Environmental Assessment Report
Project Application

Peter Johnson Building, 702-730 Harris Street, Ultimo

UTS Student Housing

Submitted to
Department of Planning
On Behalf of the University of Technology Sydney

April 2009 ■ 08564

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Statement of Validity

Environmental Assessment

This Environmental Assessment has been prepared and submitted under Part 3A of the *Environmental Planning and Assessment Act* 1979 (as amended) by:

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Project Summary

Applicant	University of Technology Sydney
Applicant address	PO Box 123 Broadway NSW 2007
Subject Site	702-730 Harris Street, Ultimo (Lot 11 in DP 835246)
Proposed development	Infill of podium of Peter Johnson Building to provide approximately 5,950m^2 of additional University teaching space and student housing support services. Construction of a 13-level tower for student housing and associated facilities – approximately 19,200m^2 of additional floor space.

Declaration

I certify that the following Environmental Assessment Report has been prepared in accordance with the requirements of Part 3A of the *Environmental Planning and Assessment Act, 1979* and Regulation and that, to the best of my knowledge, is not false or misleading.

Name Vivienne Goldschmidt

Date 14 April 2009

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nettleton*tribe*

Executive Summary

This Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and State Environmental Planning Policy (Major Projects) 2005 (SEPP) in support of a Project Application for student housing in the Peter Johnson Building at the Broadway Precinct of the UTS City Campus at Ultimo. The University of Technology Sydney (UTS) is the applicant for the Project Application.

Project Overview

The proposal involves modifying and extending the existing Peter Johnson Building by infilling the existing podium with additional teaching spaces and a café and construction of a new 13 storey tower for student housing. Project approval is sought for:

- Infilling and extending the existing Peter Johnson building (Building 6) to provide approximately 5,950m^2 of additional floor space for teaching space and student housing support services.
- Construction of a 13-level tower above the existing and infilled building, which will accommodate student housing for 720 students and comprise approximately 19,200m^2 of additional floor space.
- Provision of associated recreational and communal spaces at proposed Levels 8 and 21.

The capital investment value of the project is $69.9 million.

UTS has procured the provision of student housing through a Public Private Partnership (PPP) model with the preferred partner building, owning and operating the student housing project on UTS land for 35 years. The building is then handed back to UTS. Following a competitive tender process, the Living Education consortium (comprising Citta Property Group, Macquarie Capital Advisers, Hutchinson Builders and UniLodge) was selected as the preferred tenderer for delivery of the project.

Site Context and Project Background

The Peter Johnson Building is located at to 702-730 Harris Street in Ultimo and is legally described as Lot 11 in DP 835246. The current building accommodates academic and teaching spaces over seven storeys for the Faculty of Design, Architecture and Building. The area of the site is approximately 5,109m^2, and it is zoned Residential-Business in the Ultimo-Pyrmont zoning map that forms part of the Sydney Local Environmental Plan 2005 (SLEP 2005). UTS is the legal owner of the site.

Pedestrian and vehicular access to the site is available via Harris Street. Pedestrian access is also available to Level 3 of the building via stairs and a one-way escalator from the Ultimo Pedestrian Network. The UPN provides pedestrian access from UTS to Central Station via the Devonshire Pedestrian Street Tunnel.

The locality is characterised by multiple medium to high rise buildings for commercial, education and residential uses. The remainder of the Broadway Precinct of the UTS City Campus is on the opposite side of Harris Street. An overhead pedestrian bridge connects Level 4 of the Peter Johnson Building with the remainder of the Broadway Precinct.

Adjoining the site to the south is the headquarters of the Australian Broadcasting Corporation. A 17-storey residential building (the Taragon) comprising dual aspect two and three bedroom apartments adjoins the site to the north. Multiple modes of public transport are available on Harris Street, Broadway and at nearby Central Station.

The podium of the Peter Johnson Building was constructed in accordance with development consent DAZ91-00242 issued by the Council of the City of Sydney. The development consent also included a 13 storey tower above the podium to accommodate commercial offices, up to a maximum height of RL80 AHD.

Design Process

As part of the PPP tender process, Living Education submitted a holistic offer to UTS that was judged on design, operation and commercial criteria. Living Education has worked within UTS's design review process to ensure the final design has taken into account the opportunities and constraints of the site and existing building, the context of surrounding built form, the need to achieve appropriate integration with the existing building, and the delivery of high quality internal amenity for students.

The following design principles were developed by UTS and Living Education for the development:

- The proposed building envelope will step back on the south eastern corner to respect adjoining windows and view corridors of the adjoining southern residential building (Taragon).
- The Harris Street façade is to be treated as an infill between the ABC building and southern adjoining buildings. The façade will be articulated to complement the scale and detail of articulation of adjacent buildings.
- The new façade on the UPN side will be aligned with the ABC recessed building line.
- The building identification sign will be clearly visible from Alumni Green reinforcing the connection of the building to the rest of the Broadway Precinct of the university.
- The infill of the podium on the UPN side will create a new address and reinforce connections from Central Station through the UPN to Harris Street.
- Provide a café at the UPN interface to activate the locality.
- The Harris Street façade is to be constructed in a way that ensures a safe working environment is maintained for UTS staff and students using the existing teaching spaces in the Peter Johnson Building.

Description of the Development

The two main components of the development are the expansion of the existing building towards the UPN (being the podium infill) and the construction of a tower for student housing over the podium.

Podium Infill

Between Levels 2 and 7, the existing building will be extended towards the UPN essentially filling in the existing basketball court area.

Level 1 (the basement car park) will be modified to accommodate structures and upgrades to satisfy the Building Code of Australia requirements for life safety systems. Works to Level 2 include a direct pedestrian entry into the building, a cafe at the UPN entrance to the building, and secure reception/ lobby area for the student housing. Works on Levels 3 to 7 will comprise the construction and fitout of additional floor space to be utilised by UTS for teaching purposes and upgrades to existing plant areas and fire stairs.

Student Housing

A 13 storey tower will be constructed over the podium to provide 720 beds for student housing. Accommodation will be in studios, two-bedroom and six bedroom units.

As well as student housing, Level 8 will include an apartment for an on-site manager and communal facilities such as laundry, indoor and outdoor recreational space and study areas. Levels 9-20 will comprise only residential accommodation. A common roof top terrace will be provided on Level 21.

The tower will achieve a height of 66.66 metres (top of ceiling of habitable floor). Above the roof terrace is a 6.1 metre plant room, part of which will incorporate a new building identification sign. The tower is set back from Harris Street in line with the adjoining tower elements of the ABC and Taragon buildings. The UPN façade of the building incorporates deep modulations to provide solar access to the interior of the student housing and protect the solar access and privacy of the apartments in the Taragon Building.

Pedestrian Access

The infill of the podium of the existing building will include three new lifts which will provide direct access between Level 2 and the student housing. In addition, an accessible path of travel will be provided from the UPN to the new UTS teaching spaces in the infilled podium and student housing.

Transport and Parking

Vehicle access and egress to the existing car park remains unchanged and will be via the existing two-way driveway off Harris Street. Up to 122 parking spaces will be retained for use by UTS staff, a reduction of 13 parking spaces from the current situation.

Ecologically Sustainable Development

The proposal incorporates various measures for the development to target the equivalent of a 5 star Green Star rating, assessed in accordance with the pilot tool for multi-residential development. Specifically, all accommodation units will be naturally ventilated; operational construction waste will be minimised; and energy and water saving appliances, fittings and fixtures will be used throughout the building. Up to 70 secure bicycle parking spaces will be provided at Level 2 for student use.

Signage

A building identification sign is proposed on the roof top of the building. The sign will incorporate UTS's logo and be affixed to the plant room at the western side of the building. A further UTS building identification sign will be located near ground level on the UPN façade.

Operations and Management

A student housing office will be located at Level 2 near the UPN entry. Students will be supported by a Residential Life / UniLodge Team, comprising a manager, two coordinators and a live-in staff member. Access to the student housing will be controlled by lockable doors and an intercom system.

The EAR provides an assessment of the environmental impacts of the Project Application in accordance with the Director-General's Environmental Assessment Requirements (see Section 6). The EAR includes a draft Statement of Commitments (see Chapter 7) which sets out the undertakings to manage and minimise potential impacts on neighbouring properties including noise from outdoor terraces.

Alternatives to the Proposal

The proposal is consistent with the objectives of the broader intention to increase the level of student housing at UTS. UTS currently provides 423 beds for student housing, at a rate that is well below comparable universities. The proposal will improve this ratio to bring UTS better in line with comparable universities in Sydney and Australia. The site is suitable for student housing due to its proximity to the main UTS campus and public transport. Undertaking

the proposal at an alternative location would not support state and local government objectives of boosting educational uses in this locality or deliver comparable social and environmental benefits.

Assessment

Consistency with Strategic and Statutory Plans

The proposal is consistent with and supports the Metropolitan Strategy for Sydney and Draft Sydney City Subregional Strategy in that it reinforces global competitiveness and strengthens links to the regional economy. It assists to constrain Sydney's development footprint by providing student housing at an existing university campus adjacent to a multi mode transport hub. The proposal supports and complements the objectives of the Residential-Business zone and meets the objectives of SLEP 2005 in relation to development in Ultimo-Pyrmont. It is consistent with relevant State and Regional Environmental Planning Policies and has taken into account the provisions of the Urban Development Plan for Ultimo Pyrmont and relevant City of Sydney DCPs.

In addition, although student housing is not typical of residential apartment living (and is designed for short term residents who require smaller, more affordable apartments), the proposal has had regard to the design quality principles and energy and water saving targets that would normally apply to a residential flat building of this scale. The proposal has also sought to address the guidelines and specific development standards for boarding house developments within the City of Sydney local government area.

The proposal exceeds the building height and floor space ratio development standards applying to the site. The variation is justified given the significant State and Regional planning benefits and minimal environmental impacts of the proposal.

In relation to a major project, the Minister for Planning is not bound by the provisions of an environmental planning instrument, other than a State Environmental Planning Policy. Despite this, the DGRs require the proposal to justify any proposed departures from the development standards in SLEP 2005 that apply to the site.

The new tower will contain up to 720 beds for UTS students and significantly addresses the current shortfall in student accommodation. It will exceed the building height (42 metres) and floor space ratio development standards applying to the proposal. The development proposes a maximum height of 67.79 metres and a gross floor area of 41,005m^2 which achieves a floor space ratio of approximately 8:1. The proposal is justified on the following grounds:

- The building is only marginally taller than the approved 1991 scheme for a commercial building on the site. That proposal achieved a building height of 70 metres and floor space ratio of approximately 7:1.
- The scale of the development is consistent with other buildings in the locality and will fill the current gap between the adjoining Taragon and ABC buildings.
- The load bearing capacity of the existing Peter Johnson Building podium constrains development to only about half of the podium, meaning that to achieve the necessary floor space and for the required number of students the tower component of the development must extend vertically rather than horizontally.
- The tower is set back approximately 40 metres from the Harris Street boundary, meaning the existing podium of the Peter Johnson Building will remain the dominant feature on the Harris Street frontage of the site.
- The proposal incorporates deep modulations to the UPN façade to give the appearance of three towers above podium level and protect the visual amenity of residents in the Taragon building.

- Overlooking and visual impacts to the adjoining Taragon Building are minimised by the set back at the south eastern corner of the site, so maximising separation between habitable rooms.
- The proposal will have negligible impacts on roads and public transport as the accommodation is for existing UTS students who will now reside on-campus.
- The proposal will deliver significant social, environmental and regional benefits associated with providing accommodation for up to 720 students at a major Sydney university.

Visual Impact

The proposed new tower for student housing will have minimal visual impacts on the locality. In distant views from the north and west, the tower will appear as an infill development between the existing ABC and Taragon buildings. As the tower form is set back from the Harris Street boundary of the site and Broadway, it will not be visible from the Railway Square Special Area and will not have adverse impacts on nearby heritage items.

Modulation and articulation to the façade act to reduce the bulk and scale of the development, and the proposed roof top signage adds interest to the skyline without adding clutter. Adverse impacts on the adjoining Taragon Building have been minimised where possible by setting back the south eastern corner by 8 metres to maintain some skyline views from north and east facing windows.

Internal Amenity

The development will achieve high levels of internal amenity for UTS students and staff. The internal layout of the student housing conforms to the requirements in the UTS Design Guidelines in terms of internal and common spaces, kitchen, storage and study requirements and provision of accessible housing.

The proposed development maximises natural daylight and ventilation to each unit while ensuring suitable levels of privacy. The visual privacy of each unit is achieved by offsetting facing windows and providing blinds or privacy screens on windows. Lifts and other plant areas from units have been acoustically isolated from units and building facades will be insulated to facilitate acoustic privacy.

Access and Mobility

All student housing units are visitable and 38 of the proposed 433 units will be fully accessible. A new accessible path of travel will be provided from the UPN into building and student housing above. Access to common, music and study rooms, terraces and laundries will comply with the relevant parts of AS 1428.2.

Impacts on Adjoining Development

Noise: Access to the Level 8 terrace adjacent to the Taragon Building will be limited to staff and acoustic screens will be installed along the perimeter of the terrace. In addition, internal areas of the building will meet environmental noise criteria for the site based on AS 2107:2000.

Visual Privacy: Due to the constrained nature of the site, the adjacent residential building may be overlooked by some student units or common areas. A range of measures have been incorporated into the design to minimise any adverse impacts.

There is fully enclosed lightwell on the northern façade of the Taragon site to enable light to penetrate to the lower levels of the Taragon Building. The 6 metre wide Taragon lightwell and the proposed 8 metre setback of the new residential tower from the boundary separates facing windows by approximately 14 metres. This is a better outcome than if the approved commercial building had been constructed on the site. To further minimise overlooking from the

student housing to the Taragon Building, permanent acoustic and external privacy screens will be provided on the south and east facing windows of the live-in staff member's apartment and on the boundaries of the adjoining outdoor terrace on Level 8. In addition, permanent external privacy screens will be installed on the south facing windows of units on Levels 9-20 of the tower and access to the outdoor terrace of Level 8 adjacent to the Taragon Building will be restricted to members of staff.

Solar Access: Between 9 am and 3 pm at the winter solstice, windows up to Level 9 of the Taragon Building are overshadowed by the adjoining Wembley House and the podium of the Peter Johnson Building. North facing windows above Level 9 of the Taragon Building are similarly overshadowed between 9 am and 10 am at the winter solstice.

The proposal will increase overshadowing to north and east facing windows of the Taragon at the winter solstice. However, this impact is considerably less than if the footprint of the approved commercial building had been adopted for the new residential tower. In addition, the combination of the lightwell in the Taragon Building and proposed setback of the new tower from the north east boundary of the Peter Johnson Building site will provide solar access to north facing windows in the Taragon between 9 am and 12 noon at the winter solstice. All affected units have two aspects and all affected windows are secondary windows (bedrooms, other than Level 17). The new student residential tower will not affect solar access to any primary living areas or balconies of these units.

Ecologically Sustainable Development

The proposal will minimise the use of energy and water by incorporating naturally ventilated units, no on-site car parking and use of environmentally friendly construction materials. The proposal has been assessed as delivering an equivalent environmental benefit as a 5 Star Green Star building assessed against the Multi-unit Residential tool.

Traffic and Transport

As the proposal is for student housing on a university campus adjacent to a major transport hub, it is not expected to generate any additional traffic impacts or additional demand for public transport when compared to the current situation. The existing Level 1 car park will be modified to accommodate structures associated with the construction of the new tower for student housing, and the remaining 122 car parking spaces are used by UTS staff. Secure parking for 70 bicycles will be provided on Level 2.

Heritage

The site does not include any items of local heritage significance. As the proposed student housing is set well back from the Harris Street boundary of the site and is separated from Broadway, the development will have negligible impacts on the heritage value of the Railway Square Special Area or heritage items in the vicinity of the site including items on the main UTS campus.

Geotechnical Conditions and Structural Engineering

Assessments of the existing structure and geotechnical conditions in the vicinity of the site have determined the existing structure can accommodate the proposed development. Further detailed testing will be carried out of critical piles, and piling records reviewed, to confirm the individual increased load capacities of the piles.

Safety and Security

To ensure the safety and security of students and staff, access to the student housing will be limited to authorised persons only. The Residential Life / UniLodge office will be operational from 8am-8pm Monday to Saturday and one

full time staff member will reside in the Tower throughout semester. In addition, doors to student housing units and bedrooms will be lockable and security personnel will patrol the area after hours.

Social and Economic Impacts

The proposal will, for the first time, introduce a resident population onto the Broadway Precinct of the University and redress the current deficiency in student housing at UTS by providing 720 beds for quality, affordable accommodation. It may also assist in relieving pressure on local private rental housing – so benefitting the wider community by enabling local residents to rent affordably. UTS student services and recreational facilities will be able to accommodate any additional demand generated by the students, while students residing on campus will deliver economic benefits to the locality by patronising local services and retail outlets in the vicinity of the site.

Construction Management

Impacts from construction on operations in the Peter Johnson Building and adjoining properties will be minimised through the management of construction traffic, noise, vibration and waste. Works will be carried out over an 18 month period and staged to minimise impacts on existing University facilities.

Conclusion

The Project Application for UTS Student Housing in the Peter Johnson Building will deliver significant benefits for future UTS students. It will complement the proposed expansion of teaching spaces on the Broadway Precinct of the UTS City Campus as this application includes the infill of the existing Peter Johnson Building to provide approximately 5,900m^2 of additional UTS teaching spaces and student services.

The development is considered to be in the public interest as State, regional and local needs will be met through the provision of new student housing on the primary campus of a major tertiary institution. The proposed development will have minimal adverse environmental effects, all of which can be effectively managed.

1.0 Introduction

This Environmental Assessment Report (EAR) is submitted to the Minister for Planning (the Minister) pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for a Project Application for new student housing in the Peter Johnson Building at the Broadway Precinct of the UTS City Campus at Ultimo.

This EAR relates to 702-730 Harris Street in Ultimo (Lot 11 in DP 835246), herein referred to as 'the site'.

Approval is sought for:

- Infilling and extending the podium of the existing Peter Johnson building (Building 6) to provide approximately 5,950m^2 of additional floor space for University teaching space and student housing support services.
- Construction of a 13-level tower above the existing and infilled podium which will accommodate student housing and recreation space for 720 students and comprise approximately 19,200m^2 of additional floor space.

The report has been prepared by JBA Urban Planning Consultants Pty Ltd, on behalf of the applicant, the University of Technology Sydney (UTS). It is based on design information provided by **nettleton**tribe (NT) and supporting technical documents provided by the expert consultant team (see Section 1.3 and Table of Contents). A 3-D model and a physical model as well as a materials and finishes sample board are submitted separately.

1.1 Background

Planning History

The existing Peter Johnson building was constructed in accordance with development consent DAZ91-00242 issued by the Council of the City of Sydney (Council), but was only constructed to the podium level. The development consent also included a 13 storey tower above what was to be a seven storey podium to accommodate commercial offices, up to a maximum height of RL80 AHD. Only the existing podium was constructed in accordance with this consent, which is now considered to be substantially commenced.

The Peter Johnson Building, also referred to as Building 6, forms part of the UTS Broadway Precinct of the UTS City Campus. It currently houses the Faculty of Design, Architecture and Building.

On 4 September 2008, the Minister for Planning formed the opinion that the proposed UTS Concept Plan was a Major Project to which Part 3A of the EP&Act applies (see **Appendix A**). On 5 February 2009, the Department of Planning (the Department) confirmed that a separate declaration was not required for the proposed Project Application on the basis that because the Minister declared the UTS Concept Plan to be a Major Project, the proposed Project Application is considered to be authorised within the scope of the proposed Concept Plan, and therefore a Major Project under which Part 3A applies.

On 17 February 2009, in accordance with Section 75F of the EP&A Act, the Director-General of the Department issued the requirements for the preparation of an Environmental Assessment to accompany the Project Application. A copy of the Director General's Requirements (DGRs) is included at **Appendix B**.

Project Background

Throughout its evolution, UTS has increased student numbers without any significant increase in student facilities. In relation to student housing, UTS currently rates relatively poorly compared with other Sydney and Australian universities which offer a greater range and volume of student housing. This proposal seeks to redress the current deficiency in student housing.

In selecting the most appropriate procurement method for the redevelopment of the Peter Johnson Building – the first stage of development of the Concept Plan - UTS has adopted a Public Private Partnership (PPP) process for the design, construction and operation of student housing in the Peter Johnson Building as well as refurbishment of the seven levels of education space in the existing building (the podium).

Following a competitive tender process, involving a range of selection criteria (particularly design, construction costs and the operational aspects of the student care development), Living Education was deemed the preferred consortium to deliver the project on behalf of UTS. Living Education will own and operate the student housing component of the development for the next 35 years. After this time, ownership will revert to UTS who will operate the student housing.

