



Planning &  
Infrastructure

**MAJOR PROJECT ASSESSMENT**  
**University of Technology Sydney**  
**Faculty of Science Building**  
**Major Project Application**  
**MP 09\_0213**



Director-General's  
Environmental Assessment Report  
Section 75I of the *Environmental Planning  
and Assessment Act, 1979*

June 2012

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## EXECUTIVE SUMMARY

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On 23 December 2009, the former Minister approved a Part 3A Concept Plan for the University of Technology Sydney (UTS) City Campus. The approved Concept Plan included a new building on the corner of Jones and Thomas Street for the Faculty of Science, which was to be assessed under a separate Part 3A application.

A Project Application has been lodged for the construction of the new Faculty of Science building consisting of:

- 6 storey building with a maximum height of 29.10 metres (RL 43.10) and a gross floor area of 11,295m<sup>2</sup>;
- 3 basement levels used for teaching and research purposes; and
- landscaping and associated works.

The estimated capital investment value is \$92 million. The proposal is estimated to create 350 construction jobs. Approvals have already been granted for the bulk earthworks for the building and to widen the basement car park ramp which will pass underneath the building.

The proposal publicly exhibited from 15 February 2012 until 19 March 2012.

One public submission was received and commented that level pedestrian access should be provided through the campus to connect the Ultimo Pedestrian Network with Jones Street, the Frasers Development and Sydney University. Pedestrian access through the campus is currently available between the UPN and Jones Street via Building 6 and the pedestrian overbridge on Harris Street. The Concept Plan identifies a number of improvements that can be made to improve circulation within the campus.

City of Sydney generally supports the proposal and states that the building will provide an iconic feature and contribute to other key developments in the area, such as the Broadway Building and Frasers Central Park Development.

City of Sydney recommended conditions of approval to address matters such as construction management, archaeological investigations, landscaping, public domain improvements associated with the closure of Jones Street and Section 94 contributions.

The University has advised that the Jones Street road closure and public domain upgrades will be undertaken in 2018 once other construction projects have been completed. This will allow use of Jones Street for construction access.

The Department does not consider that Section 94 contributions are required because the University already provides many of the services and facilities that would be funded by Section 94 contributions such as open space, childcare facilities, gymnasiums and libraries.

Roads and Maritime Services, Transport for NSW and Sydney Water did not raise any objections to the proposal and provided conditions of approval.

The Department has assessed the merits of the proposal and is satisfied that the impacts of the proposed development have been addressed via the Environmental Assessment, the Statement of Commitments and the Department's recommended conditions of approval. On these grounds, the Department is satisfied that the site is suitable for the development, subject to recommended conditions of approval. All statutory requirements have been met.

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# 1 BACKGROUND

## 1.1 SITE LOCATION

The UTS City Campus is located at the southern edge of the Sydney CBD at Ultimo. The proposed site for the Faculty of Science building is on the corner of Thomas and Jones Street.

The site comprises part Lot 2003 and part Lot 2004 in DP 1053548 and is 2,120m<sup>2</sup> in area. The site is vacant except for a driveway access to the basement car park located beneath Building 2.

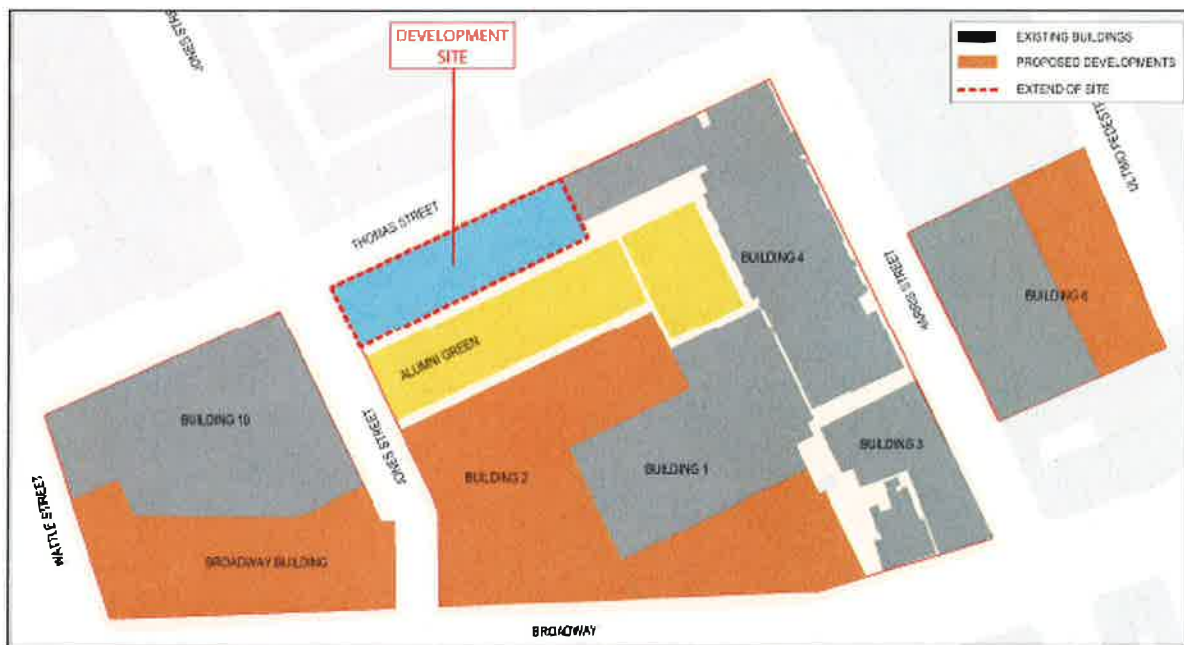


Figure 1: Site location

The adjoining development includes Sydney Institute of TAFE to the north. The nearest residential building is located in Wattle Street at the end of Thomas Street, about 120 metres away. The site is conveniently located to public transport and Broadway Shopping Centre.

## 1.2 PREVIOUS APPROVALS

### 1.2.1 Concept Plan MP 08\_0116

On 23 December 2009, the former Minister approved a Part 3A Concept Plan for the UTS City Campus. The approved Concept Plan allows an additional 83,750m<sup>2</sup> gross floor area (GFA) for educational, social and sporting facilities, and student housing including the following:

- New Broadway Building and Faculty of Science building, with a combined GFA of 44,650m<sup>2</sup>;
- Expansion of Buildings 1 and 2, with a combined additional GFA of 10,800m<sup>2</sup>;
- Expansion of Building 6 for the provision of student housing, with an additional 25,250m<sup>2</sup> GFA;
- Modifications to Buildings 3, 4 and 10;

- Modifications to Alumni Green, with a new Multi Purpose Sports Hall and library book storage vault beneath; and
- Public domain improvements to Broadway and Thomas, Harris, Wattle and Jones Streets.

