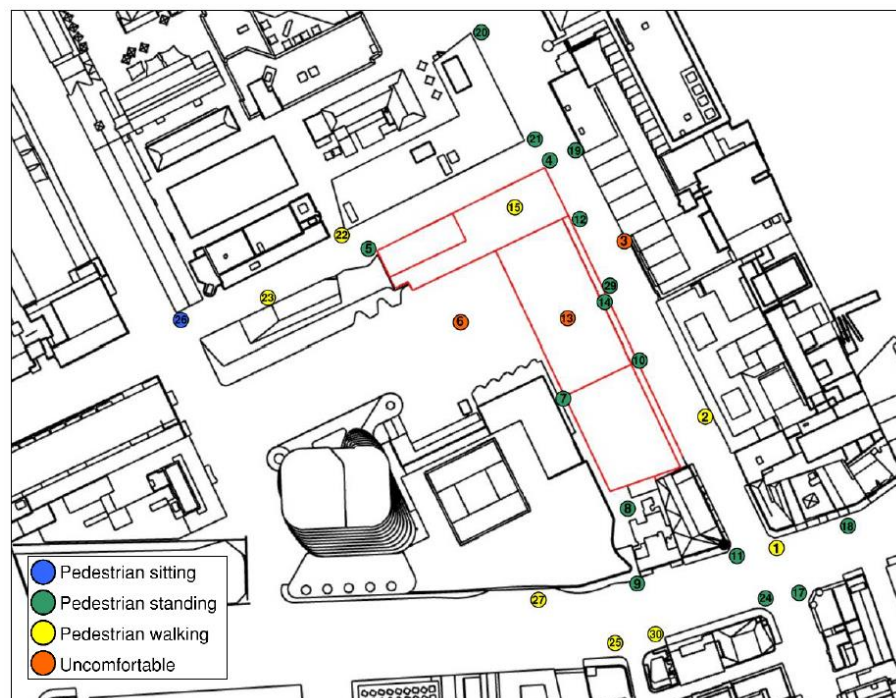


Figure 10 Proposed envelope: Pedestrian wind speed measurement location with comfort ratings

Source: Arup

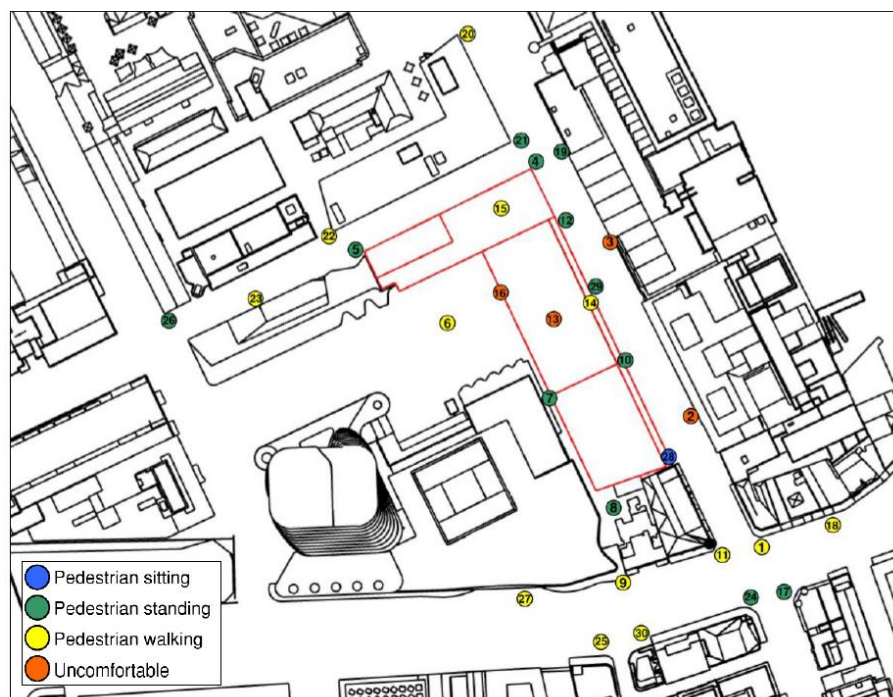


Figure 11 Proposed articulated scheme: Pedestrian wind speed measurement with comfort ratings

The testing showed that for the proposed and articulated designs the wind conditions at most locations are similarly classified. The east side of Harris Street meets the non-active frontage walking criteria for all wind directions except one direction from the west. For the articulated scheme, measured wind speeds at this location are lower than the proposed envelope, suggesting that the porous podium roof assists with mitigating wind conditions at this location. Location 2 in the articulated scheme and Location 6 in the proposed control envelope would have wind conditions at the boundary of walking criteria which would be similar to Location 1 in the existing design.