Living Education is a consortium comprising Citta Property Group, Hutchinson Builders, Macquarie Capital Advisors and UniLodge. Student services will be provided by Residential Life, a part of UTS.

Student Housing

UTS seeks to provide value-for-money student housing that creates a social and learning environment that supports the University's objectives. It is a proven model of accommodation that has been used at similar Australian universities including the ANU and University of NSW. Student housing at the Peter Johnson Building will include the following features:

- Affordable and functional accommodation;
- A high level of pastoral care and sense of community;
- A high level of safety and security including a front desk reception;
- Mix of accommodation types to meet market demands;
- Fully furnished rooms; and
- Indoor and outdoor communal facilities.

Accommodation will be in studio, two and six bed configurations and could be considered to be a hybrid of boarding house, hotel and serviced apartment style accommodation.

1.2 Capital Investment Value

The capital investment value of the project is $69.9 million (see the Quantity Surveyor's report at **Appendix C**). Capital investment value is defined in the Major Projects SEPP as the value of the development including all costs necessary to establish and operate the development, including design and construction of buildings, structures, associated infrastructure and fixed or mobile plant and equipment (but excluding land costs).

1.3 Project Team

The following consultants contributed to this environmental assessment report:

Project/Development Manager	Hutchinson Builders
Architecture	**nettleton**tribe
Urban Planning	JBA Urban Planning Consultants
Quantity Surveyors	WT Partnership
Structural Engineering	BG&E
Geotechnical Assessment	Douglas Partners
Stormwater	BG&E
ESD	Viridis E^3
Hydraulics	GDK Hydraulics Consulting
Traffic and Transport	Halcrow MWT
Non-Indigenous Heritage	Godden Mackay Logan
Noise	Acoustic Logic Consultancy
Access	Morris-Goding Accessibility Consulting
Wind Impacts	Windtech
Solar Light Reflectivity Impacts	Windtech
Waste Management	JD MacDonald
Operational Management Plan	UniLodge
Building Code of Australia	City Plan Services
BCA Section J Review	DSA Consulting
Fire Safety Engineering	Defire (NSW) Pty Limited
Computational Fluid Dynamics Study	Waterman AHW Consulting Engineers
Electrical and Communications Infrastructure	Building Services Engineers
Construction Management	Hutchinson Builders

2.0 The Site

2.1 Location and Context

With an area of 5,109m^2, the site has two frontages, one to Harris Street and the other to the Ultimo Pedestrian Network (UPN) – the public pedestrian link between the Devonshire Street Pedestrian Tunnel and Ultimo Road. The locational context is shown in **Figure 1**.

The site is located within the City of Sydney local government area and within the Ultimo Cultural and Education Precinct which also includes the Sydney Institute of TAFE, the Powerhouse Museum, the University of Sydney, the Sydney Institute of TAFE, the Sydney Entertainment Centre and the ABC Headquarters. It is within short walking distance of Central Station, via the Devonshire Street tunnel, which connects to the UPN, as well as a large number of services and retail outlets, including along Broadway, and around World Square and Chinatown.

Figure 1 – Site plan (Source: BVN with JBA overlay)

2.2 Land Title and Zoning

The site is owned by UTS and is legally described as Lot 11 in DP 835246. It is zoned Residential-Business under Sydney Local Environmental Plan 2005 (SLEP 2005). A site survey is at **Appendix D**.

2.3 Existing Development

The Peter Johnson Building as viewed from Harris Street is shown in **Figure 2**. The existing structure is seven storeys in height and was designed by Phillip Cox Richardson Taylor and Partners Pty Ltd and is of a post modern style – see **Figure 3**. This decorative side of the building addresses Harris Street, with a simple facade treatment to the rear of the building – see **Figure 4**.

Figure 2 – View of Peter Johnson Building from Harris Street

Figure 3 – Peter Johnson Building from the Harris Street Pedestrian Bridge

Figure 4 – Rear of Peter Johnson Building from the UPN

The floor layouts of the existing building are shown in the plans prepared by **nettleton**tribe and included at **Appendix E**. Specifically the building comprises the following uses at each level:

- Level 1 – car parking for 135 cars;
- Level 2 – faculty workshops and loading dock;
- Level 3 – public lecture theatre and faculty computing area;
- Level 4 – exhibition area, seminar rooms and café;
- Level 5 – faculty offices and studios;
- Level 6 – architecture offices, design offices and workshops; and
- Level 7 – studios.

Vehicle access to the underground car park (at Level 1) and loading dock (at Level 2) is from Harris Street at the southern end of the building.

The main pedestrian entry into the building is located on Harris Street (Level 2), with stairs leading to the building's internal foyer at Level 3 – see **Figure 5**. A one-way escalator and stair provides access from the UPN to Level 3 of the building.

At the rear of the building at Level 2 is an open space area which is at the same grade as the UPN. Utilised for a basketball court, this area includes a small existing tree and is fenced to the rear boundary and is accessed by a set of stairs that link to Levels 2 and 3 above – see **Figure 6**. At Level 4, the building connects to the pedestrian bridge over Harris Street, linking the building to the remaining portion of UTS's Broadway Precinct – see **Figure 7**.

The building also serves as a pedestrian through link between the UPN, Central Station and the Broadway Precinct. This requires pedestrians to make their way up the stairs or escalator from the UPN to Level 4 (see **Figures 7** and **8**), through the cafe on Level 4 (see **Figure 9**) and onto the Harris Street pedestrian bridge to UTS Building 4 – see **Figures 10** and **11.**

Also at Level 4 are two central courtyard areas that adjoin the cafe and teaching rooms. Each courtyard is separately located to the northern and southern sides of the site – see **Figure 12**.

Figure 5 – Pedestrian entry from Harris Street to Level 3

Figure 6 – Basketball court to rear of Peter Johnson Building

Figure 7 – Escalator and stair structure viewed from UPN

Figure 8 – Escalator and stairs between Peter Johnson Building and UPN

Figure 9 – Cafe at Level 4 of Peter Johnson Building

Figure 10 – Harris Street Pedestrian Bridge at Level 4

Figure 11 – Harris Street Pedestrian Bridge

Figure 12 – Southern courtyard within Peter Johnson Building

2.4 Surrounding Development

The locality is characterised by several medium to high rise buildings. Between Broadway and Ultimo Road, Harris Street primarily accommodates commercial and education uses and is typified by mature street trees that partially screen many of the buildings just above street level – see **Figure 13**.

Conversely, buildings that address the UPN form a hard edge corridor of high rise development. Much of this development comprises the back of buildings, exposing their plainer and utilitarian side whose primary address is Broadway, Thomas Street or Harris Street – see **Figures 7** and **14**.

Figure 13 – Harris Street streetscape

Figure 14 – Ultimo Pedestrian Network looking north

The UPN is embellished with simple landscaping, seating, trees and street lighting – see **Figure 14**. Directly opposite the site is the rear of the Marcus Clark Building, which forms part of the Sydney Institute of TAFE's Ultimo College – see **Figure 15**.

South east of the site is the Wembley House building which is currently used for commercial offices – see **Figure 15**. The rear of this building addresses the UPN and is constructed over the former railway line that once traversed the UPN. It partially abuts the Peter Johnson Building.

The Citigate Central Hotel also abuts the UPN on its eastern side with the hotel car parking levels directly addressing the UPN. The accommodation portion of the building is set back from the UPN – see **Figure 16.**

Figure 15 – Marcus Clark Building (left) and Wembley House (right)

Figure 16 – Rear of Citigate Hotel building viewed from the UPN

Immediately adjoining the site to the north, at 700 Harris Street, is the Australian Broadcasting Corporation's (ABC) Ultimo Centre. This building serves as the ABC's Sydney headquarters and accommodates a range of broadcasting facilities and office uses associated with the ABC's radio, internet and television services - see **Figure 17**.

The ABC building addresses both Harris Street and the UPN and extends up to Ultimo Road. The building's design is contemporary and includes a tall spire that rises to RL 89.19 signifying the ABC's association with broadcasting. The building comprises both a podium level and connected tower elements which are set back from Harris Street. Viewed from the UPN, the ABC tower elements are not set back from the podium so that the building reads as a single built element – see **Figure 18**. The southern side of the ABC building addresses the site with a blank facade – see **Figure 19**.

Figure 17 – ABC building viewed from Harris Street Pedestrian Bridge

To the south of the site is a residential apartment building, known as the Taragon. It has a 6 storey podium element fronting Harris Street, and comprises a total of 17 storeys rising to RL 65.57– see **Figure 20**. The rear of this building overlooks the rear of the development site towards the UPN – see **Figure 21**.

The building is of contemporary design and is typical of new residential high rise development in the city's CBD. The northern facade directly adjoining the Peter Johnson building comprises a blank facade – see **Figure 22**.

Figure 18 – ABC building viewed from UPN

Figure 19 – Adjoining wall of ABC building from UPN

Figure 20 – Taragon Building to the south of the site

Figure 21 – Taragon Building (grey and white building) viewed from UPN

Figure 22 – Taragon Building viewed from Peter Johnson Building

Harris Street and the Harris Street Overpass are located to the western side of the site. Harris Street is a busy 5 lane arterial road carrying one way traffic to Broadway. On average, it accommodates approximately 30,000 vehicle movements per day.

2.5 Access and Transport

The site is a short walk, generally via the Harris Street Pedestrian Bridge, to the other buildings comprising the Broadway Precinct of the University.

Broadway is a major public transport corridor with regular bus services both during the week and over the weekends between the inner west areas through to the Sydney CBD, including Central Railway Station. The site is a short walk from Central Railway Station via the Devonshire Street Pedestrian Tunnel. All metropolitan and regional rail services either pass through or terminate at Central. In addition, the station serves many regional bus services.

2.6 Site Analysis

Further analysis of the site and its character has been undertaken by **nettleton**tribe and is included in their Design Report at **Appendix E**. Based on **nettleton**tribe's advice and the above analysis, the following is an overview of the constraints and opportunities associated with developing the site.

Constraints

- Existing pedestrian entry points and access routes through the Peter Johnson Building are generally unclear and illegible and impede access for disabled persons.
- New development is limited by the structural capacity of the existing (podium) building and to the eastern side of the site.
- Harris Street is a busy street that does not provide a friendly pedestrian environment or a pick-up / drop-off area.
- The design and orientation of the buildings along the UPN, suggest that when they were constructed there was deliberate intent for them not to address or overlook this pedestrian thoroughfare.
- The western side of the site is exposed to solar gain, particularly during warmer months.

Opportunities

- The site provides important pedestrian links between the UPN, Devonshire laneway and the UTS's Broadway and Haymarket Precincts.
- The site's interface with the UPN provides an opportunity for the development to activate the UPN at Level 2.
- There is opportunity to expand the building over the north eastern portion of the site, which is undeveloped.
- The site is well served by public transport.
- The built character of existing development along Harris Street is established by tower elements over podium built forms.

The adjoining developments to the north and south of the site include bare walls, with no windows or fenestration.

3.0 Project Application

The Project Application relates to the development of the first component of the Concept Plan for the UTS Broadway Precinct. Specifically, approval is sought for:

- Infilling and extending the existing Peter Johnson building (Building 6) to provide approximately 5,900m^2 of additional floor space for University teaching space and to house student housing support services.
- Construction of a 13-level tower above the existing and infilled building, which will accommodate student housing for 720 students and comprise approximately 19,200m^2 of additional floor space.
- Provision of associated recreational and communal spaces at proposed Levels 8 and 21.

This section of the report provides a detailed description of the proposed development.

Architectural Plans and the Design Report for the proposal prepared by **nettleton**tribe are provided at **Appendix E** and at **Volume 3**.

3.1 Numerical Overview

The following table provides a numerical overview of the proposed development.

Table 1 – Numerical overview

Element		**Dimensions**	
		SLEP 2005 definition (see Section 4.4)	**Standard LEP definition** (see Section 4.4)
GFA	**Existing**	15,872.0m^2	15,114.6m^2
	Proposed additional	25,132.7m^2	23,732.6m^2
	Total	41,004.7m^2	38,847.2m^2
Building height	**Existing**	25.59m	30.09m
	Proposed	67.79m	71.09m
Car parking spaces		122	
Bicycle parking spaces		70	
Student Housing	**Studio**	308	
	Accessible studio	38	
	Two-bedroom	37	
	Six-bedroom	50	
	Total	433	
Total student beds		720	
Indoor communal space		1,244.7m^2	
Outdoor communal space		793m^2	

3.2 Design and Built Form

The extent of the proposed development is shown in the Architectural Plans at **Volume 3**. Photomontages of the building when viewed from Broadway, Harris Street and the UPN are provided at **Figures 23**, **24** and **25**.

Figure 23 – Photomontage of development from Broadway and Harris Street

Figure 24 – Photomontage of development from Harris and Thomas streets

Figure 25 – Photomontage of development from UPN

Design Process

UTS has utilised the Public Private Partnership (PPP) method for delivery of this project. This is a standard practice for student housing and education facilities and will become a more prevalent form of delivery across the education market sector. The PPP model involves preselected consortiums delivering an holistic offer to the client that contains design, construction, operation and financing excellence. Since being selected as the preferred tenderer, Living Education and UTS have worked together to finalise the design.

The design has taken into account the opportunities and constraints of the site and the existing building, the context of surrounding built form, the need to achieve appropriate integration with the existing building, and delivering high quality internal amenity for students.

A detailed explanation of the design process and the various design options that were explored in arriving at the final design is provided in the Design Report prepared by **nettleton**tribe included at **Appendix E**.

Design Principles

The design principles taken into account in designing the facade to Harris Street, the building's address to the UPN and its relationship to the adjoining buildings is outlined in the Design Report at **Appendix E**. The key principles for the development are as follows:

- The proposed building envelope will step back on the UPN southern side to respect adjoining windows and view corridors of the adjoining southern residential building (Taragon).
- The Harris Street façade is to be treated as an infill between the ABC building and southern adjoining buildings. The façade will be articulated to complement the scale and detail of articulation of adjacent buildings.
- The new façade on the UPN podium side will be aligned with the ABC recessed building line.
- The building identification sign will be clearly visible from Alumni Green reinforcing the connection of the building to the rest of the Broadway Precinct of the university.
- The infill of the podium on the UPN side will create a new address and reinforce connections from Central Station through the UPN to Harris Street.
- Provide a café at the UPN interface to activate the locality.
- The Harris Street facade is to be constructed in a way that ensures a safe working environment is maintained for UTS staff and students using the existing teaching spaces in the Peter Johnson Building.

Built Form

The main two components of the development are to expand the existing building towards the UPN (being the podium infill) and to construct a tower element over the extended podium.

Between Levels 2 and 7, the existing building will be extended towards the UPN essentially filling in the existing basketball court area. Level 2 will comprise a direct pedestrian entry into the building and include a cafe and the reception/ lobby area for the student housing (to be accommodated on Levels 8 to 20). A series of bi-fold doors at the interface with the UPN will open the building to UPN at this level.

Development on Levels 3 to 7 will comprise additional floor space to be utilised

by UTS for teaching purposes. The space will be fitted out to complement the existing UTS spaces in the podium.

The tower element to be constructed over the infilled podium will consist of 13 floors of student housing. Level 8 will also include a communal laundry, recreational and study areas. The common areas on Level 8 will open onto a continuous terrace overlooking the UPN and provide outdoor recreational areas for students. The terrace is part formed from the voids in the built form on the UPN façade.

Level 21 will comprise a roof-top terrace for students to utilise as additional recreational space to that provided at Level 8. These two levels of outdoor space will be for the exclusive use of the students accommodated in the building. Proposed landscaping treatments, shown in the Design Report at **Appendix E**, generally comprise outdoor furniture and clusters of large bespoke planter pots. Suitable wind and pollution tolerant species will be selected for the pots.

Building Height and Massing

Under the definition in SLEP 2005 the height of the building will be 66.79m (top of ceiling of habitable floor). Above the roof terrace is a 6.1 metre plant area, part of which will incorporate a new building identification sign.

On the Harris Street side the proposed tower element will be set back in line with the adjoining tower elements of the ABC and Taragon buildings. The UPN side the building envelope addresses the UPN but is indented to provide solar access to the interior of the student housing and the outdoor terrace spaces at Level 8. On the northern and southern edges of this façade the indented setbacks are intended to protect the solar access and privacy of the apartments in the Taragon Building to the south.

Other than the above setbacks, the tower will for the most part be built to the northern and southern boundaries of the site, abutting the ABC and Taragon buildings respectively.

Materials and Finishes

As outlined in the Design Report, the proposed materials and finishes for the development have been selected to break up the built form, highlight the window treatments (particularly the vertical and horizontal pattern window treatment along the Harris Street facade) and to provide a fresh appearance cognisant of the building's association with the University.

3.3 Internal Layout

A detailed description of the works proposed at each level is provided in **Table 2** below.

Table 2 – Description of proposed works on each level

Level	Proposed Works
Podium	
Level 1	▪ Structural upgrades to support the additional development ▪ Storage space for the student housing development
Level 2	▪ Provision of office and administrative space for the student housing development ▪ Reception area and lift lobby (and lift core) for student housing development with direct access from UPN ▪ Bicycle storage for student housing development ▪ Garbage storage for student housing development ▪ Extension of the existing UTS student lounge ▪ New UTS café with frontage to and direct access from the UPN ▪ New fire control centre ▪ Shared student drop off and delivery area
Level 3	▪ Infill and fitout of additional UTS education space
Level 4	▪ Infill and fitout of additional UTS education space
Level 5	▪ Infill and fitout of additional UTS education space
Level 6	▪ Infill and fitout of additional UTS education space
Level 7	▪ Infill and fitout of additional UTS education space ▪ Storage and plant room space for student housing development
Level 8	▪ Outdoor terrace areas at north-eastern façade (542m^2) ▪ Music room, data room, games room, common lounge/meals room, theatrette, laundry, communal study/tutorial rooms ▪ 8 x studio units ▪ 2 x accessible studio units ▪ 1 x two-bed unit ▪ 2 x six-bed units
Tower	
Levels 9-20	▪ 25 x studio units ▪ 3 x accessible studio units ▪ 3 x two-bed unit ▪ 4 x six-bed units ▪ Communal study/tutorial rooms
Roof area	▪ Plant room ▪ Roof top outdoor area including covered terrace and outdoor kitchen (336m^2) ▪ Bathroom, internal kitchen and store

3.3.1 Student Housing Modules

Each level of student housing is to comprise various accommodation types or modules. A detailed description of each of these modules is outlined in Sections 5.8 and 5.9 of the Design Report prepared by **nettleton**tribe (at **Appendix E**).

3.3.2 Student Services

Indoor and outdoor common areas will be provided for students on Level 8 and the roof. The common terrace on Level 8 and roof terrace will be accessible between 7am and 10pm daily for individual leisure and study activities. Activities managed by Residential Life / UniLodge may be held at these locations in the early evenings or on weekends.

Level 8 also incorporates a large common laundry, as well as theatrette, games room, music room and common lounge. Study / tutorial rooms are provided on all residential floors.

3.4 Pedestrian Access

The infill of the podium of the existing Peter Johnson building will include the provision of three new lifts, which will provide direct access between Level 2 and the student housing at Levels 8 and above.

To address the current difficulties with stair access from the UPN to the main parts of the UTS Broadway Precinct, a new accessible path of travel will be provided from the UPN into the infilled podium and student housing above.

Access through the building either to Harris Street or the Harris Street Bridge is to be made via the building entry at UPN frontage at Level 2 and to the existing lift lobby within the core of the building.

Access to the proposed student housing will also be made either:

- via the Level 2 UPN entry via the new lifts located within the student housing reception / lobby area; or
- from Level 3 through to the new lifts.

These paths of travel are illustrated in the Design Report at **Appendix E**.

These new pedestrian routes will provide alternative pedestrian access to the existing escalators and stairs on the UPN to Level 4. The new pedestrian route will also provide disabled access through the building to Harris Street and to the Harris Street Pedestrian Bridge, which in turn provides access to the other UTS campus buildings on the other side of Harris Street.

3.5 Transport and Parking

Vehicle access and egress to and from the site will continue to be provided via the existing two-way driveway off Harris Street. This entry will be controlled via a boom gate, which will be activated by UTS security or a security code.

A total of 122 parking spaces will be retained at Level 1; this is a reduction of 13 spaces when compared with the current situation. Remaining spaces will be for the exclusive use of the Faculty. One space will be provided for disabled visitors. No additional car parking is proposed.