The Concept Plan determined a height limit for the Faculty of Science building which is RL 40.10 (RL 46.3 including plant and services) adjoining Building 4 and then steps down to RL 31.50 (RL 37.7 including plant and services) for the remainder.

Modification B1 of the Concept Plan required the plant on each building to be setback 6m from the façade or otherwise incorporated into the design of the building to reduce its visual impact.

The Statement of Commitments required a design competition be held for the Faculty of Science building to ensure that design excellence is achieved. The Concept Plan also outlined urban design principles and controls which are summarised below. Compliance with the design principles are discussed in Section 5 of this report:

- The majority of the building is to be four storeys above ground with the fourth level setback from the south to provide good year round solar access to Alumni Green. The building height has been determined to allow a minimum width of 10m of sun along the northern edge of Alumni Green at 1pm in mid-winter.
- The building frontage should be active and provide a café and gallery at the corner of Jones Street. Pedestrian entrances are to be provided at each end to provide access to Alumni Green.
- Step back the topmost floor of the building to maximise solar access to Alumni Green at 2pm in midwinter;
- Maximise the extent of permeability of the ground floor plane through retail and student union shopfronts, student wide and public facilities;
- Enable pedestrian connections through the site from Thomas Street to Alumni Green;
- Consider an element of transparency in the building design to express functions within;
- Provide a pedestrian colonnade along the southern edge of the building to Alumni Green; and
- Provide a lift connection to Level 7 of Building 4.

### **1.2.2 Concept Plan MP 08\_0116 - Modification No. 3**

On 29 July 2011, the Concept Plan was modified and approved bulk excavation works for the Faculty of Science building and the construction of the Library Retrieval System (LRS) and Storage Building. Consequently, the excavation of the site and associated stabilisation works do not require further assessment as part of this application.

Condition A6 of the modified Concept Plan requires the temporary air shafts and fire egress for the Library Retrieval System to be accommodated either in the Faculty of Science building or Building 2.

### **1.2.3 Development Consent D/2010/2203**

Development consent (D/2010/2203) was granted by Council for the following works:

- Demolition of the existing western car park ramp along Thomas Street in order to accommodate the Library Retrieval System and Storage Building which was approved under the Concept Plan Approval; and
- Widening the eastern ramp along Thomas Street which provides access from Thomas Street into the main basement car park of the UTS under Building 1 and 2.

The Proponent intends to undertake these works prior to the construction of the LRS and Storage Building and the bulk excavation works for the basement levels of the Faculty of Science building.

## 2 PROPOSED DEVELOPMENT

### 2.1 DESIGN COMPETITION

UTS conducted a design competition for the Faculty of Science building in early 2011. The Design Competition jury included officials from the Sydney City Council and UTS. The competition was won by Durbach Block Jagers and Bligh Voller Niel.

### 2.2 PROPOSED DEVELOPMENT

The Proponent seeks project approval for the construction of a new Faculty of Science building consisting of:

- A 6 storey building with a maximum height of 29.10 metres (RL 43.10);
- A 3 level basement for teaching and research purposes;
- 11,295m<sup>2</sup> of gross floor area for education use;
- Landscaping around the building including a landscaped roof garden at level 4; and
- Connection of services to the development.

The proposed development also includes:

- Modification to existing Building 4 to provide pedestrian access at levels 1 to 5 of both buildings; and
- Modification at basement levels to provide pedestrian access and services between the Faculty of Science building and surrounding buildings (Library Retrieval System, Storage Building and Building 1 and 2).



Figure 2: View from Alumni Green

The new building will be an extension to the existing science building (Building 4). The two buildings will be directly joined through connected internal circulation systems. New lifts at the eastern end of the new Faculty of Science building will contribute to additional vertical circulation and amenity to Building 4.

The proposed built form was guided by the urban design principles of the Concept Plan. The design principles involved creating a high quality and sustainable design with an effective and accessible building. Key features of the building include:

- Providing direct access from the main foyer to Alumni Green;
- A colonnade on the ground floor of the southern façade;
- Situating teaching places on the ground floor and faculty offices on the upper floors;
- Providing pedestrian links between the Faculty of Science building and Building 4 through aligning and directly connecting internal circulation systems; and
- Providing large and open informal learning and break-out areas at the eastern end of the building adjoining Building 4.



**Figure 3: Internal circulation spaces**

The internal layout aims to create flexible spaces with basement levels used for activities not requiring natural light. Levels 1 to 3 will consist of laboratories and faculty offices. Level 4 will be used for offices. Level 5 will be used mostly for plant and equipment. The roof area will be covered with a mid-grey roof covering. The roof top area accommodates a water tank based experiment zone, ventilation flues, solar panels and four skylights/rooflights.

The key features of the façade design consist of a lightweight framed system supported off the buildings concrete frame. A range of window types are positioned in a 350mm deep frame and are canted both horizontally and vertically creating an undulating variation across the façade.

The main pedestrian entry point to the building is on the ground floor of the eastern elevation of Thomas Street through to the Alumni Green. The Alumni Green elevation and Jones Street have several evenly distributed pedestrian access points. The Faculty of Science building connects directly to the existing Science Faculty (Building 4) at Levels 1 to 5 creating a continuous corridor along each floor.

There is no vehicle access to, or parking proposed within the building. Deliveries will be made through the Basement Level 1 via the secure goods lift located at the north east corner of the building. Vehicles will access Basement Level 1 from Level 1 of the Library Retrieval System.

## **2.3 PREFERRED PROJECT REPORT**

The Proponent submitted a Preferred Project Report (PPR) on 16 May 2012 addressing issues raised by agencies. The PPR provided clarification and a justification for why Section 94 contributions should not be required, changes to ground levels, public domain improvements and building height. The PPR was forwarded to Council and no further comment was made.

## 3 STATUTORY CONTEXT

### 3.1 MAJOR PROJECT DECLARATION

The UTS City Campus development was declared to be a Part 3A project by the Minister on 4 September 2008 as it falls into the class of development described in Clause 20 of Schedule 1 (Classes of Development) – Educational facilities that has a capital value of more than \$30 million. The Minister approved the Concept Plan on 23 December 2009.

The Concept Plan approval determined, pursuant to section 75P(1)(a) of the Act, that the Faculty of Science building be assessed under Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act).