The measured wind conditions were generally found to be similar to the existing conditions with a few locations on the border of the non-active frontage criterion. The added massing changes the flow pattern around the site, resulting in some locations becoming more windy, and others calmer. It is considered that wind conditions generated by the general massing of the development would produce an environment suitable for the intended use of the space. It is evident that changes to the proposed control massing scheme would slightly affect the local wind climate and testing of the final architectural scheme would be recommended. All locations in and around the proposed development would pass the safety criterion.

4.3 Heritage

An Updated Heritage Design and Impact Statement has been prepared by Paul Davies Pty Ltd and is available at **Appendix C**. It provides an update of the Statement submitted with the proposal as exhibited and includes additional analysis and response to heritage issues raised during exhibition.

The updated Statement provides a more comprehensive analysis of the interior of the Bon Marche building in response to the City of Sydney's comments. The assessment states that while some original structural elements (such as columns) remain, progressive fitouts of the interior from the mid-20th century (1965) onwards have obscured or covered any remnant original structural elements. Any remaining original structural elements to the interior of the original part of the building have been assessed in the Conservation Management Plan as being of moderate significance. The key issues associated with a future detailed development application would be to retain original floor levels and floors where they exist and retaining the remaining timber structure (in the original part of the building). Recovery of the main floor level could be achieved as part of a future detailed development application in a way that could reactivate the ground floor area (which has been fragmented and disjointed with the changes to floors and structure that have taken place).

A revised approach to access into Bon Marche is also proposed, responding to comments made by Council and the Design Review Panel where the creation of large major entries was not supported. A finer grain approach to access into the building and connection beyond to the courtyard is now proposed.

The Conservation Management Plan, included at **Appendix D**, has also been updated to reflect the refined design approach to the heritage buildings and reflect the further investigations undertaken into the heritage significance of the buildings.

4.4 Design Excellence

An updated Design Excellence Strategy has been prepared and is included at **Appendix J**. Changes made respond to comments provided by Council to ensure greater consistency with its Policy.

4.5 Landscape and Public Domain

An updated Landscape Design Report has been prepared by Arcadia and is included at **Appendix L**. Changes made respond to the revised building envelope and its consequential changes to the Sky Garden concept design. The key principles and vision remain in terms of providing high quality open space to meet the needs of students, staff and the broader community.

4.6 Massing Form and Suitability

As noted changes have been made to the proposal in order to address comments made during the public exhibition period by agencies. The changes have led to a refined building envelope and overall are considered to deliver an improved built form and urban design outcome. The proposed amended envelope continues to ensure:

- Solar access impacts to surround residential buildings are minimised;
- The form and setting of the heritage listed Bon Marche, Apothecary building and terraces is preserved;
- Sun light amenity to Alumni Green during the key lunchtime period in mid-winter is maintained;
- Large floor plates suitable for research and teaching can be accommodated;
- The height and form is appropriate to the context and setting of the site on the edge of the CBD and proximity to a number of buildings tall buildings; and
- Flexibility for creativity, articulation and manipulation of a future building design.

5.0 Conclusion

The proponent and project team have considered all submissions made in relation to the public exhibition of the proposal. A considered and detailed response to all submissions has been provided within this report and accompanying documentation.

In responding to and addressing the range of matters raised, the proposed modifications to the Concept Plan have been refined to provide greater certainty and responsiveness to providing the best outcome for the site.

The refined modifications do not substantially differ from those originally publicly exhibited. In addition, and to the benefit of the overall project, the environmental impacts of the amended modifications remain consistent (or are an improvement) with those already assessed.

The proposal has significant planning merits as it will:

- facilitate the addition of a new iconic (exemplar design excellence) building for the UTS City Campus Broadway Precinct and Sydney CBD more broadly, helping to reinforce its global status;
- assist in meeting the increased demand for tertiary education;
- support the creation of additional jobs;
- support a more skilled workforce;
- strengthen a key industry of Sydney and NSW;
- provide opportunities to increase the extent of open space to the top of the podium level as a sky garden;
- contribute to the creation of the Harbour CBD's Innovation Corridor and the Camperdown-Ultimo Health and Education Precinct as envisaged under the District Plan; and
- strengthen the western gateway to the Sydney CBD.

Due to the significant merit of the proposed modifications and the lack of any adverse environmental, social and economic impacts, the modifications are appropriate and supportable.