3.6 Ecologically Sustainable Development

The proposal incorporates various measures for the development to target the equivalent of a 5 star Green Star rating, assessed in accordance with the pilot tool for multi-residential development. The measures to be incorporated into the development include:

- All student housing units will be naturally ventilated.
- Green construction management practices, including certified EMP, waste management, commissioning, handover and fine-tuning will be used.
- Green materials and products, including concrete, steel, floor coverings, composite wood, appliances, fixtures, paints, sealants and adhesives will be used in the building.
- Step the building footprint to the UPN to provide improved solar access to student housing and open spaces at Level 8.
- Use energy and water saving appliances, fittings and fixtures.
- Harvest rainwater for on-site reuse.
- Provide no additional car parking for the development.
- Encourage students to utilise nearby public transport and pedestrian links.

These measures form part of the draft Statement of Commitments.

A detailed appraisal of the development in accordance with the Green Star pilot rating tool is included in the Environmental Initiatives Statement prepared by Viridis E^3 and included at **Appendix F**.

3.7 Signage

A building identification sign is proposed on the roof top of the building. The sign will incorporate UTS's logo and be affixed to the proposed mechanical plant room at the western side of the building. The UTS logo will have dimensions of 2.4m (height) x 7.17m (width). The sign will be constructed of white metal cladding and will be back lit. This sign will be illuminated from sunset to sunrise.

A further UTS building identification sign will be located near ground level on the UPN façade. It measures 6.99 m (length) x 24.49m (height). The logo will be perforated into the screen facade, so that it will give the appearance of a watermark.

3.8 Deliveries and Servicing

Chutes for general waste and recyclables are to be provided on all student housing levels. Private contractors will collect garbage on a twice weekly basis via the storage area on Level 2 which is accessed via the loading dock off Harris Street. This is addressed in detail in the Operational Waste Management Plan prepared by JD MacDonald at **Appendix T**.

General deliveries to the building will be via the existing Level 2 loading dock which is accessed from Harris Street.

3.9 Operations and Management

A student housing office will be located at Level 2 near the UPN entry. Office hours will be 8am to 8pm Monday to Saturday. All students will be supported by a Residential Life / UniLodge Team, comprising a manager, two coordinators and a live-in staff member. The live-in staff member will be allocated the two-bedroom apartment on Level 8. The student housing will be operated in accordance with the Plan of Management prepared by UniLodge and included at **Appendix G**.

All unit doors, bedroom doors and the main entry to the student housing area will be lockable. Security cameras, intercom system, after hours lock-out service and after hours on-call and roaming security personnel will patrol the site.

Student access to the roof terrace and common outdoor terrace on Level 8 will be generally limited to 7am to 10pm and be managed by Residential Life / UniLodge. These areas will be locked at all other times. Access to the private terrace on the south east corner of Level 8 will be limited to Residential Life / UniLodge staff.

The Plan of Management forms part of the draft Statement of Commitments.

The proposed café at Level 2 will be open during the day. Bi-fold doors are provided along the UPN frontage of the site, to encourage natural ventilation and enable outdoor tables and chairs to be used in warmer weather. The fit-out of the café will be the subject of a separate development approval.

4.0 Planning Framework

This chapter details the relevant strategic plans and environmental planning instruments (EPIs) applying to the site and the proposal. An assessment of compliance with relevant plans is provided at Section 6.0.

4.1 Strategic Planning

Metropolitan Strategy

"City of Cities: A Plan for Sydney's Future" (the Metropolitan Strategy for Sydney) was launched by the NSW Government in December 2005. It provides commentary and direction for the next 25-30 years at a regional level on issues such as land use, economic development, jobs, transport, innovation, centres and corridors, and residential areas within Sydney. It aims to accommodate 1.1 million additional residents and 500,000 new jobs over the period to 2031. Elements of the Metropolitan Strategy relevant to the proposal include:

- Maintaining the strong global economic corridor, which stretches from Sydney Airport to Macquarie Park and includes the City of Sydney and UTS site;
- Containing Sydney's development footprint; and
- Providing fair access to housing, jobs, services and educational opportunities.

The proposed student housing development is a key component of the redevelopment of the Broadway Precinct and will revitalise and improve the area while reducing pressure on rental accommodation in the locality.

Draft Sydney City Subregional Strategy

The Draft Sydney City Subregional Strategy was released in July 2008. It is a key part of the implementation of the Metropolitan Strategy and is intended to guide land use planning in the City of Sydney local government area to 2031. Elements of the draft subregional strategy relevant to the proposal include:

- Reinforcing global competitiveness and strengthen links to the regional economy;
- Planning for sustainable development of major urban renewal projects;
- Developing an improved and increasingly integrated transport system that meets the city's multiple transport needs; and
- Planning for housing choice.

UTS is located in the heart of Global Sydney, in the Sydney Education and Health Precinct in close proximity to a key public transport interchange (Central Station). This Precinct is defined as "a major area for education, medical and research and technology-based jobs". The addition of student housing in this location is consistent with the State Government's strategic planning goals.

Sydney 2030

In *Sustainable Sydney 2030*, Council highlights the "international role of its major ...educational institutions" including UTS. It encourages increased functions for such institutions in the economic life of City precincts, as well as the fostering and development of the City's creative and innovative capacity. To this end *Sustainable Sydney 2030* supports the expansion of education clusters within walking distance of activity hubs such as Harris Street, and proposes a substantial increase in employment in the City's specialised industries, including education, by 2030.

The proposed development of approximately 720 additional student beds will support the expansion and improvement of the Campus in this location consistent with State and local government objectives for the area.

NSW State Plan

The NSW State Plan was released in November 2006. It sets out the priorities and targets for the State Government over the next 10 years which are designed to deliver better services and improve accountability across the public sector.

The concept for the redevelopment of the Broadway Precinct of the UTS City Campus (of which the proposed development for student housing forms an integral part) meets the following objectives of the NSW State Plan in that it facilitates the delivery of:

- *NSW: Open for Business* through facilitating increased business investment (P1) and more people participating in education and training throughout their life (P4); and
- *Improved Urban Environments* through providing a range of additional student housing accommodation will provide affordable housing choice for UTS students in close proximity to the University (E6).

The development of additional student housing will encourage increased economic activity in the locality by increasing the demand for local services and local businesses. Additionally, it supports the expansion and consolidation of the UTS Broadway Campus, a key education institution within the City of Sydney.

Urban Transport Statement

The Urban Transport Statement was released in November 2005. The Statement comprises a $660 million package of new and accelerated initiatives to address Sydney's present and future transport needs. The Statement is an action plan that responds to the growing transport challenges in Sydney as the current population of 4.1 million increases to more than 5 million within 20 years.

The proposed development is consistent with the Urban Transport Statement as the site is less than 500 metres from Central Station. It will promote the use of the existing CityRail and bus services.

4.2 State and Regional Planning Instruments and Policies

This section summarises the relevant State and regional environmental planning instruments (EPIS) that apply to the site. An assessment of the proposal against these relevant EPIs is provided in Section 6.3 of this EAR.

State Environmental Planning Policy No 55 - Remediation of Land

State Environmental Planning Policy 55 – Remediation of Land (SEPP 55) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. It requires that a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated, and that is the land is contaminated whether or not the land can be made suitable for the proposed use.

State Environmental Planning Policy (Major Projects) 2005

The Major Projects SEPP identifies certain categories of development and specified sites that are subject to assessment and determination under Part 3A of the EP&A Act. The proposal is a Major Project under Clause 20 of Schedule 1 as a development for the purpose of teaching or research (including universities, TAFE or schools) that has a capital investment value of more than $30 million.

State Environmental Planning Policy (Infrastructure) 2007

The aim of the Infrastructure SEPP is to facilitate the effective delivery of infrastructure across the State by:

- Improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services;
- Providing greater flexibility in the location of infrastructure and service facilities;
- Allowing for the efficient development, redevelopment or disposal of surplus government owned land;
- Identifying the environmental assessment category into which different types of infrastructure and services development fall;
- Identifying matters to be considered in the assessment of development adjacent to particular types of infrastructure development; and
- Providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing.

The Infrastructure SEPP requires referral to the Roads and Traffic Authority (RTA) of any development listed in Schedule 3 of the SEPP. The proposed student housing development is required to be referred to the RTA as it is a type of development listed under Schedule 3, namely development for the purposes of *residential flat building*[1] *with 75 or more dwellings with access to a classified road*.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

State Environmental Planning Policy (Building Sustainability Index) 2004 (SEPP BASIX) establishes energy and water saving targets for new residential developments within NSW. The policy aims to ensure that new residential development achieves a high standard of energy and water efficiency. The BASIX SEPP is not strictly applicable to the proposed development as is does not apply to Class 3 buildings. As a result, alternative mechanisms to achieve a high standard of energy and water efficiency on the site are proposed. Further detail is provided in Section 6.10.

State Environmental Planning Policy 64 – Advertising and Signage

State Environmental Planning Policy 64 – Advertising and Signage (SEPP 64) applies to signage that can be seen from a public place unless the signage is permitted as exempt development under a local planning control.

A rooftop sign is proposed on the new student housing development which is identified as a building identification signage for the purposes of SEPP 64.

1 A residential flat building means a building containing 3 or more dwellings

Before granting consent to development which involves signage affected by SEPP 64, the consent authority must be satisfied that the proposal is consistent with the objectives of the Policy which are:

(a) to ensure that signage (including advertising):

(i) is compatible with the desired amenity and visual character of an area, and

(ii) provides effective communication in suitable locations, and

(iii) is of high quality design and finish.

In addition, the consent authority must assess the proposal against the relevant assessment criteria in Schedule 1 of SEPP 64, including the proposal's compatibility with the character of the area and its impact on views and vista. An assessment of the proposal against the relevant provisions of SEPP 64 is provided in Section 6.3.

State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings

State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings (SEPP 65) provides guidelines and design principles for the development of Residential Flat Buildings (RFBs) within NSW. All new RFB development must demonstrate compliance with the ten design principles within SEPP 65 and must be accompanied by a Design Statement from a registered NSW architect. SEPP 65 is supported by the Residential Flat Design Code (RFDC) which provides numerical guidelines (Rules-of-Thumb) for RFB developments in NSW.

The intention of SEPP 65 is to provide clear design guidance and to ensure implementation of best practice in the development of residential flat buildings. Strictly speaking, the proposed student accommodation is not a residential flat building as it is purpose-built for the specific needs of students whose living arrangements are not family orientated and are required to be very affordable.

In the recent case *Phoenix Ventures Pty Ltd v Sydney City Council* [2006] NSWLEC 632, in which student accommodation was proposed at a site in Pyrmont, the Commissioner Murrell found that it was acceptable for the student accommodation to not achieve all desirable 'rules of thumb' design requirements under SEPP 65 as this type of development was considered to be a 'hybrid' form of residential development and needed to be suited to the specific needs of students. The Commissioner also noted the Council needed a planning policy specific to student accommodation which would help explain the planning requirements for this form of development. At this stage Council has not prepared a specific policy for student accommodation development to provide further clarity on the matter.

Regard has been given to the principles of SEPP 65 with respect to the proposed development. However, where concessions have been made to the application of the 'rules of thumb' under the Residential Design Flat Code these are considered acceptable in the context that the proposed development aims to provide accommodation that is affordable with good levels of amenity suited to the living and study needs of the students.

The ways in which the development achieves the SEPP 65 principles are outlined in the SEPP 65 Statement prepared by **nettleton**tribe, which is included at in the Design Report at **Appendix E**.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The Sydney Regional Environmental Plan (Sydney Harbour Catchment) (the Sydney Harbour REP) applies to land within the Sydney Harbour Catchment and includes the site. It aims to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained.

4.3 Local Statutory Planning Framework

Although local planning controls are not strictly applicable to Major Projects assessed under Part 3A of the EP&A Act, in accordance with the DGRs, relevant local planning instruments and policies have been taken into consideration. This ensures that the proposed student housing development is consistent with the character and scale of development in the locality. This section summaries the relevant local environmental planning instruments, policies and development control plans that apply.

Sydney Local Environmental Plan 2005

The *Sydney Local Environmental Plan 2005* (SLEP 2005) is the principal EPI applying to the site and includes key development standards for the site. It also identifies the land use zone and zone objectives for the site, as well as relevant provisions to be taken into account when assessing the Project Application.

Planning principles for development in Ultimo-Pyrmont include:

- Development is to provide for a significant increase in residential population in a mixed-use development pattern also accommodating employment, educational and other uses;
- Uses at the ground level of buildings fronting the public domain should complement the functions of the public domain; and
- Where possible, development is to make use of existing under-utilised buildings and large areas of land which are either vacant or occupied by out of date facilities.

Additional planning principles are provided in relation to residential development, social issues, high quality urban design and public domain and the provision of a range of leisure and recreation opportunities.

Residential-Business Zone

The site is zoned Residential-Business under SLEP 2005. **Figure 26** provides an extract of the land use zoning map for the site and surrounds. Uses that are consistent with one or more of the zone objectives are permissible with development consent in the zone.

Objectives of the zone that are relevant to the proposal include:

- Accommodate uses which generate employment opportunities and provide facilities and services that enable people to live and work in the same community; and
- Encourage sustainable transport modes for journeys to work and other trips, including walking, cycling and all forms of public transport.

Development Standards

Clause 93 of SLEP 2005 (maximum building heights) establishes a maximum building height of 42 metres for the site. **Figure 27** provides an extract of the building height map for Ultimo Pyrmont from SLEP.

Clause 99 (floor space limits for non-master plan areas in Ultimo Pyrmont) establishes the following maximum floor space ratios for land with a maximum building height of 42 metres:

- maximum floor space ratio for residential uses: 4.0:1; and
- maximum floor space ratio for business uses: 5.0:1.

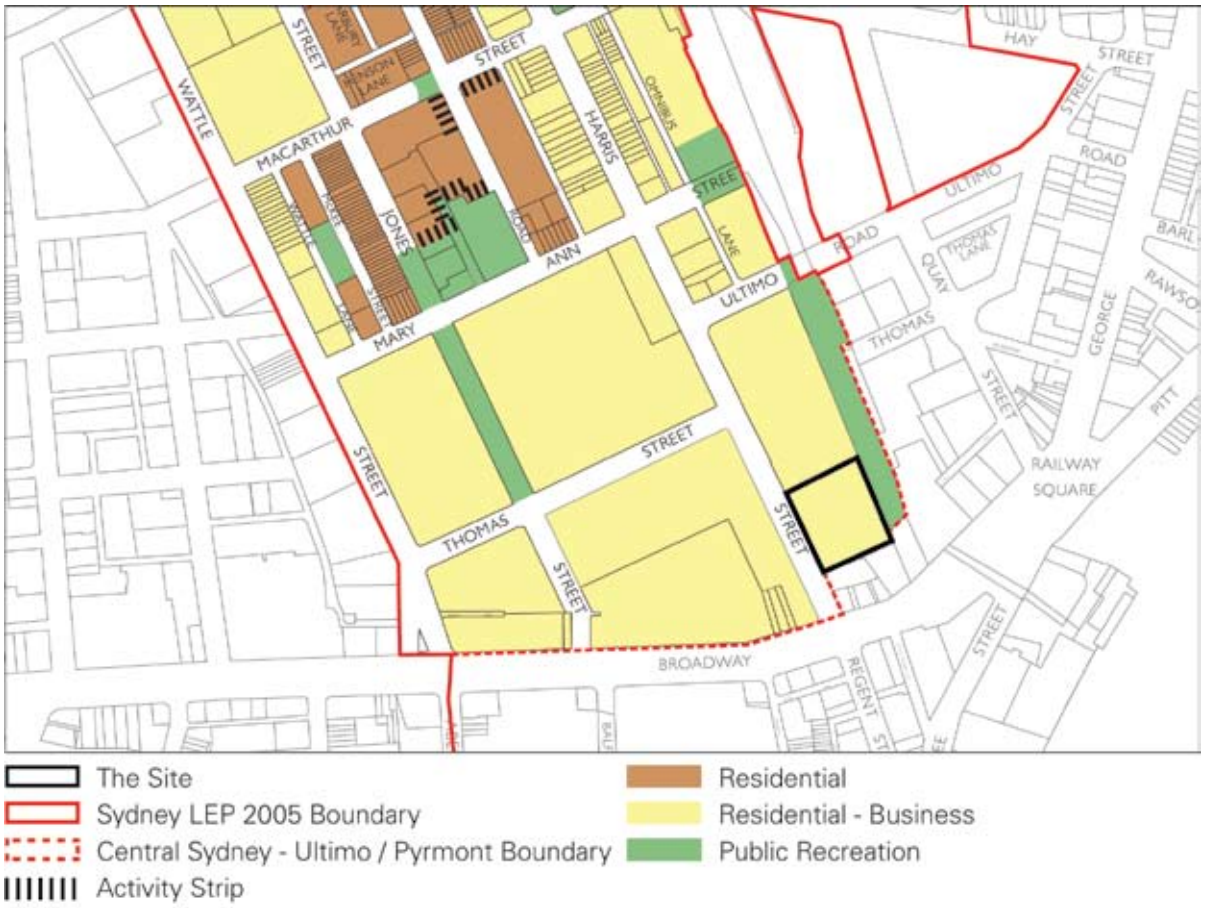

Figure 26 – Extract from Ultimo-Pyrmont Zoning Map, SLEP 2005

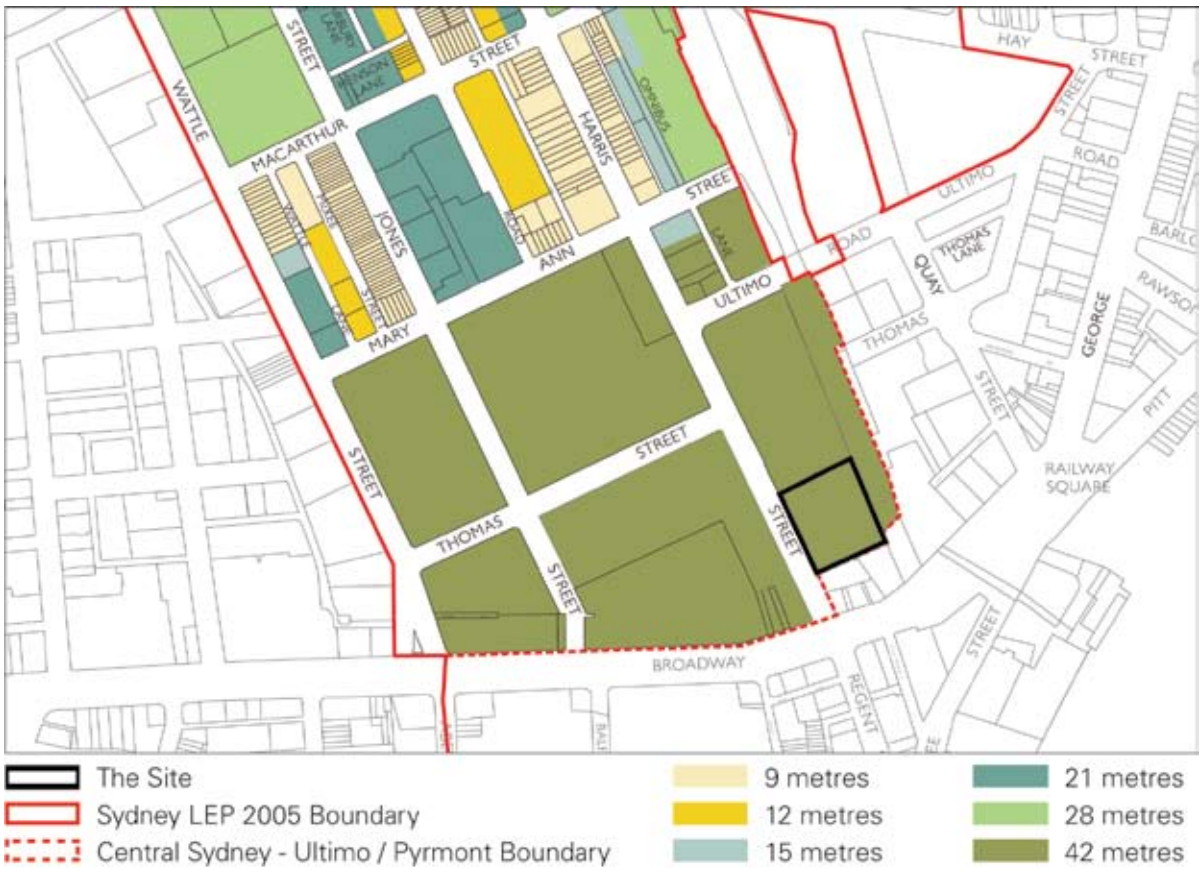

Figure 27 – Extract of Ultimo-Pyrmont building height map, SLEP 2005

Heritage

The site is not listed as including an item of heritage significance and does not form part of a conservation area listed under SLEP 2005.

However the there are various items located within the vicinity of the site. These are shown in the map at **Figure 28** and include:

- 1-7 Broadway (UTS Building 3);
- 9-13 Broadway (UTS Building 8);
- The Agincourt Hotel, at the corner of Harris Street and Broadway;
- A Federation Style freestanding commercial building at 855-894 George Street; and
- The Marcus Clark Building at 827–837 George Street (Building W of Ultimo College TAFE NSW—Sydney Institute).