### 3.2 CONTINUING OPERATION OF PART 3A

On 22 June 2011, the NSW Government passed a Bill to create a new State significant assessment system and concurrently repeal the Part 3A system. Part 3A of the Act, as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the Act, continues to apply to transitional Part 3A projects.

Director-General's environmental assessment requirements were issued in respect of this project on 19 January 2010 and the Environmental Assessment was lodged prior to 1 October 2011. The project is therefore a transitional Part 3A project.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister (or his delegate) may determine the application under section 75J of the Act.

### 3.3 SECTION 75I(2) OF THE ACT & CLAUSE 8B OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

Section 75I(2) of the Act and Clause 8B of the *Environmental Planning and Assessment Regulation 2000* provides that the Director-General's report is to consider a number of requirements. These matters and the Department's response are set out below.

**Table 1: Section 75I(2) criteria**

Section 75I(2) criteria	Response
Copy of the Proponent's environmental assessment and any preferred project report.	The Proponent's Environmental Assessment is included at <b>Appendix D</b> .
Any advice provided by public authorities on the project.	All advice provided by public authorities on the project is included at <b>Appendix C</b> .
Copy of any report of the Planning Assessment Commission in respect of the project.	Not applicable.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project.	Each relevant SEPP that substantially governs the carrying out of the project is identified and assessed in <b>Section 3.4</b> below.
Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division.	Sydney LEP 2005 would apply were the application not Part 3A. The relevant provisions are identified in <b>Section 3.4</b> below.

Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate.	The environmental assessment of the project application is this report in its entirety.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The Proponent's EA addressed the Director-General's assessment requirements adequately as addressed in this report.
<b>Clause 8B criteria</b>	<b>Response</b>
An assessment of the environmental impact of the project.	An assessment of the environmental impact of the proposal is discussed in <b>Section 5</b> of this report.
Any aspect of the public interest that the Director-General considers relevant to the project.	The public interest is discussed in <b>Section 4</b> of this report.
The suitability of the site for the project.	The report assesses the suitability of the site for the project in discussion of the key issues in <b>Section 5</b> of this report.
Copies of submissions received by the Director-General in connection with public consultation under section 75H or a summary of the issues raised in those submissions.	A summary of the issues raised in the submissions is provided in <b>Section 4</b> . Copies attached in <b>Appendix C</b> of this report.

### 3.4 ENVIRONMENTAL PLANNING INSTRUMENTS

#### 3.4.1 Sydney Local Environmental Plan 2005

The site is located within the City of Sydney local government area. The site is currently zoned 'Residential – Business' under *Sydney Local Environmental Plan 2005* (LEP 2005). A 42 metre height limit applies to the site under LEP 2005.

Educational uses are consistent with the zone objectives – in particular, to encourage a wide range of uses consistent with Ultimo-Pyrmont's proximity to the Sydney CBD and transport infrastructure and to accommodate uses which generate employment opportunities and provide facilities and services that enable people to live and work in the same community. The proposal is not prohibited by the LEP.

Draft Sydney Local Environmental Plan 2011 proposes to zone the site B4 Mixed Uses. Educational establishments are permissible with consent in this zone.

#### 3.4.2 State Environmental Planning Policy No. 55 – Remediation of Land

Clause 7(1) of SEPP 55 requires that a consent authority must not grant consent to the carrying out of any development on land unless:

- it has considered whether the land is contaminated, and
- if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

A Section 75W modification to the Concept Plan has approved the bulk excavation works for the Faculty of Science building and the construction of the Library Retrieval System (LRS) and Storage Building.

A Stage 1 Environmental Assessment report was prepared for the Section 75W application. The report, based on the site history and a site inspection, concluded that there could be potential for contamination from imported fill material, asbestos contamination associated with site buildings/sheds, previous commercial and industrial uses and any use of pesticides.

Soil samples were obtained for seven locations. The sample results were below the Site Assessment Criteria for soil contaminants and no asbestos was detected. The potential for significant widespread soil contamination was considered low.

The assessment concluded that the site is suitable for the proposed development provided the site is inspected by experienced environmental personnel during the demolition and excavation works to assess any unexpected conditions or subsurface facilities that may be discovered between the investigation locations

Conditions were included on the Section 75W application requiring that excavated material be disposed of appropriately and that a Site Audit Statement be submitted to confirm that the site is suitable for the intended use. The proposal is satisfactory with regard to Clause 7 of SEPP 55.

#### **3.4.3 State Environmental Planning Policy (Infrastructure) 2007**

Clause 104 of this SEPP says that before determining a development application for traffic generating development, the consent authority must consult with the Roads and Maritime Services (RMS). Traffic generating developments are defined in Schedule 3 of the SEPP and include educational establishments with an increase in size or capacity of 50 or more students.

No car parking is proposed within the Faculty of Science Building. RMS does not raise any issues with the car parking or traffic impacts of the development.

#### **3.5 OBJECTS OF THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979**

It is considered that subject to conditions of approval, the proposed development will meet the objects of the Act contained in Section 5 of the EP&A Act.

## 4 PUBLIC CONSULTATION

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### 4.1 PUBLIC EXHIBITION

The proposal was placed on public exhibition from 15 February 2012 until 19 March 2012 for a period of 34 days. An advertisement was placed in the Sydney Morning Herald. Neighbouring landowners were also notified of the exhibition by the Department.

The Environmental Assessment (EA) was made available to the public at the Department of Planning's Bridge Street Office and Town Hall House in the city. Copies of the EA were forwarded to the City of Sydney, Roads and Maritime Services, Transport for NSW and Sydney Water for comment. All of these agencies provided comments which are discussed below.

### 4.2 SUBMISSIONS

The Department received one public submission and four agency submissions. The assessment of key issues raised in submissions are discussed in further detail in Section 5 of this report.

The public submission commented that the above ground pedestrian access should be provided from the Frasers Central Park development via the University campus to the Ultimo Pedestrian Network. The Concept Plan approval requires pedestrian links which connect with surrounding streets across the campus to improve legibility of pedestrian access through the University campus.