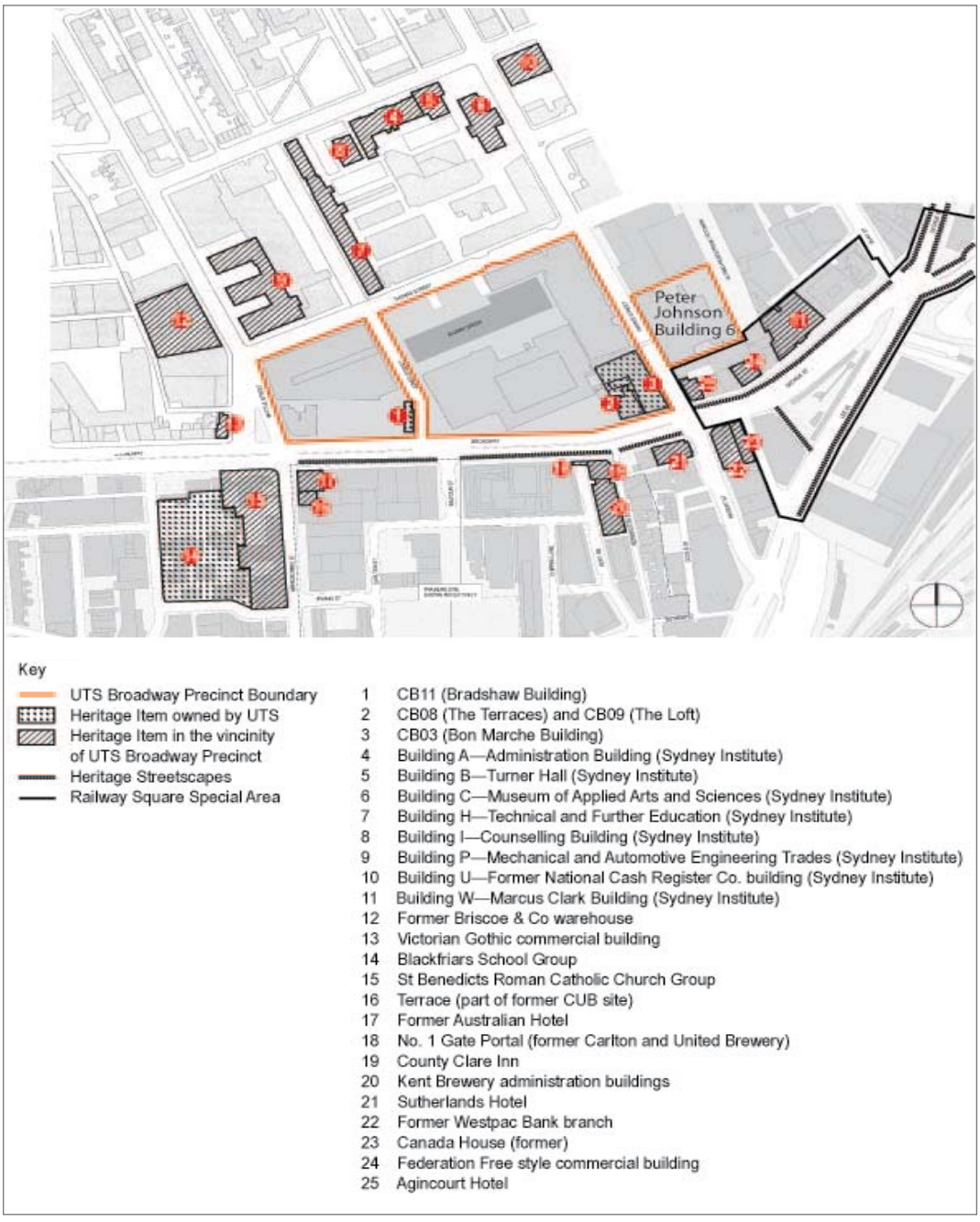

Figure 28 – Heritage items within the vicinity of the subject site (Source: GML)

Part 5 Heritage conservation of SLEP 2005 requires the consent authority to be satisfied that development in the vicinity of a heritage item be compatible with the conservation of the heritage significance of the item or the character of the conservation area. A heritage report by Godden Mackay Logan (at **Appendix H**) has been prepared for the proposal, which considers the impact of the proposal on the heritage significance of the heritage items within its vicinity.

City of Sydney Heritage Development Control Plan 2006

The heritage DCP sets out a number of provisions for development within the vicinity of heritage items. It requires that alterations and additions to buildings and structures, and new development of sites in the vicinity of a heritage item are to be designed to respect and complement the heritage item in terms of:

- building envelope;
- proportions;
- materials, colours and finishes; and
- building and street alignment.

In addition, development in the vicinity of heritage items should provide adequate curtilage to allow interpretation of the heritage item and should retain and respect significant views to and from the heritage item.

The impacts of the proposal on the heritage significance of the site and the locality have been addressed in Section 6.12.

City of Sydney Signage and Advertising Structures Development Control Plan 2005

The City of Sydney Signage and Advertising Structures Development Control Plan 2005 (Signage DCP) provides design guidelines for the placement and design of signs, including building identification signs, in the City of Sydney. The DCP aims to ensure that signage structures achieve a high level of design quality and compatibility with the architectural design of buildings and the character of the streetscape.

The DCP provides general guidelines for all signage structures, as well as specific design guidelines for building identification signs. An analysis of the proposal against the relevant provisions of the Signage DCP is provided in Section 6.3 of this report.

City of Sydney Access Development Control Plan 2004

The City of Sydney Access Development Control Plan 2004 (Access DCP) provides standards and guidelines which promote equitable access to and within new and existing development within the City of Sydney. These standards are generally consistent with the requirements of the *Disability Discrimination Act 1992* (DDA), the Building Code of Australia (BCA) and relevant Australian Standards.

The proposed student housing development is defined as a part Class 3, part Class 9b and part Class 5 Building for the purposes of the Access DCP. Disabled access to the new development and most common areas is to be provided in accordance with the DCP. An assessment of the proposal against the relevant provisions of the DCP is provided in Section 6.8 of this report.

City of Sydney Boarding Houses Development Control Plan 2004

The City of Sydney Boarding Houses Development Control Plan 2004 (Boarding House DCP) provides guidelines and specific development standards for boarding house development within the City of Sydney local government area (LGA).

The following facilities are required to be provided within the student housing development:

- Manager/operator accommodation;
- Laundry facilities;
- Communal food preparation facilities (in addition to private provision);
- Sanitary facilities;
- Bedrooms;
- Storage facilities; and
- Garbage storage and recycling facilities.

Specific standards for occupancy rates, provision of communal facilities and other services for boarding houses within the City of Sydney are provided within the DCP.

The proposed student housing development is considered a Class 3 (student housing) Building for the purposes of the BCA and is therefore a type of development to which the Boarding House DCP applies. (The existing level 1-7 podium is classed as 9b – University under the Building Code of Australia).

A detailed assessment of the proposal against the relevant criteria within the DCP is provided at Section 6.3.

Draft City of Sydney Ecologically Sustainable Development – Development Control Plan

The draft City of Sydney Ecologically Sustainable Development – Development Control Plan (draft ESD DCP) was publicly exhibited in March 2008 and has not yet been formally adopted by the City of Sydney. The draft ESD DCP provides a comprehensive set of guidelines and requirements to ensure the application of ESD principles throughout the City and applies to commercial and residential development.

Environmental performance under the draft ESD DCP are based upon eight environmental impact categories including management, indoor environmental quality, energy, water, materials, land use and ecology and emissions, with points awarded for commitment to certain targets. The environmental performance of the proposal has been addressed at Section 6.10.

Urban Development Plan for Ultimo-Pyrmont Precinct – 1999 Update

The 1999 update to the Urban Development Plan (UDP) for Ultimo-Pyrmont was prepared in terms of clause 36 of the then Sydney Regional Environmental Plan No 26 City West. The UDP provides detailed planning and urban design principles for land in Ultimo-Pyrmont, particularly the South Ultimo sub-precinct, which includes the site.

Principles relevant to the built form of the proposal include character, environmental issues and ESD, access, parking and circulation. The proposal in the context of the UDP is addressed in the Tables of Compliance at **Appendix I**.

Thus, although the UDP is still applicable, its controls are less relevant to the design of the proposed student housing.

4.4 Planning Definitions

As discussed above, the Ultimo-Pyrmont chapter of SLEP 2005 provides development standards applying to the site.

The Council of the City of Sydney is currently in the process of translating the provisions of SLEP 2005 into the format of the Standard Instrument—Principal Local Environmental Plan. The draft SLEP 2008 is expected to be publicly exhibited some time in 2009, and gazetted 6-12 months later. Until that time, the provisions of the Ultimo-Pyrmont chapter of SLEP 2005 will apply to the site. The planning definitions for building height and GFA in the Ultimo-Pyrmont section of the Sydney LEP are somewhat different to those in the Standard Instrument.

Therefore, for assistance to UTS and the consent authority, the building heights and GFA of the Project Application have been calculated in accordance with both sets of definitions, quoted below.

Building height

Sydney LEP 2005:

> ***height of a building on land within Ultimo-Pyrmont*** *means the vertical distance measured in metres between the natural surface level of the ground on which the building is sited or, where the natural surface has been excavated, the land of the adjoining public domain, and the ceiling of the topmost habitable floor of the building above that point.*

Standard Instrument:

> ***building height (or height of building)*** *means the vertical distance between ground level (existing) at any point to the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.*

Gross Floor Area

Sydney LEP 2005:

> ***gross floor area of a building within Ultimo-Pyrmont****, means the sum of the areas of each floor of the building, where the area of each floor is taken to be the area within the inner faces of the external enclosing walls as measured at a height of 1,400 millimetres above each floor level, but excluding:*
>
> *(a) columns, fin walls, sun control devices, awnings and any other elements, projections or works outside the general lines of the outer face of the external walls, and*
>
> *(b) lift towers, cooling towers, machinery and plant rooms, and airconditioning and ventilation ducts, and*
>
> *(c) ancillary car parking and any associated internal designated vehicular and pedestrian access to it, and*
>
> *(d) space for the loading and unloading of goods, and*
>
> *(e) internal public areas, such as arcades, atria and thoroughfares, and terraces and balconies with outer walls less than 1,400 millimetres high.*

Standard Instrument:

> ***gross floor area*** *means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:*
>
> *(a) the area of a mezzanine, and*
>
> *(b) habitable rooms in a basement or an attic, and*
>
> *(c) any shop, auditorium, cinema, and the like, in a basement or attic, but excludes:*

(d) any area for common vertical circulation, such as lifts and stairs, and

(e) any basement:

(i) storage, and

(ii) vehicular access, loading areas, garbage and services, and

(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and

(g) car parking to meet any requirements of the consent authority (including access to that car parking), and

(h) any space used for the loading or unloading of goods (including access to it), and

(i) terraces and balconies with outer walls less than 1.4 metres high, and

(j) voids above a floor at the level of a storey or storey above

5.0 Consultation

The Environmental Assessment Requirements for this proposal issued by the Director - General (included at **Appendix B)** require that consultation be undertaken with relevant public authorities/agencies.

This proposal is an integral part of the Concept Plan for UTS's Broadway Precinct. Preparation of the Concept Plan involved consultation with several authorities, agencies and utility providers. The applicant has deemed that this consultation was sufficient for the purposes of this Project Application.

Council of the City of Sydney

The Council of the City of Sydney (CoS) was consulted by UTS and the Living Education consortium in November 2008. This was in addition to the consultation that has been carried out with the Council regarding the proposed UTS Concept Plan of which the proposed development forms an integral component. The issues raised at these meetings in relation to Building 6 are summarised in **Table 3** below.

Table 3 – Key issues from consultation with CoS

Issues/discussion	Comment/response
Visual amenity of Taragon apartment building: impact on the visual amenity and solar access of the apartments as a result of the development	- The development has been designed to protect the visual amenity and solar access of apartments in the north west corner of the Taragon apartment building (at 849 George Street) by modulating the UPN façade of the building, including an indent/splay in the south eastern corner of the envelope. - At the time the Taragon apartment building was designed and approved there was an existing approval for a commercial tower above the podium for the development site. The proposed development is similar to that approved for the commercial tower but incorporates the aforementioned measures to protect visual amenity.
Amenity of residents within the development: relationship of the proposed building envelope to the neighbouring buildings	- The envelope for the development and the design of the eastern facade will provide solar access and visual amenity for residing students within as well as additional useable open space in the form of the terrace.
Activation of UPN	- The inclusion of the cafe and entry to the reception/lobby for the student housing at Level 2 will help to activate the UPN, thereby improving the permeability and accessibility of the existing building.
SEPP 65 assessment: Council would like the proposed development to be assessed in accordance with SEPP 65	- The proposed development is a Class 3 building and it does not fall within the ambit of SEPP 65. In addition, SEPP 65 is primarily for long term or residential owner occupiers, rather than students. Also student housing needs to be affordable so will be smaller than standard residential apartments. - Nevertheless, development will meet the principles as best as possible within the constraints of a Class 3 building – a detailed assessment is included at Section 6.2.

Issues/discussion	Comment/response
Building heights: details of any non-compliance with SLEP 2005 to be addressed	- On the basis that the development will be considered under Part 3A of the EP&A Act, compliance under Part 4 of the EP&A Act is not required. - The proposed development exceeds the height and FSR controls set by the Council's requirements but is within the building envelope previously approved by Council - see Section 6.3 for further discussion. - Council officers provided in-principle endorsement of the proposed building envelope, on the basis of compatibility with the scale of adjoining development.
Traffic and parking: proposed parking provision and impacts of the proposal on local traffic	As detailed in Section 6.11 the proposal will not impact on local traffic patterns and intersection operations. The proposal reduces the amount of car parking on the site.

Heritage Branch

GML met with the Heritage Branch of the Department of Planning in February 2009 to discuss the proposal. The Heritage Branch did not raise any major concerns regarding the proposal. A summary of the discussions is provided below:

- There are no State significant items in the vicinity of the site.
- The visual impact of the proposal on local heritage items is likely to be of a minor nature.
- The impact of the proposal on the existing Peter Johnson Building. The existing building is not considered to be a fine example of Philip Cox's work and is not among the buildings identified by the RAIA as significant twentieth century buildings. In addition, it does not warrant State or local listing.

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposal. It addresses the matters for consideration set out in the Director-General's Environmental Assessment Requirements (DGRs) located at **Appendix B.** The draft Statement of Commitments complements the findings of this section.

6.1 Director General's Environmental Assessment Requirements

Table 4 identifies the location in this report and/or the appended technical studies where the matters listed in the DGRs area addressed.

Table 4 – Director General's Environmental Assessment Requirements

Director General's requirements	Location in Report
GENERAL REQUIREMENTS	
An executive summary	Page ix
Detailed description of the project including: ▪ Project objectives and strategic justification for the project; ▪ Description of the site including cadastral and title details; ▪ Textual and diagrammatic articulation of the proposal; ▪ Design, construction, operation, management and staging, as applicable; ▪ Alternatives considered.	Sections 1.0 & 8.0 ▪ Section 2.2 ▪ Architectural Plans at Volume 3 ▪ Sections 3.2, 6.19, 3.9, 6.21 ▪ Section 6.6
An assessment of the environmental impacts of the project, with particular focus on the Key Assessment Requirements specified below.	▪ Section 6.0
Draft Statement of Commitments, outlining commitments to public benefits including State and local infrastructure provision or contributions, environmental management, mitigation and monitoring measures and clear indication of responsibilities;	▪ Section 7.0
Signed statement from the author of the EA confirming that the information is neither false nor misleading; and	▪ Page vii
Report from a quantity surveyor identifying the capital investment value of the Project Application.	▪ QS Certificate included at Appendix C
KEY ASSESSMENT REQUIREMENTS	
Part A – Head of Consideration	
Land title and ownership details for all parcels of land to and from the development site;	▪ Section 2.2
Suitability of the site	▪ Section 6.22
Likely environmental, social and economic impacts	▪ Sections 6.0, 6.19 & 6.20
Previous DAs lodged for the site	▪ Section 1.0
Justification for undertaking the project	▪ Section 8.0

Director General's requirements	Location in Report
Demonstrate how the proposed building achieves design excellence including:	
▪ Achieving a high standard of architectural design, materials and detailing appropriate to the building type and location;	▪ Sections 6.3.1 & 6.7
▪ The form and external appearance of the building and how it will improve the quality and amenity of the public domain;	▪ Section 6.7
▪ The sustainable design principles incorporated into the building design in terms of sunlight, natural ventilation, wind, reflectivity, visual and acoustic privacy, safety and security and resources, water and energy efficiency; and	▪ Section 6.10
▪ The process and design evolution/competitive design process leading to the proposal.	▪ Sections 3.2, 6.3.2 & **Appendix E**
Public interest	Section 8.0
Part B - Relevant EPIs, Guidelines and other requirements to be addresses	
Planning provisions applying to the site including permissibility and the provisions of all plans and policies including:	
▪ All relevant State Environmental Planning Policies;	▪ Sections 4.2 & 6.2
▪ City of Sydney LEP 2005 and relevant DCPs;	▪ Sections 4.3 & 6.3
▪ Metropolitan Strategy 'City of Cities: A Plan for Sydney's Future';	▪ Section 4.1
▪ Urban Transport Statement;	▪ Section 4.1
▪ Sydney City Subregional Strategy;	▪ Section 4.1
▪ The State Plan.	▪ Section 4.1
Nature and extent of compliance with relevant EPIs.	Section 6.3
Part C - Key issues to be addressed	
Site Analysis	
▪ Site and context analysis plan that identifies the relevant natural and built environmental features within and adjoining the site with particular attention to the integration of the development within the existing and future (as indicated in the Concept Plan) campus layouts.	▪ **Volume 3**
▪ Survey Plan including site boundaries, levels, building elements to be retained and easements.	▪ **Appendix D**
▪ Plan showing how the proposal will integrate with future development on the UTS Campus and surrounding properties.	▪ **Volume 3**

Director General's requirements	Location in Report
Land Use	
■ Identify proposed staging and timing for the development and pedestrian upgrades and land uses to be contained in each stage;	■ Section 6.2.1
■ Table listing different land uses, FSR, development yield, site coverage for each use and total GFA for the development.	■ Section 3.1
Urban Design and Built Form	
■ Detailed plans, elevations and sections showing height, bulk, scale of the proposed built form in relation to existing and proposed site levels, buildings to be retained and the surrounding locality including within the context of the Concept Plan proposal and adjoining development;	■ Architectural Plans at Volume 3
■ 3D modelling and a physical model of the proposed building within the UTS Concept Plan and neighbouring development;	Submitted under separate cover
■ Demonstration of how the development including the land uses, height, bulk, scale and design is consistent with the quality controls established for the Concept Plan;	■ Sections 3.0 & 6.5
■ Photomontages of key elements and views of development from close up and distant vantage points including the Ultimo Pedestrian Network, Harris Street and Broadway/George Street, and street frontages;	■ Volume 3
■ A materials/finishes sample board and detailed elevations confirming the application of material and finishes.	■ Submitted under separate cover & Architectural Plans at Volume 3
Public Domain and Streetscape	
■ Sections showing relationship of the building to the public domain including the Ultimo Pedestrian Network.	■ Architectural Plans at Volume 3
■ Pedestrian circulation diagram showing main pedestrian routes within the site and pedestrian entries to the building, connections to adjacent uses and how level changes will be accommodated.	■ Design Report at **Appendix E**
■ Active frontage diagram showing location of active frontage within the development, with particular reference to Harris Street and the Ultimo Pedestrian network during both day and night.	■ Section 3.0 & Architectural Plans at Volume 3
Amenity	
■ Shadow diagrams illustrating the impact of proposed building on the site and on adjoining land, with particular regard to public domain. The shadow diagrams are to show the impact on existing development and proposed future development both on the site and on adjoining land.	■ Volume 3
■ A wind analysis addressing the impacts of the tower construction on neighbouring development and the public domain.	■ Section 6.9.6

Director General's requirements	Location in Report
▪ A reflectivity analysis to demonstrate the impacts of reflectivity from the façade design on the road network and public domain;	▪ Section 6.9.4
▪ Address potential overlooking impacts from the proposed development to adjoining development;	▪ Section 6.9.2
▪ View analysis of significant views and vistas that would be impacted on by the proposal.	▪ Section 6.7.2
Traffic and Transport Traffic Study in accordance with the Roads and Traffic Authority's Guide to Traffic Generating Developments, with particular regard to: ▪ Existing road capacity, expected impacts on local and regional roads and any upgrade requirements; ▪ Internal road layout and access arrangements; ▪ Pedestrian and bicycle linkages; ▪ Parking requirements; ▪ Access for emergency vehicles; and ▪ Voluntary Planning Agreement addressing MoT's requirements. ▪ Proposed number of car parking spaces and compliance with the relevant parking codes; ▪ Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need for funding of or upgrading road improvement works as relevant; ▪ Details of any local and regional road upgrades, as relevant to the proposal.	▪ Section 6.11 & Traffic Study at **Appendix J**
Heritage ▪ Heritage Impact Statement (HIS) assessing impacts of the proposed development on the existing campus layout and buildings and heritage items within the site and the vicinity of the site, as relevant.	▪ Section 6.12 & **Appendix H**
Landscape ▪ Detailed landscape plan indicating any changes to the interface of the building with the Ultimo Pedestrian Network including levels and finishes, as relevant.	▪ Design Report at **Appendix E** & Architectural Plans at Volume 3
Ecologically Sustainable Development ▪ Demonstrate how the development will satisfy ESD principles, including BASIX (or a suitable alternative), water sensitive urban design measures, energy efficiency, recycling and waste disposal.	▪ Section 6.10

Director General's requirements	Location in Report
Geotechnical and Contamination	
▪ Demonstrate how the construction methodology has met Railcorp requirements, as relevant.	▪ Section 6.13
▪ Demonstrate that the existing building is structurally capable of supporting the new development.	▪ Section 6.13 ▪ Section 6.2
▪ Demonstrate compliance with the requirement of SEPP 55, as relevant.	
Utilities and Infrastructure	
▪ Utility and infrastructure servicing, demonstrating development can be adequately serviced for water supply, wastewater, stormwater, electricity, gas and communications.	▪ Sections 6.14 & 6.15
▪ Demonstrate appropriate provision of social infrastructure and services to support expected population increase.	▪ Section 6.19
▪ Potential impacts on rail infrastructure.	▪ Section 6.13
Drainage, Stormwater and Groundwater Management	
▪ Identify drainage, stormwater and groundwater management issues.	▪ Sections 6.14 & 6.15
Developer Contributions	
▪ Scope and justification for any developer contributions proposed.	▪ Section 6.4
Consultant Reports	
The application is also to include technical reports addressing the following: ▪ Construction Management; ▪ Operational Management; ▪ Waste Management; ▪ Environmental Management; and ▪ BCA.	▪ See Tables of Contents
▪ A statement addressing the key design quality principles in SEPP 65.	▪ SEPP 65 Statement in Design Report at **Appendix E**

Director General's requirements	Location in Report
CONSULTATION REQUIREMENTS	
Written evidence shall be submitted to demonstrate that an appropriate level of consultation has been undertaken with the following relevant parties during the preparation of the Environmental Assessment having regard to previous consultation. Agencies and other authorities: ▪ Council of the City of Sydney; ▪ NSW Ministry of Transport; ▪ NSW Roads and Traffic Authority; ▪ Railcorp; ▪ NSW Heritage Council; ▪ NSW Department of Education and Training; and ▪ All relevant utility providers. Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy. The consultation process and the issues raised should be described in the Environmental Assessment.	▪ Section 5.0
Landowners Consent ▪ Landowner's consent (for each parcel of land) is to be provided within the EA in accordance with clause 8F of the Environmental Planning and Assessment Regulation 2000.	▪ Provided under separate cover

6.2 Compliance with Relevant Planning Instruments and Policies

This section summaries the consistency of the proposal with relevant State, regional and local planning instruments and policies. Where relevant, compliance tables have been included at **Appendix I** to demonstrate the proposal's consistency with specific development controls and/or assessment criteria.

State Environmental Planning Policy No 55 -Remediation of Land

No part of the site is proposed to be excavated. In this regard the development is not expected to have any issues with contamination and as such the site is considered suitable for the proposed development within the context of SEPP 55.

State Environmental Planning Policy (Infrastructure) 2007

The referral of the Project Application to the RTA is required under the Infrastructure SEPP. To assist the Department and the RTA in making an assessment of the traffic impacts of the proposal, a traffic report has been prepared and is attached at **Appendix J**.

The traffic impacts of the proposal are considered in Section 6.11.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

Compliance with the BASIX SEPP is not required for a Class 3 building. Despite this, the proposal has been assessed against the BASIX multi unit tool (copy of BASIX certificate is at **Appendix K**). In addition, the proposal has been assessed against the Pilot Green Star Rating Tool developed by the Green Building Council of Australia. This assessment concluded the development could reasonably achieve the requirements of a 5 Star rating using this tool. This is further addressed at Section 6.10.

State Environmental Planning Policy 64 – Advertising and Signage

In accordance with SEPP 64 the proposal has been assessed against the relevant assessment criteria. This assessment is detailed in the Tables of Compliance at **Appendix I**.

In summary, the proposed building identification sign is appropriate within the surrounding context and serves to identify this part of Broadway Precinct to the western side of Harris Street. The scale of the sign is consistent with City of Sydney requirements and is in keeping with the building to which it is attached. Based on the assessment the proposed signage will not have a significant visual impact in its proposed location and will not obscure any important views to, from or over the site.

State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings

A detailed design statement has been prepared by **nettleton**tribe and included at **Appendix E**. This assessment demonstrates the design and internal layout of the proposed student housing will generally be consistent with the SEPP 65 design principles.

Given that student housing is not typical of residential apartment living (student housing is for short term residents rather than permanent or long term residents that require smaller, more affordable apartments), strict compliance with the numerical rules of thumb within the Residential Flat Design Code is not always achievable.

An assessment of the proposal's compliance with relevant Rules-of-Thumb in the RFDC is provided in the Tables of Compliance at **Appendix I**.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The proposed development is not considered to result in adverse impacts to watercourses, riparian areas or ground water that area safeguarded under the SREP. As it is unlikely to be visible from the harbour it is not expected to impacts on Sydney Harbour views.

6.3 Compliance with Relevant Local Planning Policies

This section summarises the proposal consistency with relevant local environmental planning instruments, policies and development control.

6.3.1 Sydney Local Environmental Plan 2005

Zoning and Permissibility

In accordance with SLEP 2005 the proposed development is permissible with consent.

The objectives of site's zone include:

- to promote a wide range of uses, particularly business development including tourist, leisure, commercial, retail and office development consistent with Ultimo-Pyrmont's proximity to the Sydney CBD, harbour locations and transport infrastructure;
- to accommodate uses which generate employment opportunities and provide facilities and services that enable people to live and work in the same community; and
- to encourage sustainable transport modes for journeys to work and other trips, including walking, cycling and all forms of public transport.

The proposed development satisfies these objectives given that it:

- will provide short-term low cost residential accommodation for UTS students and will support the expansion of the UTS Broadway Precinct;
- will contribute to economic activity within the locality by increasing patronage of local business and retail outlets by students moving into the area; and
- is in close proximity to key public transport nodes and is consistent with the City of Sydney's sustainable transport objectives.

Clause 10 of SLEP 2005 enables consent to be granted to the development of land in Ultimo-Pyrmont that is not in a master plan area and which contravenes a maximum height limit or maximum floor space ratio, if the consent authority is satisfied the proposed development will improve or contribute positively to the public domain and would achieve design excellence. Pursuant to this clause, consent may be granted to a building that:

- does not contravene the maximum building height by more than 10%, or the height of one floor of the building, whichever is the greater; and
- does not contravene the maximum floor space ratio (FSR) for the building by more than 10%, or the proportion of the floor space ratio of the building attributable to one floor in the building, whichever is the greater.

The proposed development contravenes the both the height and FSR standards by more than 10%.

Pursuant to Section 75R(3) of the EP&A Act, the Minister for Planning is not bound by the provisions of an environmental planning instrument - specifically, major project applications are only required to comply with State Environmental Planning Policies, and other environmental planning policies (LEPs and REPs) to the extent that they dictate permissibility of land uses. Despite this, any departure from a standard in an environmental planning instrument needs to be justified in the context of the proposal's state and regional significance and the planning merits of the proposal. The DGRs require the proposal to justify any proposed departures from the development standards in SLEP 2005 that apply to the site.

Building Height

Clause 93 of SLEP 2005 establishes a maximum building height of 42 metres for the site. The development proposes a maximum height of 67.89 metres, being 25.89 metres taller than that currently permitted for the site. The overall height of the development in the context of adjoining existing development is illustrated in **Figure 29**.

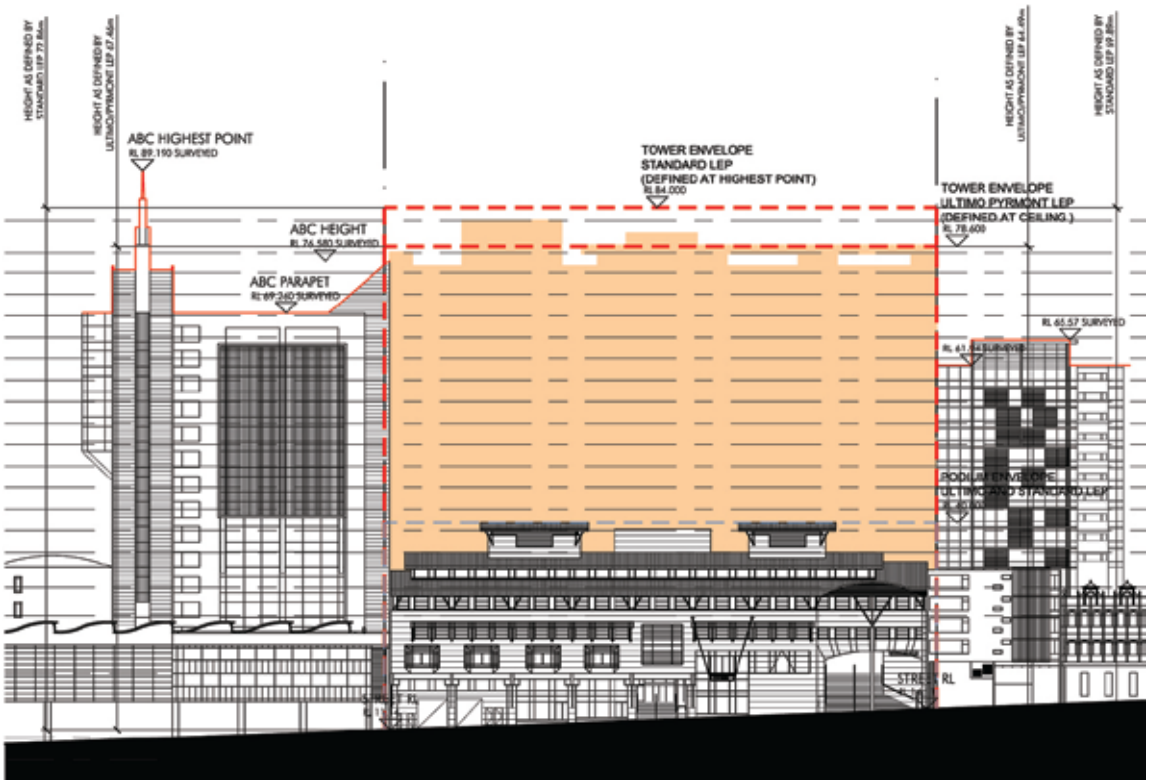

Figure 29 – Peter Johnson Building in relation to adjoining buildings (Source: NT)

The proposed additional height for the development is considered reasonable and justified on the basis that:

- The load bearing capacity of the existing Building 6 podium constrains development to only about half of the podium – therefore to provide the required quantum of accommodation, without disrupting the operation of the remainder of the education facilities in the existing podium, the student housing component of the development must extend vertically rather than horizontally.
- The tower element of the proposal is set back approximately 40 metres from the Harris Street boundary, in a similar manner to both the adjoining ABC and Taragon tower elements. In this regard, the development is consistent with the established pattern of built form and massing along this section of Harris Street.
- The detailed design of the new tower protects the visual amenity and solar access of apartments in the north east corner of the Taragon apartment building with an indent or void in the south eastern corner of the envelope.
- Both the adjoining ABC and Taragon buildings were designed and approved with approval in place (DAZ91-00242) for a commercial tower building on the site that achieves a maximum height of RL 80 (or 70 metres when measured using the SLEP 2005 definition of building height). This development consent established the scale of development expected for the site. By comparison, the highest point of the proposed tower for student housing (the top of the rooftop building identification sign) reaches RL 81 (66.6 metres when measured using the SLEP 2005 definition of building height).
- The envelope for the tower essentially matches the design of the previously approved commercial building, however it incorporates significant modulation and articulation at the UPN façade to give the appearance of three towers above podium level and protect the visual amenity of residents in the Taragon building. This is illustrated in **Figure 30**.
- The development has adopted the principles of SEPP 65 to maximise the internal amenity of the student housing. This includes ensuring the maximum building depth is less than 18 metres and 100% of units receive natural light and ventilation.
- The proposed development is of a scale that is comparative to the tower form on the adjoining ABC and Taragon buildings. In this regard, the development is consistent with the established pattern of built form along this section of Harris Street.
- The development will have minimal visual impacts on the integrity of heritage buildings in the vicinity of the site. This is discussed further at Section 6.12.
- The tower form will also have minimal adverse visual impacts from the UPN. The pedestrian entrance to the Peter Johnson Building will be significantly improved through extension to the existing podium and the façade of the tower facing the UPN will be highly modulated and articulated.
- The highly articulated façade treatments for the development, including the use of texture, slotted windows and coloured building materials will reduce the bulk and scale of the proposal when viewed from the public domain and nearby other buildings.
- The proposal will deliver significant social, environmental and regional benefits associated with providing accommodation for up to 720 students at a major Sydney university

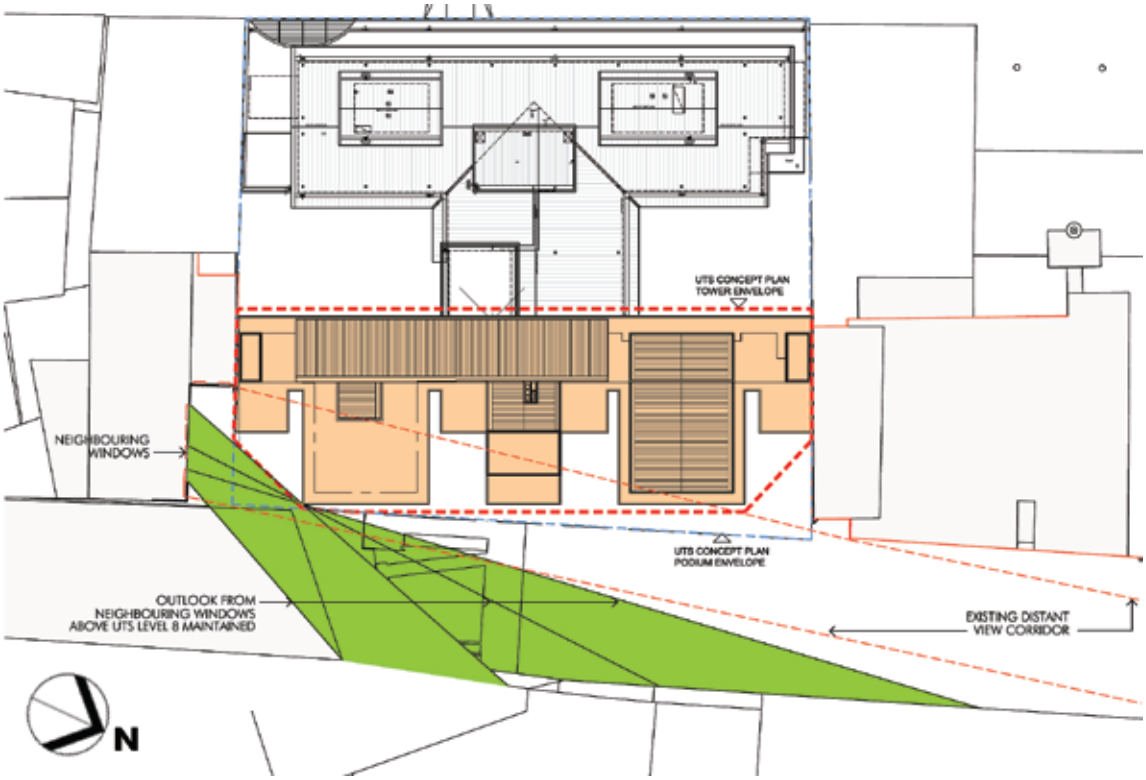

Figure 30 – Footprint of the residential tower (Source: NT)

In the absence of any negative environmental impacts, the height of the UTS Student Housing tower above the Peter Johnson Building is considered reasonable.

Floor Space Ratio

Clause 99 of SLEP 2005 for developments with floor space limits for non-master plan areas in Ultimo Pyrmont establishes the following maximum floor space ratios for the site:

- residential uses: 4.0:1; and
- business uses: 5.0:1.

The proposed development will achieve an overall GFA of 41,005m^2 and FSR of approximately 8:1.

The proposed additional FSR for the development is considered reasonable and justified on the basis that:

- The commercial building that was approved for the site in 1991 achieved an overall FSR of approximately 7:1.
- Deep modulations to the UPN façade of the tower act to minimise the gross floor area of the building while maximising the penetration of natural light, and natural ventilated student housing. At the same time, overlooking and visual impacts to the adjoining Taragon building are minimised by the indented corner at the south eastern corner of the façade.
- The proposed development is expected to provide significant social benefits by providing a significant quantum of low cost accommodation for students.
- The proposed development is also expected to provide significant environmental benefits by locating a large quantum of student housing within the University campus, thereby reducing travel demand.

- The additional development over the permitted FSR will not generate parking demand, as the level of on site parking will be reduced as part of the proposal.
- The objective to locate student housing within the UTS City Campus meets the objectives of the Metropolitan Strategy and SLEP 2005 by supporting the development of education facilities in close proximity to residences, by reducing carbon emissions and congestion due to fewer trips by public and private transport between students' residences and the university.
- The increased portion of floor space for student housing will help to alleviate pressure on the local private rental market, so benefitting the wider community by enabling students to rent affordably in close proximity to the university's facilities.

In the absence of any negative environmental impacts of proposal, and the significant social and environmental benefits associated with providing accommodation for up to 720 UTS students on site, the proposed envelope for the UTS Student Housing at the Peter Johnson Building is considered acceptable.

6.3.2 Design Excellence

UTS is committed to design excellence across its Broadway Precinct. This outcome is a particular consideration for the development of UTS student housing, which will also deliver important social, economic and environmental benefits to future UTS students.

Clause 10 of SLEP 2005 enables certain development standards to be waived by up to 10% if a proposed development will improve or contribute positively to the public domain and would achieve design excellence. Clause 26 of SLEP 2005 requires that, in determining an application, the consent authority consider whether the building exhibits design excellence. In particular, consideration must be given to whether:

- A high standard of architectural design, material and detailing will be achieved appropriate to the building type and location; and
- The form and external appearance of the building will improve the quality and amenity of the public domain; and
- The new development detrimentally impacts on important view corridors.

UTS has utilised a Public Private Partnership method to deliver this project. The PPP model involves preselected consortiums delivering a holistic offer to build, own and operate the student housing project on UTS land for 35 years. The building is then handed back to UTS.

Each consortium proposed the mix of student bed configurations that they believed would best suit the student housing market and hence ensure the financial stability of the project. The Living Education consortium, the preferred tenderer for the delivery of the project, is committed to a design outcome that satisfies the interests of all stakeholders, in particular UTS.

Although the final building design has not been the result of a formal design competition in accordance with the City of Sydney guidelines, the nature of a PPP is such that a superior building design has resulted due to the common interests of all stakeholders to achieve a positive outcome. This differs from a traditional property development model that is focused only on the interests of one party.

The final building design has been subject to ongoing review by UTS including the respected architect, Graham Jahn, who has peer reviewed the design and has had regular input into its detailed planning. This iterative review process delivers a superior building with a high standard of design and environmental outcomes and that will benefit UTS and the community as a whole.

6.3.3 City of Sydney Heritage Development Control Plan 2006

There are several items of local heritage significance in the vicinity of the site. These items are shown on the map at **Figure 25.**

A detailed assessment of the impacts of the development is on local heritage items is at Section 6.12. The Heritage Impact Statement prepared by GML (refer **Appendix H**) concludes that the proposed development will have no detrimental impacts to listed heritage items or the nearby conservation area, and as such complies with the requirements of the Heritage DCP.

6.3.4 City of Sydney Signage and Advertising Structures Development Control Plan 2005

The Signage DCP provides general controls for development involving signage structures within the City of Sydney, as well as specific controls for building identification signs.

The proposed sign is consistent with the Signage DCP in that it the proposed design and colour scheme for the sign will integrate with the architectural design and façade finishes on the proposed student housing development and with the site's context. A detailed assessment of the proposal against the relevant provisions of the DCP is in the Tables of Compliance at **Appendix I**.