The key issues raised in the Council's submission were:

- The proposed façade modulation, changes in form, use of varying window sizes and colour of the inside of the frame are critical to breaking down the length of the building and these design measures should not be lost at the construction stage.
- Archaeological potential may exist on the site and excavation work should obtain permission from the Heritage Office.
- Closure of Jones Street and public domain improvements proposed by UTS should be undertaken in connection with this application.
- Cycleways described in the City of Sydney Cycle Strategy and Action Plan 2007 - 2017 should be shown.
- The overall campus review should incorporate the bicycle parking rates in the draft Sydney DCP 2010, being 1 space per 10 staff and 1 space per 10 students.
- The combination of Alumni Green and the private roof terrace on the Faculty of Science building provide an appropriate level of privately and publicly accessible open space.
- Solar access provided to Alumni Green does not strictly comply with the Concept Plan requirements.
- Public domain works should comply with the City of Sydney's design and construction standards and provide a clear delineation between the private and public domains.
- Existing street trees along Jones and Thomas Streets may be impacted by excavation works and an arborist should ensure these trees can be safely retained.

- The rooftop landscaped area is supported. Further detailed plans should be prepared to address planting specifications, construction and stormwater management.
- Outdoor dining area should ideally be at the same grade as the footway and any changes in level taken up at the entrance to the building.
- Section 94 contributions of \$3,354.54 per additional worker are required under the Ultimo Pyrmont Contributions Plan.

The key issues raised by State government agencies were:

- A construction traffic management plan should be prepared;
- Bicycle parking facilities should be provided either within the development or in close proximity;
- Pedestrian access should comply with AS 1428.1:2001 *Design for Access and Mobility*.
- All works and regulatory signposting should be at no cost to the RTA.
- Stormwater should be connected to the Council's system and the Sydney Water stormwater pipe in Thomas Street should only be used as a last option;
- On-site stormwater detention is to be provided; and
- Sydney Water conditions relating to Section 73 certificates and checking of approved plans should be imposed.

The Department believes the closure of Jones Street and associated public domain works should be delayed until construction activities on the site have been substantially completed. The Department does not consider that Section 94 contributions should be required for this development. Section 94 contributions are assessed in detail in section 5.14 of this report.

The other matters raised by Council and government agencies can be addressed by appropriate conditions of approval.

## 5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

### 5.1 URBAN DESIGN AND BUILT FORM

#### 5.1.1 Design Excellence

The proposed building has a visually striking and modern design which has been influenced by the following beneficial design elements:

- Proposed height is consistent with the existing height of the adjacent Building 4;
- Gentle surface curves across each facade;
- Roof garden on Level 4;
- The solids in the façade will emulate an off-white concrete finish, with fine dark steel frames lining the openings;
- Different window sizes with full height glazing; and
- The linings to the windows on the northern elevation to be painted with pale blue and blue while the southern elevation will be painted in lime green and yellow. These will reflect gently coloured light into the interiors of the building, cooling or warming the light depending on the orientation.

The Department supports the proposed design which incorporates the above design elements. When these elements are combined, a simple but effective building is created which responds to its environment. The building is not imposing however it has a modern appearance.

Council generally supports the design but commented that the proposed façade modulation, changes in form, use of varying window sizes and colour of the inside of the frame are critical to breaking down the length of the building and must not be 'value-engineered' out of the construction process. The Department agrees these are important parts of the design.



Figure 4: View from Thomas Street

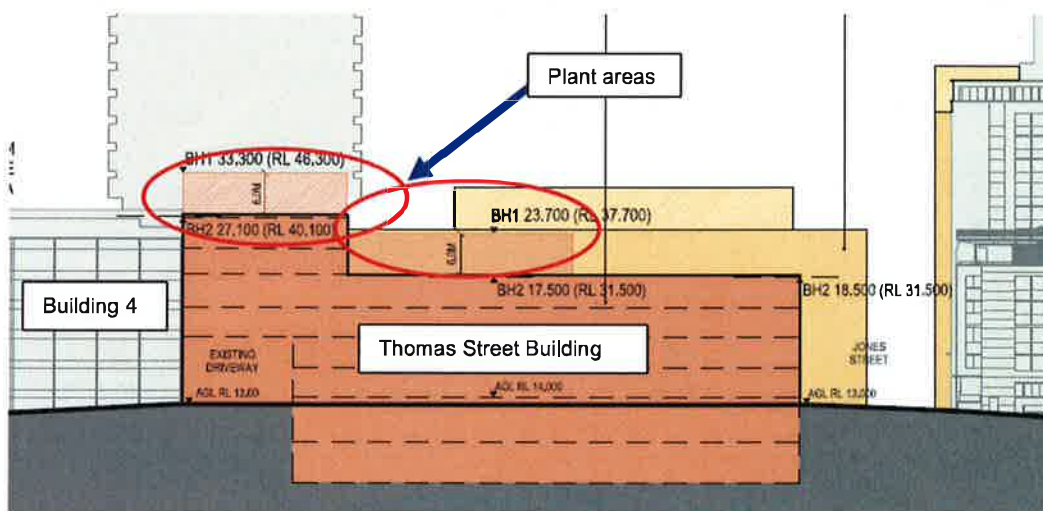
The proposal addresses the Concept Plan controls regarding

- active uses such as café/ gallery on the corner of Jones and Thomas Street; and
- transparency in the building design to express functions within.

### 5.1.2 Building Height and Plant

The approved Concept Plan established a building envelope for the Faculty of Science building. It also requires the plant to be setback 6m from the façade or otherwise incorporated into the design of the building to reduce its visual impact.

The building envelope in the Concept Plan incorporates a taller element (27.1m high) above the driveway that reflects the height of the adjoining building, Building 4. The building envelope steps down to a four storey scale with a height of 17.5m which continues to Jones Street. The building envelope is approximately 1m higher at Jones Street due to the fall in the footpath levels.