6.3.5 City of Sydney Access Development Control Plan 2004

The Access DCP sets outs specific requirements for access levels and the provision of access services within different classes of building including Class 3 buildings under which the proposed student housing development is classified. The Access DCP provisions are consistent with those of the DDA and the BCA.

The DCP establishes requirements for the following features of a boarding house:

- Common areas and unique features are to be accessible and not less than 1 of each room or area in which a unique service is provided or which has a unique feature;
- Sole occupancy units are distributed across the building equitably; and
- Two and six-bed units are provided in the building.

As discussed in the Access Report prepared by Morris-Goding Accessibility Consulting (refer **Appendix L**), the proposal complies with all three requirements.

6.3.6 City of Sydney Boarding Houses Development Control Plan 2004

The City of Sydney Boarding Houses Development Control Plan 2004 (Boarding House DCP) provides guidelines and specific development standards for boarding house development within the City of Sydney local government area (LGA).

A detailed assessment of the proposal against the relevant criteria within the DCP is provided in the Tables of Compliance included **Appendix I**. In summary, the proposal will be generally consistent with the requirements of the Boarding House DCP. Where minor non-compliances are proposed, there will not be any impact on the amenity of the proposed student housing development.

6.3.7 Draft City of Sydney Ecologically Sustainable Development – Development Control Plan

Environmental performance under the draft ESD DCP is based upon eight environmental impact categories including management, indoor environmental quality, energy, water, materials, land use and ecology and emissions, with points awarded for commitment to certain targets.

The environmental performance of the proposal has been addressed in Section 6.10. The proposed development will achieve good levels of environmental performance as required by this DCP.

6.3.8 Urban Development Plan for Ultimo-Pyrmont Precinct – 1999 Update

The Urban Development Plan (UDP) for Ultimo Pyrmont provides detailed planning and urban design principles for the South Ultimo sub-precinct that includes the site.

The plan established a maximum street wall height to Harris Street of 19.6m. The existing podium on the site has an approximate height of 24m. As the podium on this frontage will remain unchanged, there will be no change to the existing street wall height. The proposal will accommodate a 13 storey tower (above the existing podium) which will be setback from the Harris Street frontage.

The UDP also establishes a number of built form design guidelines including:

- Encourage the provision of active uses at ground floor on major pedestrian routes such as the proposed café which will front the UPN;
- Provision of articulated and interesting façades which are sympathetic to buildings within the vicinity;
- The application of a 16m per second wind speed criteria to ensure pedestrian safety and comfort;
- The use of glass with more than 20% reflectivity and other highly reflective material is not permitted;
- No more than 50% of major open space areas and communal private open space should be overshadowed between 10am and 2pm between 21st April and 21st August; and
- In relation to residential and other sensitive development in vulnerable locations an acoustic design report shall indicate the noise attenuation measures required to satisfy the following criteria:
  - The L10 (20 minute) noise level in the unit windows and external façade doors closed shall be less than 40dB(A);
  - The L10 (20 minute) noise level in the unit with windows and façade doors open, taking an aggregate opening or opening size not less than 5% of the floor area of the room (as required as the minimum standard for natural ventilation under clause F4.6 of the BCA) shall be less than 50dB(A).

These matters are separately addressed in the following assessment sections of this report and in the Tables of Compliance at **Appendix I**.

The planning controls that apply to residential development under the UDP are generally consistent with those that apply under SEPP 65 (considered in Section 6.2). The proposal will achieve a high level of internal amenity suitable to its short-term occupancy by students and aims to provide development suited to the needs of students.

6.4 Development Contributions

UTS does not propose to enter into any voluntary planning agreement or separate development contributions framework as part of the Project Application.

The Council's Ultimo Pyrmont Section 94 Contributions Plan applies to the site. The plan requires payment of contributions where any proposed development seeks to increase resident and/or worker population. However, the proposed development for education and student housing are not land uses that are specifically required to be levied under this plan.

The proposed development seeks an exemption from the application of Section 94 or the need to enter into a voluntary planning agreement on the basis that:

- The development will provide a substantial quantum of low cost accommodation in the locality area, which will support the aims of the Council in providing affordable housing opportunities.
- The development is self contained with social services and facilities to support students provided by the University generally on the campus. As such the development is not expected to give rise to demands on local infrastructure, which would normally be associated with residential development (such as public domain and town centre improvements, community services and public infrastructure) (see Section 6.19).
- The development will not generate significant additional traffic demand on the local road system (see Section 6.11).
- The development will provide an alternative and accessible means of pedestrian access through the site, which will achieve the aims of the Contributions Plan by improving the area's pedestrian network and providing safe and convenient pedestrian access.

6.5 Consistency with the Concept Plan

The proposed development has been designed to accord with the scope of the proposed elements and Statement of Commitments in the Concept Plan for the UTS Broadway Precinct. Specifically the development:

- is to be built within the building envelope proposed for the site by the Concept Plan;
- does not exceed the overall maximum floor space proposed for the site by the Concept Plan;
- adopts the same design principles at those used for the Concept Plan development;
- provides secure parking for 70 bicycles but no additional car parking; and
- achieves a high level of environmental performance.

6.6 Alternatives to the Proposal

The UTS Concept Plan sets out the development parameters for the expansion and revitalisation of the UTS Broadway Precinct. Part achievement of this overall goal is underpinned by attaining increased provision of student housing in the vicinity of the City Campus. The proposed development serves to provide this function, as well as additional teaching and learning spaces.

The alternatives to the proposed Project Application development would be to:

- Not provide additional student housing; or
- Locate the proposed development on an alternative site.

No additional student housing

One of the fundamental objectives of the UTS Concept Plan is to provide good quality, more accessible and well located student housing in close proximity to the UTS City Campus. Together with 163 new beds to be provided at UTS Blackfriars, this proposal will serve to decrease the ratio of total students (equivalent full time student load) to beds and bring UTS closer to the level of student accommodation at other universities. It will also assist in relieving pressure on local private rental housing – so benefitting the wider community by enabling local residents to rent affordably.

Alternative locations

The site has been identified for accommodation as part of a lengthy master planning process for the UTS City Campus. The location is particular suitable because it is part of the City Campus and the land is owned by UTS. Alternative locations would involve considerable and cost in terms of land acquisition and development, would not achieve the aims of creating a living campus with residential students, would not reduce dependence on public and private transport, or provide low cost accommodation.

Undertaking the proposal at an alternative location would not support the objectives of the draft Sydney City Subregional Strategy, which aims in part to congregate educational land uses within the Sydney Education and Health Precinct, of which the UTS City Campus forms a part. The addition of student housing in the proposed location is consistent with the State Government's strategic planning goals.

6.7 Built Environment

6.7.1 Design Quality

The external design of the proposed development has been developed by **nettleton**tribe to achieve various outcomes. A detailed explanation of the evolution of the design for the development is detailed in the Design Report at **Appendix E** and summarised in Section 6.6.

The proposed design for the development is considered to be well resolved on the basis that it:

- Has been the subject of an iterative design process in response to ongoing feedback from the UTS Design Review Panel;
- Is of a contemporary design that conveys a sense of innovation, while identifying the building's association with the university;
- Has been configured to best utilise the structural capacity of the existing building, while maintaining the setback tower form adopted for the adjoining ABC and Taragon buildings;
- Utilises materials and finishes for the Harris Street facade that enliven the building's facade, but also insulates students from traffic noise; and
- Improves pedestrian accessibility through the building and provides an alternative pedestrian link between the UTS Broadway Precinct and the UPN.

6.7.2 Visual Impact

A Visual Impact Assessment of the proposal has been prepared by **nettleton**tribe and is included in the Design Report at **Appendix E**. This assessment considers the visual impact of the development when viewed from vantage points and locations surrounding the site. In addition, the heritage impact statement prepared by GML at **Appendix H**) has considered the visual impact of the proposal on heritage items in the vicinity.

Existing Conditions

The existing 8 storey Peter Johnson Building has frontages to Harris Street the UPN. The Harris Street frontage of the building includes offices, pedestrian and vehicular entries to the building, and retail tenancies. The UPN façade to the building includes an outdoor basketball court and enclosed offices. There is limited vegetation in the vicinity of the site, with the exemption of some street trees on Harris Street.

Assessment

Views from UTS: The upper levels and the rooftop sign of the student housing tower will be visible in the middle distance from Alumni Green behind Building 4 on the Broadway Precinct of the UTS City Campus. The new building will form part of the skyline between the ABC and Taragon buildings. The bulk and scale of the tower is consistent with its adjacent context and is minimised through the use of colour. Although the UTS signage will be clearly legible from Alumni Green, it will not have a negative or overbearing impact and gives the building identification within the UTS campus and city context.

The new tower will be visible from the upper levels of UTS Building 1. Current views of the roof of the Peter Johnson Building will be replaced by the new tower and some views to the CBD between the ABC and Taragon Buildings will be blocked. Views to Sydney Harbour and the CBD skyline to the north and north east will not be impacted.

Views from Broadway opposite UTS Buildings 1 and 2: The new tower will be partially visible from Broadway opposite UTS Buildings 1 and 2 as it will infill the current space between the ABC and Taragon buildings. However, it is partially obscured from view by public domain treatments (such as street lights and street trees). It has minimal adverse visual impacts on pedestrians or vehicles using Broadway. The tower is likely to be further obscured by proposed new development on the Broadway frontage to UTS.

Views from Railway Square Special Area: The upper levels of the new tower may be visible in some views from George and Pitt Streets and Railway Square adjacent to the former Marcus Clark department store. However, the separation of the new tower from this area means there will be negligible heritage impacts on the Railway Square Special Area and the heritage streetscapes within it.

Views from Broadway/Harris Street Intersection: From the southern side of the intersection of Broadway and Harris Street, the bulk and scale of the proposed building is consistent with its neighbouring buildings. The mass is set back from the Broadway and Harris Street, thus reducing its impact at street level.

The UTS signage is legible from Broadway, giving the building identification within its surrounds amongst multilayers of neighbouring signage, all blending within the city context. The signage does not dominate the existing context. The proposed roof language is complementary with the neighbouring Taragon roof skyline by the incorporation of simple horizontal roof elements.

Views from Harris Street: The new tower will be visible from Harris Street near Thomas Street. However, the bulk and scale of the proposed building is reduced by the setback from Harris Street and screening provided by street trees. The UTS signage is legible giving the building identity on street level. As it is located at a lower vantage point, it does not dominate the existing ABC building signage.

The addition of the building is consistent with the current streetscape and skyline in terms of bulk and material, it has negligible negative visual impact at street level. It completes a section of the skyline within the urban context by infilling a large gap between two large buildings.

Views from Ultimo Pedestrian Network: The roof of the new tower will be visible in the distance behind the ABC Building, when viewed from the south at the UPN near Ultimo Road. This will have a negligible impact.

The new café in the infilled podium will introduce ground level active uses at the UPN entrance to the Peter Johnson Building and deliver a positive visual impact to the public domain. In addition, a building identification sign at ground level will assist in way-finding for pedestrians exiting the Devonshire Street Tunnel from Central Station.

The tower will be generally outside the field of view at the UPN entrance to the Peter Johnson Building as pedestrians would need to deliberately look upward to see the tall building. Despite this, the UPN façade of the tower has been articulated and deeply modulated to reduce overall bulk and scale. Building materials used will complement the existing ABC Building and existing UPN façade of the Peter Johnson Building. Consequently, the new tower will have a neutral visual impact on the locality.

Views from Taragon Building: From Level 9 and above in the Taragon Building, skyline views from north and east facing windows will be obscured by the new tower and infilling of Level 7. Views below this point are currently blocked by the existing Wembley Building (that has an approximate height of RL 37, which equates to Level 9 in the Taragon Building) and the podium of the existing Peter Johnson Building podium.

Despite this, as illustrated in **Figure 30**, the modulated façade at the south east corner of the new tower enables some views to the city skyline to be maintained above Level 10. This footprint delivers an improved visual impact for residents of the Taragon Building when compared to the previously approved commercial tower for the site. Some north facing windows between Levels 6 and 8 of the Taragon may lose some views over the roof of the current Peter Johnson Building. Infilling Level 7 of the podium will result in these views being blocked by the new structure. The footprint of the new tower is modulated above Level 8 of the Peter Johnson Building. Despite this, the footprint of the previously approved building did not set back from the southern boundary of the site at any level or incorporate façade modulations, and would have obscured more views than the current proposal.

In summary, the proposed new tower for student housing will have minimal visual impacts on the locality. In distant views from the north and west, the tower will appear as an infill development between the existing ABC and Taragon buildings. As the tower form is set back from the Harris Street boundary of the site, it will not be visible from the Railway Square Special Area and will not have adverse impacts on nearby heritage items.

Deep modulations and articulation to the façade act to reduce the bulk and scale of the development, and the proposed roof top signage adds interest to the skyline with adding clutter. Adverse impacts on the adjoining Taragon Building have been minimised where possible by modulating the façade to maintain some skyline or UPN views from secondary windows (bedrooms).

6.7.3 Landscaping and Public Domain

The proposed landscaping elements at Levels 8 and 21 are considered to be compatible with the development in that they will:

- Provide an attractive green edge to the top of the building and the podium levels, when viewed from the UPN;
- Provide functional, yet attractive spaces for students to study and socialise;
- Help screen adjoining development, and yet continue to provide filtered distant views; and
- Provide contiguous spaces that add to the proposed internal communal areas.

On this basis, the proposed landscaping elements are considered appropriate for the development.

6.7.4 Design Alternatives

As outlined in Section 4.0 of the Design Report prepared by **nettleton**tribe (at **Appendix E**), there were various design options explored for the development. This assessment included a study of examples of other student housing developments.

Following extensive review and revision, including critical review by the UTS Design Review Panel, the proposed and preferred design option was selected due to the following factors:

- The proposed building envelope for the development:
  - respects the pattern of existing tower built form development that is setback from Harris Street, and established by the adjoining ABC and Taragon developments; and
  - provides interest and clear articulation to the building's UPN facade, such that it provides interest and a point of destination as pedestrians move along the UPN;
- The proposed Harris Street facade treatment:
  - helps to break up the scale of the building through use of horizontal and vertical window and fenestration elements;
  - adds a three dimensional quality to the facade through use of large recessed openings; and
  - creates a safe barrier between the ongoing operations and ensures safety of student body etc.
- The roof top element not only provides a functional space, but serves to provide a strong linear element that clearly denotes and caps the top of the building; and
- The proposed signage will assist students as they navigate their way along the UPN and from the other parts of the UTS City Campus to the building.

Based on these outcomes, the design is considered appropriate for the development.

6.8 Internal Amenity

The following demonstrates that the development will achieve high levels of internal amenity for UTS students and staff.

6.8.1 Student Housing

In addition to the SEPP 65 assessment provided by **nettleton**tribe (in the Design Report at **Appendix E**) the internal layout of student housing conforms with the following requirements set out by UTS's Design Guidelines. Specifically:

- every student bedroom has access to, or incorporates, a bathroom/ensuite and kitchen;
- individual storage areas and a study desks are provided within each bedroom;
- windows from living rooms are positioned to provide views of the street or the outdoor areas, such as the common courtyard;
- at least 5% of all beds are to be in studios or one bedroom units; the development provides 48% of all beds in single units;
- internal common and private spaces are arranged in a legible and efficient manner; and

- there are various common spaces for students to relax and study across the building, including the living rooms within units, the common spaces on each residential level (including study and tutorial rooms) and the outdoor terraces at Levels 8 and 21.

Natural Light and Solar Access

The proposed development maximises natural daylight to each unit within the constraints of ensuring suitable levels of privacy for students. 70% of all habitable rooms will receive a minimum of 2 hours of direct sunlight between the hours of 9am and 3pm during the winter solstice.

Ventilation

Waterman AHW has undertaken computational fluid dynamic simulation into cross ventilation of the proposed student housing (refer **Appendix M**). Waterman found that there is significant air flow through the student housing and all apartments can be naturally ventilated, thus meeting the natural ventilation requirements of SEPP 65.

Visual Privacy

The proposed development maximises the visual privacy of each unit through the combination of the proposed layout of units and provision of screens on windows. Specifically, living room windows of all units have outlooks but are not placed opposite each other. In addition, external movable screens will be provided on the windows of units on Level 8 that adjoin the common outdoor terrace and live-in staff member's private terrace and blinds will be provided on all windows to allow diffuse light to penetrate into units while at the same time maintaining the privacy of occupants.

Acoustic Privacy

Acoustic privacy of units is maximised by acoustically isolating lifts and other plant areas from units. In addition, vents provided to promote air flow (as outlined above) as part of the auxiliary ventilation system throughout the student housing will be acoustically treated to minimise the transfer of noise between units and common areas. As recommended in the Acoustic Report at **Appendix N**, the facades of the building will also be insulated to further promote acoustic privacy for residents. Party walls between units will also be treated to maximise acoustic privacy for students.

Access to the common outdoor terrace on Level 8 and roof terrace will be generally limited to 7am to 10 pm daily. The outdoor common areas will be locked outside these hours to ensure no unauthorised use. In addition, windows of units on Level 8 that adjoin the common outdoor terrace and live-in staff member's private terrace will incorporate acoustic glazing to minimise transfer of noise.

These measures will ensure adequate minimisation of noise transfer through the building.

6.8.2 Access and Mobility

The student housing and modifications to the podium of the existing Peter Johnson Building have been designed to maximise the reasonable provision of access for people with disabilities. Morris-Goding Accessibility Consulting has prepared a detailed report (at **Appendix L**) which assesses the proposal in the context of Australian Standard 1428, the UTS Design Guidelines and the provisions of the *Disability Discrimination Act 1992* (Cth).

Assessment

A new accessible path of travel will be provided from the UPN into the expanded Level 2-7 podium and student housing above.

Access through the building either to Harris Street or the Harris Street Pedestrian Bridge is via the building entry at UPN frontage and the existing lift lobby within the core of the building. This access route will be available to the public during normal business hours.

Access to the proposed student housing will be made either:

- via the Level 2 UPN entry via the new lifts located within the student housing reception / lobby area; or
- from Level 3 through to the new lifts.

Morris-Goding has determined that:

- The proposed new paths of travel and the new lifts are of a sufficient size to accommodate wheelchair users and provide adequate space for manoeuvrability.
- Adequate emergency egress for wheelchair users is available via Harris Street and the UPN, and three sets of fire stairs are also provided.
- Allocation of one of the car spaces for disabled visitors to the building is adequate.
- All student housing is visitable.
- 38 of the proposed 433 student units will be fully accessible.
- Access to common, music and study rooms, terraces and laundries will be made compliant with the relevant parts of AS 1428.2.
- Accessible unisex toilets will be provided throughout the building.

Management

To ensure that the development is adequately accessible, the following will be incorporated into the design:

- Building entries off the UPN and Harris Street will comply with the AS1428 series; and
- The Level 1 car park will comply with the requirements of AS2890.1:2002 and one disabled visitor space is to be provided.

These measures form part of the draft Statement of Commitments.

6.9 Impacts on Adjoining Development

The following provides an assessment of the proposed development with respect to potential impacts that may arise in relation to surrounding existing development.

6.9.1 Noise

A detailed environmental noise assessment has been undertaken of the student housing by Acoustic Logic Consultancy (refer **Appendix N**). The assessment considers the current noise conditions in the vicinity of the site and measures to mitigate any adverse impacts for the new residents of the tower. A separate assessment of noise impacts during construction has been undertaken and is discussed at Section 6.21.

Existing Conditions

The Peter Johnson Building is currently affected by high levels of traffic noise from both Broadway and Harris Street. Noise from students and pedestrians is also common however this has a minor impact when compared to noise from traffic. Acoustic surveys undertaken at three locations in the vicinity of the site to ascertain current background noise levels throughout the day confirmed background noise levels are dominated by general traffic noise.

Assessment

The proposal has the potential to generate additional external noise during its operation (for example through pedestrian and vehicle traffic). In addition, ingress of noise from external sources to units must also be managed.

Due to the existing high levels of traffic noise in the vicinity and as no student car parking is to be provided on site the proposal is unlikely to generate additional traffic noise.

To ensure ingress of traffic noise is minimised, the façade of the building will be acoustically treated and glazing appropriately designed. In addition, access to the Level 8 terrace adjacent to the Taragon building will be limited to Residential Life / UniLodge staff only, and acoustic screens will be installed on the south east wall of the Level 8 terrace to minimise impacts. Adoption of these measures will ensure the internal areas of the building meet environmental noise criteria for the site based on AS 2107:2000.

To minimise noise impacts associated with operational plant, a further mechanical noise assessment will be undertaken once plant selections and services drawings have been finalised. At minimum, plant will be acoustically screened using lining of ductwork, acoustic silencers, variable speed controllers, time switches and acoustic screens.

To minimise noise impacts associated with students using the common terraces on Level 8 and on the roof, access to common areas will be controlled by Residential Life / UniLodge staff and acoustic screening will be installed along the boundaries of terraces.

Access to the common terrace on Level 8 and the roof terrace will be limited to between 7am and 10pm daily, while use of the terrace on the south east corner of Level 8 will be limited to members of Residential Life / UniLodge staff. Use of these spaces outside these hours will be for events coordinated by Residential Life / UniLodge, and will be subject to prior consultation with managers of neighbouring properties (such as the Taragon Building).

Management

The design of the building will incorporate a range of measures in relation to noise management.

To minimise acoustic impacts on adjoining development, the proposal incorporates the following measures:

- Acoustic screens will be provided on the south east wall of the private Level 8 terrace; and
- Access to the common Level 8 terrace and roof terrace will be limited to generally 7am to 10pm daily, as recommended in the Plan of Management.

To minimise impacts from traffic noise on residents of the proposal, the following measures will be incorporated in the building design:

- Acoustically treating the external façade of the building;

- Using appropriately designed external glazing; and
- Adopting the findings of a detailed mechanical noise assessment that will be carried out once plant selections and services drawings have been finalised.

These measures form part of the draft Statement of Commitments.

6.9.2 Visual Privacy

Due to the constrained nature of the site, the adjacent residential building may be overlooked by some student units or common areas. A range of measures have been incorporated into the design to minimise any adverse impacts.

Existing Conditions

A multi storey residential tower (known as the Taragon building and coloured grey and white in the centre of **Figure 31**) adjoins the existing Peter Johnson Building to the south east. This building was constructed subsequent to the 1991 approval of a multi storey commercial tower to RL 80 on the site. The footprint of that tower was to extend to the boundary with the Taragon Building.

To allow light to penetrate to the lower levels of the Taragon Building following the construction of the commercial tower, a lightwell measuring approximately 6 metres by 17 metres was provided on the northern boundary of the Taragon site. The lightwell extends the entire height of the building and is fully enclosed up to approximately Level 9 of the Taragon Building. A small area of private open space is provided at the base of the lightwell, adjacent to the apartment at the lowest level of the Taragon building.

As shown in **Figure 31**, windows from some bedrooms on the northern and eastern faces of the Taragon Building currently overlook the podium of the Peter Johnson Building. These units contain two or three bedrooms and include a balcony off their main living area that faces west.

Assessment

Levels 1-7 of the podium will be infilled to accommodate additional UTS teaching spaces, UniLodge operations and plant. A new Level 8 will be constructed over the footprint of Level 7. Levels 7 and 8 will be built to the boundary with the Taragon Building. As the works on the façade abutting the Taragon Building relate only to plant area, there will be no potential for overlooking from UTS students or staff to the residential apartments opposite.

Level 8 will include indoor and outdoor common areas, some student housing units and accommodation for a live-in member of Residential Life / UniLodge staff who will reside in the apartment on the southern boundary of Level 8 closest to the Taragon Building. A private terrace is provided for use of the staff member and will be accessible from within the apartment. This terrace will be enclosed with a privacy screen to minimise impacts on residents of the Taragon Building.

The new tower will rise from Level 9 to Level 21 and is set back approximately 8 metres from the site's boundary with the Taragon Building. Levels 9 to 20 include student housing only, while Level 21 is a common roof top outdoor area.

Due to the existing lightwell in the Taragon Building, and the setback of the student housing tower from the southern boundary of the site, south facing student windows will be separated by 14 metres from any bedrooms opposite in the Taragon Building. In addition, access to the roof terrace will be limited to generally 7am to 10pm daily, and balustrades and landscaping will provided along the boundaries of the roof to minimise overlooking of adjoining buildings, such as the Taragon.

Figure 31 – Building adjacent to the podium of the Peter Johnson Building

Management

Despite this generous separation, a range of measures will be adopted to minimise overlooking from the student housing to the Taragon Building:

- Acoustic and permanent external privacy screens will be provided on south and east facing windows of the live-in staff member's apartment and on the boundaries of the adjoining outdoor terrace on Level 8;
- Permanent external privacy screens will be installed on the south facing windows of units on Levels 9-20 of the student housing tower; and
- Access to the outdoor terrace of Level 8 adjacent to the Taragon Building will be restricted to members of staff.

These measures form part of the draft Statement of Commitments.

6.9.3 Solar Access

Shadow Diagrams have been prepared by **nettleton**tribe that illustrate the impacts of overshadowing resulting from the new residential tower. They are included in Volume 3.

Existing Conditions

Between 9am and 3pm at the winter solstice, windows up to Level 9 of the Taragon Building are overshadowed by the adjoining Wembley House (the beige coloured building at the left of **Figure 31** has an approximate height of RL 37) and the podium of the Peter Johnson Building. North facing windows above Level 9 of the Taragon Building are overshadowed between 9am and 10am at the winter solstice.

As the approved commercial building for the site was to be built to the boundary with the Taragon Building, a lightwell was provided on the northern boundary of the Taragon Building to allow some light to penetrate to windows up to Level 9. The lightwell measures approximately 6 metres by 17 metres and is surrounded on all four sides by buildings (including the podium of the existing Peter Johnson Building and the Wembley Building).

All north and east facing windows of the Taragon apartments adjacent to the Peter Johnson Building are bedroom windows of dual aspect two- or three-bedroom apartments. (Level 17 also includes one north facing bathroom window and one living room window). Balconies and windows off living rooms face west for each of these apartments.

Assessment

The shadow diagrams and analysis prepared by **nettleton**tribe in the Design Report at **Appendix E** illustrate that the proposed new student residential tower will overshadow parts of the existing Taragon Building at the winter solstice as follows:

- East facing bedroom windows between Level 8 (RL 35) and Level 16 will be overshadowed between 10am and 3pm;
- North facing bedroom windows will be overshadowed between 12 noon and 3pm; and
- North facing bathroom and living room windows at Level 17 will be overshadowed between 12 noon and 3pm.

The extent and impact of the overshadowing to surrounding development is considered acceptable on the basis that:

- The combination of the lightwell in the Taragon Building, and the proposed setback of the new tower from the south west boundary of the Peter Johnson Building results in a separation of at least 14 metres between the facades of the two buildings. This ensures solar access will be provided to north facing windows in the Taragon between 9 am and 12 noon at the winter solstice.
- Windows in the Taragon Building below RL 35 are already overshadowed by the existing Peter Johnson Building and Wembley House. Light penetration via the existing lightwell will be maintained.
- North-facing windows above RL35 will continue to receive solar access between 9 am and 11 am at the winter solstice.
- All affected units have two aspects, and all affected windows are secondary windows (bedrooms, other than Level 17). The new residential tower will not affect solar access to any primary living areas or balconies of these units, or reduce cross ventilation.

- The impact on solar access of north and east facing windows of the Taragon Building is considerably less than if the footprint of the approved commercial building had been adopted for the new residential tower.
- All other adjoining sites and the public domain are either unaffected or only moderately affected by overshadowing from the proposed development.

6.9.4 Reflectivity

Windtech has undertaken a detailed Reflectivity Assessment, which is included at **Appendix O**. This assessment reviews the likely impacts of solar glare arising from the proposal on motorists and pedestrians in the vicinity of the site.

Assessment

Due to its height, the proposed tower element has the potential to be visible from considerable distances from the site. Therefore, to ascertain the impact of the new tower on pedestrians and motorists, Windtech selected three key sightlines in the vicinity of the site: Thomas Street near Thomas Lane, Quay Street near Bijou Lane and Pitt Street near Broadway.

At each location, Windtech found that existing buildings surrounding the site will obscure the new tower and consequently there will be no adverse glare impacts which will result that will affect pedestrians or motorists.

Management

Despite this, to manage any potential impacts from reflectivity, all glazed areas of the façade of the development should have a maximum normal specular reflectivity of visible light of 20%.

This measure forms part of the draft Statement of Commitments.

6.9.5 Lighting

The proposal will incorporate a backlit building identification sign on the western façade of the plant room, away from the Taragon Building. This is unlikely to result in any adverse impacts on users of nearby buildings including the Taragon.

Notwithstanding this, the sign is not out of context in this city locality and the residents of the Taragon Building would be attuned to a high level of illumination at night given existing conditions in the inner city location (near Broadway) of this apartment building.

The common outdoor terraces at Level 8 and on the roof will be accessible to students between 7am and 10pm daily and lit from dusk until 10pm to promote safety. Outside these hours, the terraces will be locked and lighting reduced accordingly. Lighting used for the outdoor terrace areas will be appropriate for the locality and designed to minimise adverse impacts on users of nearby buildings including the Taragon.

6.9.6 Wind Impacts

The impact of the proposed student housing on local wind conditions has been assessed, and recommendations made to mitigate any unfavourable impacts. The assessment was carried out by Windtech and is included at **Appendix P**.

Existing wind environment

Three principal wind directions potentially affect the development. These are from the north-east and south in warmer months and from the west in winter. The podium and pedestrian areas of the current Peter Johnson Building are relatively well-shielded from most prevailing winds by surrounding tall buildings to the north-east, south and west, meaning outdoor areas can be utilised by UTS staff and students with minimum discomfort.

Assessment

The potential impacts of the proposal on local wind conditions are described below.

Level 4 Terrace: The existing level 4 terrace is enclosed and is currently shielded from north-east, southerly and westerly winds. Expansion of the existing podium to the east and construction of the new student housing will not affect existing wind conditions within the open space courtyards on Level 4 and these areas will continue to be acceptable for their intended use.

Level 8 Terrace: Due to existing buildings in the vicinity, the communal residential terrace on Level 8 will be shielded from north-easterly, southerly and westerly winds.

Wind impacts will be minimised to the majority of the terrace by a combination of shielding by the proposed residential tower and the covering provided by upper levels of the building.

Given the above, it is not expected there will be any adverse impacts to the Level 8 communal terrace as a result of downwash resulting from the construction of the new tower form or prevailing north-easterly, southerly or westerly winds.

Roof Terrace: A common roof terrace including barbecue area will be provided on the Level 21 (the uppermost level) of the building. Although it will be somewhat exposed to the north-easterly, southerly and westerly winds, the impact of these winds can be effectively minimised through landscaping and structural treatments.

An impermeable balustrade 1.2 metres in height around the perimeter of the trafficable areas of the roof terrace will ameliorate any adverse wind conditions to the covered outdoor BBQ and communal area. Providing dense vegetation to this area would further enhance the amenity of the terrace.

Management

An impermeable balustrade 1.2 metres in height will be installed around the perimeter of the trafficable areas of the roof terrace to minimise adverse wind impacts on users of the roof terrace.

This measure forms part of the draft Statement of Commitments.

6.10 Ecologically Sustainable Development

The proposal involves the construction of a new tower to accommodate up to 720 UTS students that would otherwise reside off-campus. In addition, the podium of the existing Peter Johnson Building will be infilled to increase the teaching capacity of the University and provide additional student services such as common areas and a café.

As there is no environmental rating tool that can be readily applied to a student housing development (State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 does not apply to Class 3 buildings), Living Education has commissioned Viridis E^3 to undertake an assessment of the proposal using the Multi Unit Residential tool developed by the Green Building Council of Australia (GBCA) (see **Appendix E**). However, it should also be noted that this tool is still in its "pilot" stage and as the proposal is for student housing (not residential accommodation for permanent residents); therefore, the proposal is not strictly not eligible for a rating issued by the GBCA in relation to this tool.

Despite this, the design will incorporate naturally ventilated units, no on-site car parking and use of environmentally friendly construction materials. This will enable the building to deliver the equivalent environmental benefit of a 5 Star Green Star rating using the Multi-unit Residential Pilot tool.

In addition, the Living Education consortium has generated a BASIX certificate for the proposal using the criteria that would normally apply to a large multi unit residential development (BASIX only applies to boarding houses less than 300 m^2). Those targets are:

- 40 for water (40% reduction in mains-supplied potable water consumption compared to the average NSW dwelling);
- 20 for energy (20% reduction in greenhouse gas emissions compared to the average NSW dwelling); and
- Achieve an appropriate level of thermal performance by meeting the Thermal Comfort requirements applicable for the proposal.

A copy of the BASIX certificate demonstrating the proposal can meet these targets is at **Appendix K**.

The assessment of the proposal using the Green Star tool and BASIX demonstrates that the student housing development incorporates measures that will achieve energy and water efficiency.

In addition, the proposal is consistent with the following five accepted principles of ecologically sustainable development described below.

Integration Principle

The integration principle holds that decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.

UTS currently rates poorly in the provision of student housing. The proposal will significantly improve this situation, delivering important social, environmental benefits for students that will reside on campus rather than compete for high cost rental accommodation. It complements UTS's proposal to improve its teaching and recreational facilities at the Broadway Precinct of the UTS City Campus, which will benefit all UTS students and staff.

Precautionary Principle

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 proposal is supported by multiple environmental studies and technical reports which conclude that there are no environmental constraints that preclude the development of the site in accordance with the proposal, subject to appropriate management in future planning, design, construction and operational stages.

The precautionary principle has been applied in particular in relation to the management of energy and water use and will continue to be implemented once the facility is operational. The proposal also capitalizes on its central location adjacent to the main UTS Broadway Precinct and major transport hub by promoting walking, cycling and public transport to students and staff, rather than private transport.

Intergenerational Equity

The principle of inter-generational equity holds 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 proposal as a whole will directly benefit current and future generations by providing much needed accommodation for students at an established university.

Biological Diversity

Under the biodiversity principle, the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.

There is no natural vegetation on the site and it does not contain any threatened or vulnerable species, populations, communities or significant habitats. Construction and ongoing operations of the facility will be managed in accordance with the draft Statement of Commitments, ensuring no indirect impacts on Sydney Harbour or other waterways.

Valuation and Pricing of Environmental Resources

Under this principle, improved valuation, pricing and incentive mechanisms should be promoted. The costs of infrastructure and measures to ensure an appropriate level of environmental performance on the site have been incorporated into the cost of development.

6.11 Traffic and Access

A detailed assessment of the impacts of the proposal on the existing road and public transport network has been conducted by Halcrow MWT (refer **Appendix J**). The assessment considered the current traffic conditions in the vicinity of the site and traffic impacts associated with the proposed development. Impacts on the local traffic network associated construction of the development are discussed separately at Section 6.21.

6.11.1 Traffic

Existing Conditions

The site is located on Harris Street, Ultimo. Harris Street is classified as a state road (MR 170) and carries about 30,000 vehicles per day in five traffic lanes which operate one-way in the southbound direction. At its southern end, Harris Street connects to Broadway at a controlled intersection with full pedestrian facilities.

Broadway is a State road that provides a major arterial link between the Sydney CBD and Sydney's west. It carries approximately 70,000 vehicles per day in a 25 metre divided carriageway with four traffic lanes in either direction. The kerbside bus lanes are provided in both directions with clearway restrictions in operation on weekdays between the hours of 6am to 10am and 3pm to 7pm.

Assessment

The proposed tower will provide accommodation for UTS students adjacent to the university campus no additional traffic impacts are expected. Thus, the traffic impacts of the proposal will be negligible when compared to the current situation.

Halcrow MWT has also undertaken a separate assessment of traffic impacts associated with the construction of the new building. The findings are addressed in Section 6.21.

6.11.2 Access and Parking

The existing Level 1 car park will be modified to accommodate structures associated with the construction of the new tower for student housing. As a consequence, the existing car park will be reconfigured and 13 spaces removed.

The remaining 122 spaces will continue to be used by UTS staff. No spaces will be allocated to students although one space for disabled visitors will be provided. As access to all spaces is managed through UTS Security and/or an electronic code and there is some excess capacity in the car park, the number of on-site spaces is appropriate. In addition, UTS actively promotes the use of public transport, walking and cycling to its staff and students to minimise demand for on-site car parking.

The resultant revised car park layout will comply with the requirements of AS2890.1:2002 with certification to occur prior to the issue of construction certificate.

Access to the site for service and emergency vehicles will be via the existing loading dock off Harris Street. Students will also be able to use this for moving in and out of the residential tower at the end of the academic year.

6.11.3 Cycle Facilities

The building currently provides no storage facilities for cyclists, however cycle lanes on Broadway and the UPN provides cycle connections to Darling Harbour and beyond.

Parking for a total of 70 bicycles will be provided in a secure facility located on Level 2 of the proposed development. Access to these bicycle parking spaces will be via the UPN or through the Harris Street loading dock.

The quantum of bicycle spaces equates to one space per 10 residents, which exceeds the ratio of bicycle parking provided for similar student housing (for example UniLodge at the University of Sydney [1 space per 58 students] and UniLodge at UNSW [1 space per 14 students]). In addition, UniLodge operators indicate there are spare bicycle spaces at all times.

The quantum of bicycle spaces proposed is therefore appropriate as students are expected to walk to the adjacent UTS campus to attend classes, and the site is a short distance from multiple public transport services.

6.11.4 Public Transport and Demand for Services

Halcrow MWT has assessed the capacity of the existing bus and rail network to accommodate trips generated by the proposal. As the proposal is for student housing adjacent to the students' university, adjacent to a major transport hub, the development is expected to have negligible impact on the public transport networks.

6.12 Heritage

As discussed in Section 4.3 and illustrated in **Figure 25**, the site is in the vicinity of a number of heritage items and streetscapes of local heritage significance. Accordingly, a Heritage Impact Statement was prepared by Godden Mackay Logan (GML) and is included at **Appendix H**. GML's assessment addressed:

- The potential impact of the proposal on the indigenous and non-indigenous heritage significance of the locality; and
- The manner in which the project will enhance and interpret the historic associations of the place and respect the curtilage of significant places in the vicinity of the site.

Assessment

As discussed in Section 4.3 and illustrated in **Figure 25**, the site is in the vicinity of a number of heritage items, items constructed more than 50 years ago, and heritage streetscapes. It forms part of the City Campus of the UTS Broadway Precinct.

GML has undertaken an assessment of the impact of the proposed development on the heritage qualities of the vicinity and the layout of the broader UTS Broadway Precinct.

UTS Broadway Precinct: The precinct includes three items of local heritage significance that are located in close proximity to the site: Building 3 (Bon Marche), Building 8 (the Terraces). All date from the late nineteenth and early twentieth century and follow the alignment of George Street West (now Broadway). The proposed development is contained within the footprint of the existing Peter Johnson Building and as such retains the overall built form of the site including existing street pattern.

Although the new tower form will not be out of place adjacent to other recent development (including the ABC headquarters and Taragon apartment building), it may be visible in some views from Broadway to the west of the site. However, in GML's opinion, the separation of the site from the heritage items, and the substantial set back of the tower from Harris Street would result in negligible scale or visual impact on the local street layout or heritage items in the UTS Broadway Precinct.

Railway Square Special Area: Railway Square is identified in SLEP 2005 as a Special Area and streets within that area, including Broadway near Harris Street, contribute to its heritage value.

The former Marcus Clark department store (now Sydney TAFE), Agincourt Hotel (871 George Street) and the Federation Free Style commercial building at 849-855 George Street are located approximately 80 metres to the south of the Peter Johnson Building tower. Due to the location of other high rise buildings in the vicinity and the sloping topography from Broadway to the north, the upper levels of the new tower may be visible in distant views to the north from Railway Square.

In GML's opinion, given that the proposed student housing is set well back from the Harris Street boundary of the site and its distance from Broadway, the development will have negligible impacts on the heritage value of the Railway Square Special Area.

6.13 Geotechnical Conditions and Structural Engineering

Douglas Partners has prepared a Geotechnical Report for the site (see **Appendix Q**) to provide information on subsurface conditions and assess the conditions of the building's existing foundations.

Assessment

The report determines that based on review of excavation works associated with the adjoining Taragon Building and collection of bore samples drilled from the basement of the existing building, it is possible to increase the load capacity of existing building piles to accommodate the proposed development. This was provided that the piles are structurally sound and have been constructed in accordance with piling records.

The assessment also determined that given the piles were founded in Class II sandstone, the additional load of the proposed development was only calculated to increase the settlement of the existing piles by less than 5mm. This was considered to be an acceptable outcome.

No free groundwater was encountered in bore samples. Groundwater is not expected to be an issue for carrying out the construction of the development. In addition, as no excavation works are proposed, the construction methodology will not affect Railcorp infrastructure.

In addition, an assessment of the capacity of the existing structure to accommodate the proposed extension to the podium and new tower has been undertaken by BG&E (see Structural Report at **Appendix R**). BG&E identified that in circumstances where foundations in a building have not been designed for additional building load, the existing foundations may need to be upgraded.

Management

The following recommendations will be implemented to monitor the performance of the existing foundations:

- Precise leveling of all columns will be undertaken to confirm that settlement caused by the additional loading is within design expectations.
- Settlement monitoring will be commenced prior to the redevelopment works to provide a datum. Ongoing monitoring will be carried out throughout the construction phases of the project.
- Further bore testing will be carried out adjacent to critical piles, and piling records reviewed, to confirm the individual increased load capacities of the piles.