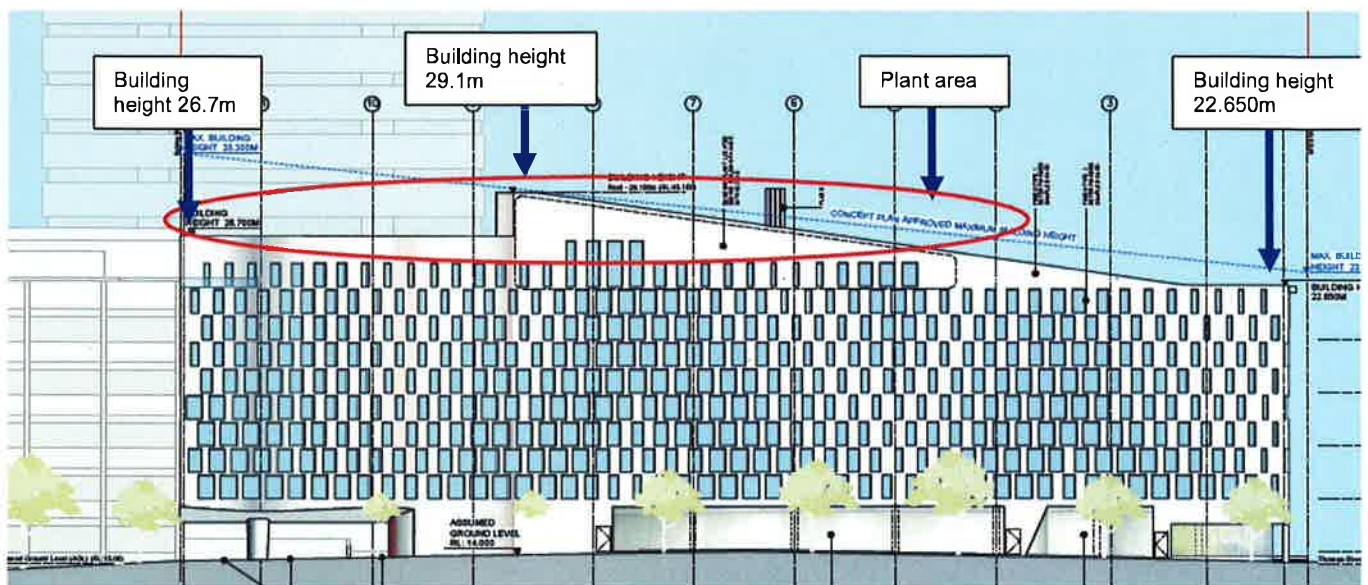


**Figure 5: Thomas Street elevation (approved Concept Plan)**

The Faculty of Sciences building in the Project Application has a height of 26.7m where it adjoins Building 4 and extends across the driveway, which is consistent with the approved Concept Plan. However, the building then steps up (not down) to its maximum height of 29.1m and then gradually slopes down to the Jones Street corner where it has a height of 22.650m (instead of 18.5m) and does not strictly comply with the Concept Plan.

The proposed design incorporates a 6m high service plant zone on top of the building envelope. The plant area has been integrated into the design of the building by roofing this area. The design includes glazing to this level on the Thomas Street elevation so the area reads as another floor in the building rather than roof plant. The additional height incorporates the roof plant and services, which are concealed from view and integrated with the overall design of the building.

The architectural design of the building is of high quality and is supported by the City of Sydney. The additional height on the Jones Street elevation does not result in any adverse amenity impacts on adjoining properties, in terms of bulk, scale, solar access or views. Therefore, the proposed height and form of the building is acceptable.



**Figure 6: Thomas Street elevation (Project Application)**

### 5.1.3 Gross Floor Area

The approved Concept Plan permits the Thomas Street and Broadway Buildings to have a combined GFA of 44,650m<sup>2</sup>. The Broadway Building, which was approved on 16 December 2011, has a GFA of 32,500 m<sup>2</sup>. The Faculty of Science building has a GFA of 11,295m<sup>2</sup> which equates to a total combined GFA of 43,795m<sup>2</sup> and complies with the Concept Plan.

### 5.1.4 Basement Levels

Two basement levels were identified in the approved Concept Plan whereas three basement levels are proposed in the application. However, the proposed basement levels do not result in any additional excavation (which has been approved already by a modification to the Concept Plan) and are considered acceptable.

### 5.1.5 Fire Egress and Ventilation for Library Retrieval System

The conditions of approval for the Library Retrieval System (LRS) required that the air shafts and fire egress stairs which discharge into Alumni Green be incorporated into the design of either the Faculty of Science building or Building 2. The proposal makes adequate provision for these services and fire egress for the LRS. Following the completion of the building, the temporary structures can be removed.

## 5.2 TRANSPORT AND PARKING

### 5.2.1 Traffic and Parking

The Transport Management and Accessibility Plan prepared for the Concept Plan application noted that 453 parking spaces are available within the University (100 of those have been lost with the development of the Broadway Building).

The proposed Faculty of Science building does not include any off-street car parking. This is acceptable given the proximity of the site to the Sydney CBD and to major public transport stations and a minimalist approach to car parking that encourages the use other transport modes is supported.

The proponent's traffic report states that the traffic generation and impacts on the surrounding road network would be negligible because no car parking was provided for the building. The submissions received from Council and Roads and Maritime Services did not raise any issues with the capacity or performance of the surrounding road network.

### **5.2.2 Bicycle parking and facilities**

City of Sydney requested that the cycleway described in the *City of Sydney Cycle Strategy and Action Plan 2007-2017* be identified on the plans and that the overall campus review consider and incorporate the bicycle parking in the draft Sydney DCP 2010 (ie 1 space per 10 staff/students).

Council has not suggested any specific conditions relating to bicycle parking facilities for the Faculty of Science Building. Roads and Maritime Services also raised the need for bicycle parking within the development or in close proximity.

Council's cycle strategy proposes a regional cycleway route between Pyrmont and Moore Park and includes a section along Jones Street. It should be taken into consideration as part of any future application for public domain upgrades for Jones Street.

In terms of bicycle parking facilities, the Transport and Management and Accessibility Plan prepared for the Concept Plan estimated approximately 17% of students either walk or cycle to the University. Under the Statement of Commitments for the Concept Plan, the proponent has agreed to provide facilities for cyclists.

The proposed Faculty of Science Building does not include any bicycle parking facilities. The proponent submits that bicycle parking will be catered for in adjacent buildings. The Department agrees with Council and the Roads and Maritime Services that bicycle parking facilities are needed but it should be addressed as part of a campus wide strategy. A condition to this effect is included in the approval.

### **5.2.3 Pedestrian Access**

Council in its submission suggested that the outdoor dining area along the Jones Street frontage should ideally be at the same grade as the footway and any changes in level taken up at the entrance to the building. The change in level is less than 1 metre.

The proponent submitted amended plans in the PPR which addressed Council's concerns ensuring a level access from Thomas Street and Jones Street to the colonnade that wraps around the southern and western sides of the ground floor of the building. Level access is also provided from the colonnade to the outdoor café area to provide direct and convenient connection to the street.

The proposal addresses Concept Plan design controls relating to:

- permeability of the ground floor level;
- pedestrian connections through the site from Thomas Street to Alumni Green;
- pedestrian colonnade along the southern edge of the building to Alumni Green; and
- a lift connection to Level 7 of Building 4.

### 5.3 LANDSCAPING AND PUBLIC DOMAIN

#### 5.3.1 Landscaping

The Proponent has used the site to maximise the developable footprint of the proposed building. As a result of the building footprint extending to the boundary of the site, proposed landscaping is limited to a roof garden on the entire southern elevation of Level 4. A small planter is also proposed on Level 1 of the Jones Street elevation.

The roof garden will have a total area of 750m<sup>2</sup> which runs along the length of Level 4. This area will provide a passive recreational space for staff with seating and gathering spaces. This space will also be used for University experimental planting and consist of hard wearing vegetation. Plant selection will consist of grasses, groundcovers, shrubs and small trees with sub-tropical character.

Council supports the rooftop landscaped area but suggested that further detailed plans be prepared to address planting specifications, construction and stormwater management. Conditions to this effect are included in the recommendation.

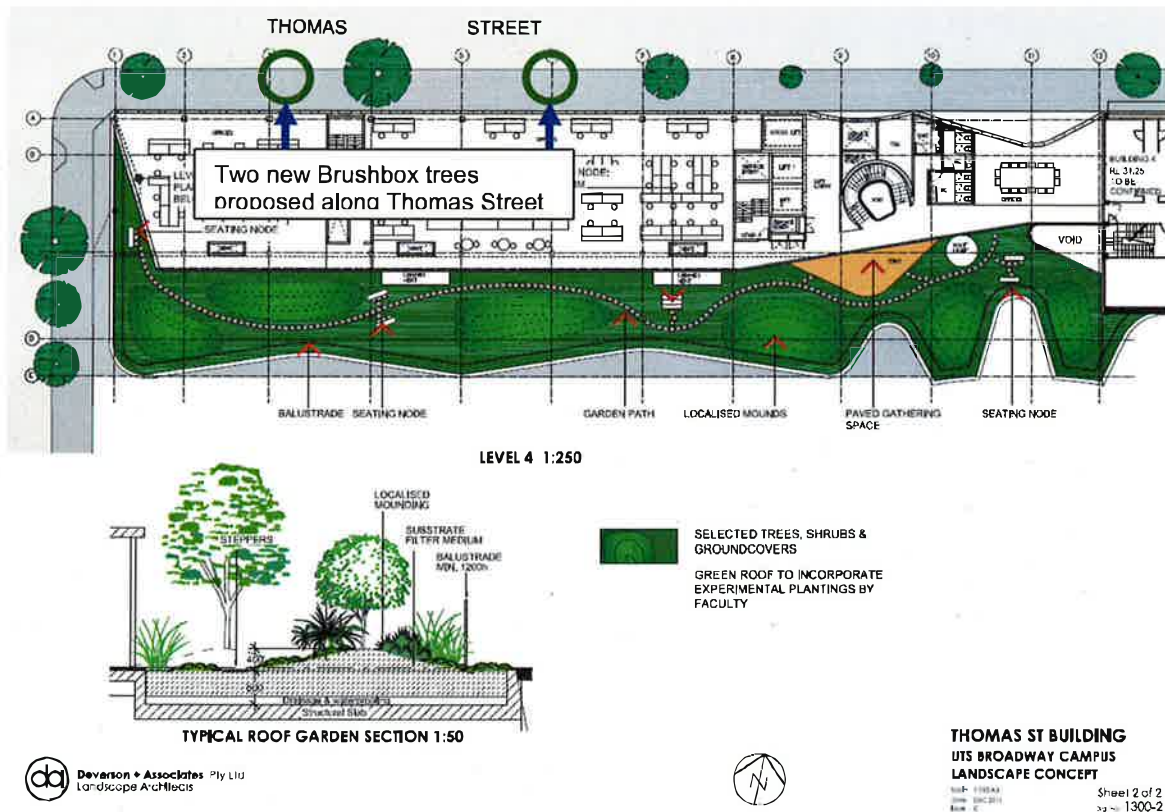


Figure 7: Landscape plan

#### 5.3.2 Public Domain Works

Council's submission advises that there are eight street trees located on the Jones and Thomas Street frontage. Whilst the trees are in good condition, they are closer to the development than the setbacks normally recommended by Council and therefore may be impacted by excavation and construction activity.

The Proponent proposes to retain all trees around the site and proposes two Brushbox trees along Thomas Street in accordance with City of Sydney guidelines. New asphalt and kerb and footpath will be provided along the footpath around the site. Stone paving is proposed to

all publically accessible areas of the Alumni Green. The final material selection will be determined subject to the Alumni Green design competition.

### **5.3.3 Closure of Jones Street**

The Concept Plan noted that Jones Street has the potential to create a significant space for the University and could provide a new major pedestrian thoroughfare connecting the new Frasers development to the south with the northern closure of Jones Street through the Sydney TAFE Institute.

Council notes that as part of their approval for alterations and additions to UTS Building 10 (on the western side of Jones Street), a condition was imposed requiring the closure of Jones Street and public domain upgrades. The condition was subsequently removed via a Section 96 application on the proviso that UTS provided a commitment to undertake these public domain improvements as part of the next application.

The University remains committed to undertaking these works and the Jones Street upgrade is expected to be completed in 2018. The Department believes that for practical reasons, the public domain works in Jones Street should be postponed until the majority of construction activity on the Alumni Green and Building 1 and 2 have been completed. The Alumni Green works are scheduled to be completed in 2014.

## **5.4 SOLAR ACCESS**

### **5.4.1 Alumni Green**

The design principles in the Concept Plan state that the height of the Faculty of Science building should allow good year round solar access to Alumni Green and achieve a minimum width of 10m of sun along the northern edge of Alumni Green at 1pm at mid-winter.

As noted earlier in Section 5.1.2, the proposed height and envelope of the Faculty of Science building differs from the approved Concept Plan. The shadow diagrams submitted with the application illustrate that a 10m wide strip of sunlight is provided along the edge Alumni Green from 9am to 12pm at mid-winter. By 1pm, a 5m wide strip is achieved and by 2pm the Alumni Green is completely overshadowed. Therefore, the proposal is non-compliant between 12pm and 2pm.

The design does not achieve a full hour of sunlight to comply with the 10m wide strip of sunlight along the northern edge of Alumni Green at 1pm at mid-winter. Partial compliance is achieved at 12:30pm where only a 5m wide strip of sunlight is achieved along the northern edge of Alumni Green. However, the proponent has designed the topmost floors of the proposed building to be setback from the southern elevation as illustrated in Figure 8 so the non-compliance with the height and envelope does not increase shadowing of the Alumni Green.

Council's submission noted that the solar access to Alumni Green does not strictly comply with the Concept Plan as outlined above but accepts that the combination of Alumni Green and the rooftop landscaped area will provide an appropriate level of privately and publicly accessible open space for the site. The Department supports the proposed height of the Faculty of Science building and considers that an adequate level of solar access is achieved to Alumni Green, particularly considering the scale of development that surrounds the site.

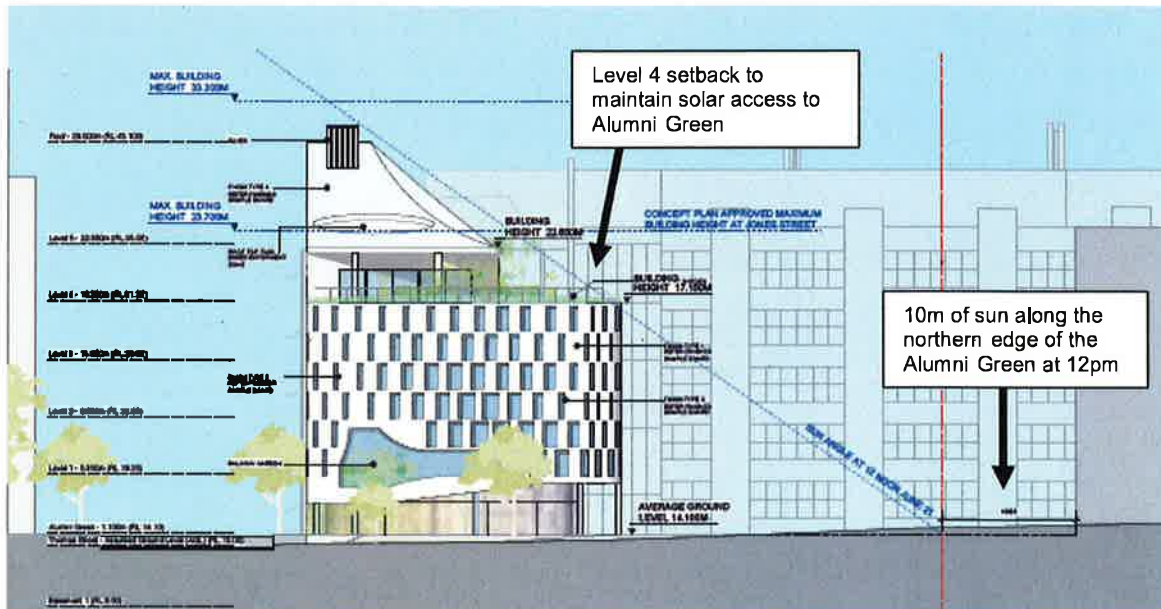


Figure 8: Solar access to Alumni Green

#### 5.4.2 Sunlight amenity

The proposed building will achieve good levels of natural light to the above-ground levels. Each façade maintains a good level of solar access to the interior of the building from windows of varying sizes. Each floor has a height of 4.3m. The basement levels acquire natural lighting from a double height void at basement levels along the northern edge of the building. Skylights are proposed on Level 3 through the roof garden to the centre of the floor ensuring adequate light levels for occupants.

It is considered that the proposal provides an acceptable level of solar access and amenity to and within the building.

#### 5.5 WIND EFFECTS

The Concept Plan Statement of Commitments required the proponent to undertake a wind impact assessment for each new building, provide colonnades or awnings along the boundaries of Alumni Green and locate pedestrian entrances to buildings along internal pedestrian links to intercept strong wind flows.

A wind assessment report was submitted for the Faculty of Science building. The report concluded that the surrounding buildings offer significant wind protection and that wind conditions at pedestrian level are expected to be similar to those currently experienced and therefore are acceptable. Further, a colonnade is provided along the southern edge of the building adjoining Alumni Green and connects through to Thomas Street. The Department is satisfied that the proposal will not result in unacceptable wind impacts.

#### 5.6 ENERGY EFFICIENCY

The Concept Plan Statement of Commitments proposed a 6 star Green Star Education target for the new Faculty of Science building. The proposal has achieved a 5 star rating and the proponent submits that the expense and difficulty of achieving a 6 star rating would make the development unfeasible.

The proposed design incorporates several measures to minimise energy consumption such as cross ventilation, enhancing solar access, incorporating mixed-mode ventilation and rain

water harvesting and reuse. The Department is supportive of the proposed energy efficiency measures and considers that 5 star Green Star rating is acceptable for the building.

## 5.7 NOISE

A noise impact assessment was submitted with the application. The report identified potential sources of noise from the development, specified noise criteria that should be achieved and recommended measures that could be implemented to meet the noise criteria.

Potential noises sources that could have an impact inside the building or on neighbouring buildings include:

- Air conditioning and ventilation plant, air handling units and fans;
- Condensing units, exhaust and intake fans and plant room noise; and
- Other noisy equipment which are required for the operation of the function of the building.

The closest residential building is located at the intersection of Wattle Street and Thomas Street and is about 120 metres from the application site. The proponent advised that due to the high level of existing traffic noise along Wattle Street, the noise generated from the proposed building will not have any impact on the nearest residential building. A maximum noise level of 60dB(A) is proposed from the building, which is lower than the traffic level on Wattle Street and is considered acceptable.

The proponent submits that the type of mechanical plant items will be finalised later in the design process and the noise specifications and locations will be checked prior to installation to ensure that they will not exceed the noise criteria set in the report. Should the mechanical plant exceed the noise criteria outlined, acoustic treatments may be required to ensure compliance and could include the following:

- Incorporation of suitable building façade and glazing to control noise intrusion into the building;
- Use of 'quiet' plant;
- Use silencers over noisy fans;
- Install acoustic louvres in lieu of architectural louvres or grills;
- Installation of specific acoustic treatment for the building air conditioning, ventilation and hydraulic services.

## 5.8 REFLECTIVITY

The Director General's Requirements stated that the reflectivity impacts of the façade should be considered. As a guide, the *Central Sydney DCP 1996* establishes that reflectivity from a building should be no greater than 20%.

The Proponent's reflectivity report states that the greatest potential for reflections from the building onto Thomas Street is from morning solar rays glancing off the northern façade towards the west and the reflectivity values would exceed 20% at 8am between June and September.

The reflectivity report states the limited width of the windows on the north façade will limit reflections and recessing the windows 150mm behind the façade line will intercept the highest glancing incident angles. The Department is satisfied that appropriate measures are included in the design of the building to minimise reflectivity impacts.

## 5.9 CONTAMINATION

The Concept Plan Statement of Commitments required the proponent to address potential contamination impacts and to undertake 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.

A Section 75W modification to the Concept Plan approved the excavation for the basement levels of the Faculty of Science building. An assessment of contamination was included in that application and has been sufficiently addressed.

## 5.10 ARCHAEOLOGY

Council state that the site may have archaeological potential and that any excavation work should obtain permission from the NSW Heritage Office and provide an archaeological assessment report be provided to Council for their archives. Excavation work does not form part of the application and approval has already been granted for those works as part of a Section 75W modification to the Concept Plan.

Notwithstanding, an Aboriginal and Historical Archaeological Assessment report was submitted with the Concept Plan application. The report concluded that the potential for the site to contain Aboriginal objects or places was very low given its highly modified state and the extent of disturbance that has occurred. The report found that the site may have once contained archaeological evidence of post 1830s development and the original Parramatta Road alignment but would most likely have been disturbed or destroyed by the construction of the Fairfax buildings and UTS tower building.

## 5.11 CONSTRUCTION MANAGEMENT

The proponent has offered by way of a Statement of Commitment to prepare a detailed Construction Management Plan that addresses the following:

- Construction hours;
- Construction traffic management;
- Noise and vibration management;
- Waste management;
- Erosion and sediment control;
- Air and dust management;
- Pedestrian management; and
- Protection of existing trees.

It is recommended that the Construction Management Plan be prepared and approved prior to commencement of work.

## 5.12 UTILITIES AND INFRASTRUCTURE

The site can be serviced by the following water, sewer, electricity and telecommunications services:

- Sydney Water watermains are situated in Thomas and Jones Streets and have adequate capacity to service the site;
- Power supply will be provided by Ausgrid from existing and new substations in adjacent building sites; and

- Telecommunication services will connect to the existing UTS network.

### 5.13 DRAINAGE AND STORMWATER

All rainfall and runoff from the roof of the building will be captured via a green roof (Level 4 roof garden). This stormwater runoff will be filtered before being disposed off within the on-site drainage system. Ground floor stormwater will be collected through drainage outlets to drain to the on-site detention tank located in Basement Level 1. The stormwater will pass through a gross pollutant trap before being sent to the stormwater storage facility.

Council has suggested conditions of approval to address stormwater management which are included in the recommendation.

### 5.14 SECTION 94 CONTRIBUTIONS

The application site falls within the boundary of the Ultimo Pyrmont Contributions Plan 1994. The Plan enables Council to require contributions towards the public amenities and services required as a consequence of development to accommodate the projected population over a 25 to 30 year period.

The Plan applies to residential and commercial development as well as other uses such as education, leisure, recreation, cultural and tourist activities. The types of amenities and services funded by contributions include parks, open space, foreshore walks, street closures, cycleways, community centres, child care centres, roadworks, stormwater drainage improvements etc.

Council requested that a Section 94 contribution of \$3,354.54 per additional worker be required in accordance with the Plan (note: the rate increased to \$3,535.77 effective from January 2012). The previous building on the site (Building T) had 71 staff. The UTS forecasts that by 2018 there will be approximately 164 new staff. If the original worker population is taken into consideration, the Faculty of Science Building will result in an increase of 93 employees and under the Plan would require a total contribution of \$328,826.61. The UTS has not agreed to pay s94 contributions for this project.

The Department agrees with the UTS's submission in the PPR that no contribution is necessary as the UTS already provides many of the services and amenities typically funded through Section 94 contributions, for example, open space areas, child care facilities, gymnasiums and libraries. The University has also proposed to undertake public domain works as part of the closure of Jones Street to vehicle traffic and these works (which will be the subject of a future application) would potentially be eligible for a works 'in kind' credit under the plan. The estimated cost of the Jones Street upgrade is expected to be in excess of \$3 million which exceeds the contribution required by Council.

Therefore, in light of the amenities and facilities provided by University and the future public domain works to be undertaken with the closure of Jones Street, it is considered reasonable that no Section 94 contributions be required for this development.

### 5.15 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The Protection of the Environment Administration Act 1991 provides five accepted ESD principles:

- (a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the integration principle);*

- (b) *if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle);*
- (c) *the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle);*
- (d) *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle); and*
- (e) *improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle).*

The Department has considered the project application in relation to the ESD principles and has made the following conclusions:

**1. Integration Principle** - The proposed development will provide additional and improved teaching space for the Science Faculty and student facilities for the University. This educational use is consistent with the continued educational use on the site.

**2. Precautionary Principle** – The site has a low level of environmental sensitivity and has been cleared. Consequently, the proposed development will not impact on threatened or vulnerable species, populations, communities or significant habitats.

**3. Climate Change** – The proposed development is not likely to be impacted by potential rises in river or sea levels due to the height of the site above sea level and is not classified as being within a flood prone area.

**4. Inter-Generational Principle** – The development will facilitate the growth and development of the University which makes provision for both teaching and research in the Science Faculty. While no car parking is proposed, the development will take advantage of the good public transport and use existing car parking and bicycle parking facilities in adjacent buildings.

The Proponent also has committed to achieving a 5 star Green Star Education v1 design rating. The Proponent has also committed to water efficiency through the use of rainwater capture and reuse; and minimisation of waste production in construction and operation.

**5. Biodiversity Principle** – There is no natural vegetation on the site as it has been cleared. The site does not contain any threatened or vulnerable species, populations, communities or significant habitats. Therefore, the proposal will not impact upon the conservation of biological diversity or ecological integrity.

**6. Valuation Principle** – The development will facilitate the expansion and improvement of the UTS which is an internationally recognised institution and a large employer in the region, while also adding significant social and economic benefits to the region.

## 6 CONCLUSION

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The Department has assessed the Environmental Assessment, Preferred Project Report and considered the submissions in response to the proposal. The Department believes the proposed development is generally consistent with the approved Concept Plan.

The Department has considered the issues relating to the proposal and supports the proposed educational use, subject to the Statement of Commitments and recommended conditions of approval to ensure that all impacts are minimised or managed to an acceptable level.

The proposal is considered to be in the public interest as it will contribute to the overall integration of educational buildings in the UTS development. The proposed development is considered to provide educational, social and economic benefits to the region, subject to conditions of approval.

It is recommended that the Director-General as Delegate of the Minister:

- (A) consider all relevant matters prescribed under Section 75J(2) of the *Environmental Planning and Assessment Act, 1979*, including those relevant matters prescribed by 75I(2) as contained in the findings and recommendations of the Director-General's report and appended documentation;
- (B) approve the application, subject to conditions, under section 75J(1) of the *Environmental Planning and Assessment Act, 1979*, having considered all relevant matters in accordance with (A) above;
- (C) sign the attached instrument of approval at Appendix A.

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**Urban Renewal and Major Sites**

  
Director-General

10/7/2012