These measures form part of the draft Statement of Commitments.

6.14 Stormwater Management

An existing 330m^3 on-site stormwater detention tank is located below Level 1 of the building that discharges into the City of Sydney's existing stormwater line on Harris Street. BG&E (refer to **Appendix U**) has determined the tank has sufficient capacity to accommodate flows associated with the student housing and including flows from the 1 in 100 year maximum storm event. Accordingly, no changes will be made to the current tank and discharge arrangements.

6.15 Infrastructure and Utilities

The site is already serviced by electricity, water, gas and telecommunications services. These services can be readily augmented to accommodate the proposed development as indicated below.

Water Supply

The existing Sydney Water 300mm DICL water main in Harris Street has sufficient capacity to provide potable water to the new student housing. The existing main will be extended to reticulate water services to the development (refer to GDK Hydraulics Consulting report at **Appendix X**).

Sewerage Services

The existing Sydney Water 300mm VC sewer main in the UPN and 225mm boundary trap on the north eastern boundary have sufficient capacity to accommodate demand associated with the proposed development. The existing connections to the Lvels 1-7 podium will be augmented and services reticulated throughout the development (refer to GDK Hydraulics Consulting's report at **Appendix W**).

Electrical Services

Energy Australia has advised the existing chamber substation (number S7357, located below ground at Harris Street) has capacity to service the proposed development (refer statement from Building Services Engineers Pty Ltd at **Appendix X**).

Communication Services

Telstra has been advised of the site location and nominated densities of population relating to communications demands by the proposed development. It is understood that there is adequate local service capacity to service the development without further upgrades to existing infrastructure (refer statement from Building Services Engineers Pty Ltd at **Appendix Y**).

Gas Services

Natural gas in the locality is managed by the Jemena Gas Network. The existing gas main in Harris Street will be extended to an existing connection point on the boundary to reticulate gas to the hot water plant and laundry dryers in the student housing (refer to GDK Hydraulics Consulting report at **Appendix X**). It is understood that there is adequate local service capacity to service the development without further upgrades to existing infrastructure.

6.16 Building Code of Australia and Fire Safety

The proposed development has been assessed for compliance with the Building Code of Australia (BCA) by City Plan Services (refer **Appendix V**), as identified in **Table 5**:

Table 5 – BCA classification of the proposal

Level	Proposed use and BCA classification
Level 1	Class 7a – carparking
Level 2	Class 9b – university Class 7a – carparking and loading Class 6 – retail Class 5 – office
Level 3	Class 9b – university Class 6 – retail
Level 4	Class 9b – university
Level 5	Class 9b – university
Level 6	Class 9b – university Class 5 – office
Level 7	Class 9b – university
Level 8	Class 3 – student accommodation
Level 9-20	Class 3 – student accommodation
Roof terrace	Class 3 – ancillary

City Plan Services indicate the proposed development is capable of complying with the BCA generally (refer to **Appendix V**) and DSA Consulting has reviewed the proposal specifically for compliance with Section J (refer to **Appendix Z**). This will be achieved through a combination of compliance with the Deemed-to-Satisfy (DTS) Provisions of the BCA, and formulating an Alternative Solution that is shown to be at least equivalent to the DTS provisions. In addition, the existing podium will be upgraded to satisfy the BCA requirements for life safety systems. These works include a new fire control room, additional fire sprinklers, new smoke alarms, new fire hydrants and new evacuations systems.

In relation to fire engineering, Defire (NSW) Pty Limited has determined that the proposed development is capable of complying with the BCA either via the DTS provisions or alternative solutions (refer to **Appendix W**). The new tower will (in part) be fire separated from the existing podium. The building will have a sprinkler system, smoke hazard management systems and other services as required by the BCA. To ensure the podium complies with current BCA requirements, a new fire control room, additional fire sprinklers, new smoke alarms, new fire hydrants and new evacuations systems will be installed.

In addition, Morris Goding Accessibility Consulting has reviewed the proposal in terms of accessibility (this is discussed in detail at Section 6.8). In regards to accessibility, the statutory and regulatory standards that will be encompassed in the design development include the BCA, AS 1428 and the Disability Discrimination Act.

6.17 Operational Waste Management

The issues associated with the management of operational waste generated by the proposal have been assessed by JD McDonald (refer to **Appendix T**). The assessment has considered the likely volumes of waste generated by the proposal, and how and when generated waste will be collected.

Assessment

The development involves the construction of a new 720 bed tower for student housing and café at the UPN entrance to the building. The existing UTS academic and teaching spaces will remain operational during the construction and operation of the development. Although the amount of waste generated is dependent upon the way a development is managed and occupants' attitudes to waste disposal, projected waste quantities can be determined.

Each student bed is expected to generate 40 litres of general waste, and 20 litres of recyclable waste per week. Students will dispose of their waste via separate chutes for general and recyclable waste provided at each level of residential accommodation. The waste is discharged into waste compactors and bins located in the garbage room in the extended part of Level 2. Until collection, general waste will be stored in 3,000 litre front / rear lift bins, or compactors, and recycled waste will be stored in 1,000 litre or 3,000 litre bins. General and recyclable waste will be collected by private contractors on a twice-weekly basis. Vehicles will enter the garbage room via the loading dock off Harris Street.

The café is expected to generate 50 litres of general waste, and 25 of recyclable waste per day. Waste will be transferred to the Level 2 garbage room on a daily basis (or more often if required) by cleaning staff. General and recyclable waste will be stored in 240 litre bins in the Level 2 garbage room until it is collected by private contractors on a twice-weekly basis.

These waste collection arrangements will complement the existing arrangements for the collection of waste generated by the existing Peter Johnson Building. Waste generated by the UTS teaching spaces will be stored, and collected separately to waste generated by the new café and student housing, and is managed by UTS.

In JD McDonald's opinion, the garbage room has sufficient space to accommodate the bins to store waste generated by the student housing and café, between collections. It is to be fitted out to meet requirements of relevant parts of the Building Code of Australia and Australian Standards.

Management

Waste generated by the student housing and new Level 2 café will be managed by arranging for private contractors to collect general and recycled waste on a twice-weekly basis from the new garbage storage area on Level 2. Organic waste will be recycled for reuse in landscaped areas.

6.18 Safety and Security

The safety and security of UTS staff and students is a paramount consideration in the design of the proposed development.

Assessment

The development introduces a new café at Level 2 (ground level) will significantly improve public safety on the UPN. The café will be accessible from both within the building and the UPN and be open to the general public as well as UTS staff and students.

Three dedicated lifts provide access from Levels 2 and 3 to the residential levels. Access to these lifts is via a secured lift lobby in the extended podium. Access to the lift lobby will be limited to persons in possession of an electronic pass, or have been authorised by a member of the Residential Life / UniLodge staff or a resident student (who then give the visitor access to the lift / lift lobby). There is no public access from the café to the secure lift lobby.

In addition, security cameras will be located at specific locations in the building, such as common areas and the café. Individual units and bedrooms will be locked and security personnel will patrol the area after hours.

A separate gate, located at the Level 2 entry to the building off the UPN between the café and lobby to the residential tower, enables non-resident students, staff and members of the public to access the interior of the building (for example to attend lectures, the café at Level 4 or the retail outlets on Harris Street). This gate is open during café hours, but locked at other times.

Access to the Level 1 car park will be controlled by an electronic code.

The Residential Life / UniLodge office, located in the secure part of the Level 2, will be staffed from 8am-8pm Monday to Saturday. A live-in staff member will reside in an apartment on Level 8 adjacent to the south eastern terrace. Access to the common terrace on Level 8 and roof terrace will be generally limited to 7am to 10pm daily. There will be no access to these common areas outside these hours.

Combined, these measures will act to maximise the safety and security of UTS students and staff using the Peter Johnson Building.

Management

The following measures will be incorporated into the final building design to maximise the safety and security:

- Access to the student housing will be limited to authorised persons only;
- The Residential Life / UniLodge office will be operational from 8am-8pm Monday to Saturday;
- One full time staff member will reside in the Tower throughout semester;
- Doors to student housing units and bedrooms will be lockable; and
- Security personnel will patrol the area after hours.

6.19 Social Impacts

The proposed development will have broad social benefits given that it will:

- Increase the supply of student housing on the Broadway Precinct;
- Provide a wide choice of student housing sizes and mix of accommodation types within the development site and the locality to suit a range of students;
- Help reduce demand for low cost accommodation in the local area;
- Increase patronage of local retailers and service providers;
- Reactivate the site through the introduction of new but university related uses and residential lobbies at the UPN level; and
- Allow for greater natural surveillance of internal and external spaces on the site promoting safety, particularly to the UPN.

6.19.1 Student Housing

With current provision of 423 student beds (provided off campus), UTS currently rates relatively poorly compared with other Sydney and Australian universities which offer a greater range and volume of student housing. At 2008 total enrolment levels (covering all UTS's City campuses) the ratio of EFTSL to beds was 1:46 – substantially below comparable universities.

The proposed delivery of accommodation for 720 students will, for the first time, introduce a resident population onto the Broadway Precinct. Student housing is available as studios, two bedroom and six bedroom formats. All accommodation is visitable and 7% of units are fully accessible (this exceeds the minimum requirement), ensuring students with mobility impairments can reside on campus.

Together with 163 new beds planned for UTS Blackfriars, the development will serve to decrease the ratio of EFTSL to beds to 1:18 and bring UTS closer to the level of student housing at other universities which are 1:15. It may also assist in relieving pressure on local private rental housing – so benefitting the wider community by enabling local residents to rent affordably.

6.19.2 Student Facilities

The university's Student Services Unit (doctors, counsellors, etc) is located in Building 1 of the Broadway Precinct and will be available for the students living in the Peter Johnson Building.

In addition, as detailed in the Plan of Management at **Appendix G**, a dedicated team of staff to support residents will be located in the building. The Residential Life / UniLodge team comprises one Manager, two Coordinators and one live-in staff member. The student housing office will be open Monday to Saturday from 8am-8pm. The Residential Life / UniLodge team is complemented by Student Networkers who interact with students and staff to encourage participation in university life through social and academic events. In addition, all new students are provided with a residents' handbook that provides advice on facilities available in the residential tower and the university generally.

Recreational and cultural facilities such as bars, theatres, cinemas, swimming pools, tennis courts, gymnasiums and sporting fields are located on the main UTS campus and in the vicinity of the site. Students residing in the accommodation will be able to use these facilities at their leisure.

The provision of these student services will be sufficient to meet the needs of students in the new residential tower without impacting upon existing social infrastructure in the local area.

6.20 Economic Impacts

The proposed development will deliver economic benefits such as:

- Creating approximately 500 jobs during construction, and 38 jobs during operation of the development; and
- Generating additional patronage to local services and retail outlets in the vicinity of the site, through the additional 720 students who will reside on site.

6.21 Construction Management

Construction of the new student housing and extension to the podium of the existing Peter Johnson Building will be managed to minimise disruption to existing student services and adjoining properties. Hutchinson Builders, in conjunction with other specialists, has prepared a detailed Construction Management Plan (CMP) to facilitate the works. This plan is included at **Appendix S**.

Staging

Works are expected to commence in mid-2009, and be completed approximately 18 months later. Key to the staging of the works is minimising impacts on existing University facilities including teaching facilities and student services.

In addition, a works zone will be installed on the UPN, and a temporary entrance to the UPN from Thomas Street will result from the demolition of an existing building (this will be the subject of a separate application to the City of Sydney).

A detailed staging plan is included in the CMP at **Appendix S**.

Construction Traffic

To minimise disruption to vehicular and pedestrian traffic on Harris Street, all construction traffic will access the site via the UPN. Hutchinson Builders and Halcrow MWT have commenced discussions with the Sydney Harbour Foreshore Authority for the establishment of a works zone at the UPN boundary to the site and scheduling of deliveries of building materials.

Halcrow MWT has prepared a detailed Traffic Management Plan for Demolition and Construction Works (included in the CMP at **Appendix S**). The plan assesses the impact of the construction program on the local road network, the proposed use of the UPN for construction traffic and the likely number and type of construction vehicles to undertake the work.

It is expected up to 15 trucks per day will access the site during the 18 month period of works. No traffic delays attributable to the proposal are expected on the road network. All trucks will access the UPN via the western end of Thomas Street in a forward direction; however, it may be necessary to reverse into or out of the dedicated works zone to facilitate deliveries. Works will be carried out from 7am-7pm Monday to Friday, and 7am-5pm on Saturday. No work will be carried out on Sundays or public holidays (unless otherwise approved by the relevant authority).

Although no pedestrian, public or private transport will need to be redirected as a result of the works, a traffic controller will be engaged to manage all vehicle movements to the site via the UPN, including at the temporary Thomas Street entrance to the UPN. In addition, traffic control signs will be installed at Thomas Street and in the UPN indicating the presence of traffic controllers and urging pedestrians to take caution.

Noise and Vibration

Demolition and construction works can produce noise and vibrations which can have adverse impacts. Acoustic Logic Consultancy has prepared a detailed Construction Noise and Vibration Management Plan (included in the CMP at **Appendix S**) to assist Hutchinson Builders to minimise adverse impacts associated with the works.

Due to the proximity of multiple residential and mixed use developments to the site, residential noise criteria have been established for the proposed works. Acoustic Logic has determined that the site works during normal construction hours will fully comply with suitable noise control criteria.

Despite this, all activities will be carefully managed and appropriate noise mitigation measures strictly implemented where required. In addition, noise management plans for particularly noisy activities, such as excavation, piling and hydraulic hammering, will be developed to mitigate adverse impacts, and ensure strict enforcement with all determined control measures.

To further mitigate the impact of noise, a range of measures can be used. They include installing acoustic barriers or screens between the noise emitter and receiver, use of silencers on equipment, handling materials away from residential receivers, and modifying a specific piece of equipment to reduce noise emitted if possible.

Vibration impacts may result from driven piling. As a result, CFA/Bored piling will be used to minimise vibration impacts from the operation of plant and equipment on the site.

Monitoring of noise and vibration impacts on nearby properties will be carried out throughout the works period. Additional controls can be implemented if the monitoring identifies adverse and unexpected impacts. Furthermore, a register of complaints associated with excessive noise or vibration will be maintained, and all complaints will be appropriately responded to.

Waste

The Living Education consortium is committed to minimising waste during the demolition and construction phases of the project. Up to 90% of demolition and construction rubbish material will be recycled for reuse in other projects. Waste generated during works will be transported off-site, where it will be sorted and converted to new uses.

Management

The following will minimise adverse any impacts during the construction and demolition process:

- Recommendations in the Traffic Management Plan for Demolition and Construction Works will be adopted including engaging a traffic controller to manage all vehicle movements to the site via the UPN and providing relevant signage to alert pedestrians, public and private transport operators of the works.
- Noise and vibration associated with construction work will be monitored throughout the demolition and construction period and additional controls implemented if appropriate.
- Up to 90% of waste generated during works will be recycled.

These measures form part of the draft Statement of Commitments.

6.22 Site Suitability

Having regard to the characteristics of the site and its location, the proposed development is considered appropriate in that it will:

- Reinforce and continue ongoing educational association and uses of the site;
- Retain the site for the purposes of the university;
- Be of a form and scale that is appropriate to the site's local context;
- Will not generate detrimental impacts to local or regional traffic;
- Provide no parking for students, thereby encouraging students to use the local and extensive public transport system;
- Have no adverse impacts on nearby heritage items; and
- Reuse and expand existing education buildings and capitalise on connections of existing university services.

The site is suited to the development in that it:

- Is zoned appropriately for the proposed uses;
- Is situated within the UTS Broadway Precinct and in close proximity to the UTS Haymarket precinct;
- Is well serviced by public transport; and
- Is adequately serviced for the level of development proposed; and
- The existing Peter Johnson Building has the structural capacity to accommodate the proposed development.

7.0 Draft Statement of Commitments

In accordance with the Director-General's Environmental Assessment Requirements, the applicant is required to include a Draft Statement of Commitments in respect of environmental management and mitigation measures for the site. The following are the commitments made by the applicant to manage and minimise potential impacts arising from the project.

7.1 Design Excellence

In order to achieve design excellence, the proposal will be constructed in accordance with the design principles and Design Report prepared by **nettleton**tribe at **Appendix E**.

7.2 Operations and Management

In order to minimise any potential impacts on neighbouring buildings and to guide the operation of the UTS student housing at the Peter Johnson Building, the Plan of Management prepared by UniLodge at **Appendix G** will be adopted.

7.3 Wind

An impermeable balustrade 1.2 metres in height will be installed around the perimeter of the trafficable areas of the roof terrace to minimise adverse wind impacts on users of the roof terrace.

7.4 Ecologically Sustainable Development

The proposal will adopt the following principles to maximise the sustainability of the proposal:

- All student housing units will be naturally ventilated.
- Green construction management practices, including certified EMP, waste management, commissioning, handover and fine-tuning will be used.
- Green materials and products, including concrete, steel, floor coverings, composite wood, appliances, fixtures, paints, sealants and adhesives will be used in the building.
- Step the building footprint to the UPN to provide improved solar access to student housing and open spaces at Level 8.
- Use energy and water saving appliances, fittings and fixtures.
- Harvest rainwater for on-site reuse.
- Provide no additional car parking for the development.
- Encourage students to utilise nearby public transport and pedestrian links.

7.5 Access and Mobility

To ensure that the development is adequately accessible, the following will be incorporated into the design:

- Building entries off the UPN and Harris Street will comply with the AS1428 series; and
- The Level 1 car park will comply with the requirements of AS2890.1:2002 and one disabled visitor space is to be provided.

7.6 Noise

To minimise acoustic impacts on adjoining development, the proposal will incorporate the following measures:

- Acoustic screens will be provided on the south east wall of the private Level 8 terrace; and
- Access to the common Level 8 terrace and roof terrace will be limited to generally 7am to 10pm daily, as recommended in the Plan of Management.

To minimise impacts from traffic noise on residents of the proposal, the design of the building will incorporate the following measures:

- Acoustically treating the external façade of the building;
- Using appropriately designed external glazing; and
- Adopting the findings of a detailed mechanical noise assessment that will be carried out once plant selections and services drawings have been finalised.

7.7 Reflectivity

All glazed areas of the façade of the development will have a maximum normal specular reflectivity of visible light of 20%.

7.8 Visual Privacy

The final building design will incorporate the following measures to minimise overlooking impacts associated with the proposal:

- Acoustic and permanent external privacy screens will be provided on south and east facing windows of the live-in staff member's apartment and on the boundaries of the adjoining outdoor terrace on Level 8;
- Permanent external privacy screens will be installed on the south facing windows of units on Levels 9-20 of the student housing tower; and
- Access to the outdoor terrace of Level 8 adjacent to the Taragon Building will be restricted to members of staff.

7.9 Structural Engineering

The following recommendations will be implemented to monitor the performance of the existing foundations:

- Precise leveling of all columns will be undertaken to confirm that settlement caused by the additional loading is within design expectations.
- Settlement monitoring will be commenced prior to the redevelopment works to provide a datum. Ongoing monitoring will be carried out throughout the construction phases of the project.
- Further bore testing will be carried out adjacent to critical piles, and piling records reviewed, to confirm the individual increased load capacities of the piles.

7.10 Construction Management

The following will minimise any adverse impacts during the construction and demolition process:

- Recommendations in the Traffic Management Plan for Demolition and Construction Works will be adopted including engaging a traffic controller to manage all vehicle movements to the site via the UPN and providing relevant signage to alert pedestrians, public and private transport operators of the works.
- Noise and vibration associated with construction work will be monitored throughout the demolition and construction period and additional controls implemented if appropriate.
- Up to 90% of waste generated during works will be recycled.

8.0 Conclusion

The Project Application for UTS Student Housing in the Peter Johnson Building will deliver significant benefits for future UTS students. It will complement the proposed expansion of teaching spaces on the Broadway Precinct of the UTS City Campus as this application includes the infill of the existing Peter Johnson Building to provide approximately 5,950 m^2 of additional UTS teaching space and student services.

The assessment of the proposal has demonstrated that it will result in positive environmental and social benefits. The student housing will be constructed largely within the envelope of a previously approved building above the existing Peter Johnson Building, that accommodates the Faculty of Design, Architecture and Building.

UTS has utilised a Public Private Partnership (PPP) method of delivery of this project. The PPP model involves preselected consortiums delivering a holistic offer to build, own and operate the student housing project on UTS land for 35 years. The building is then handed back to UTS. The Living Education consortium, the preferred tenderer for the delivery of the project, is committed to a design outcome that satisfies the interests of all stakeholders, in particular UTS.

The new tower will provide accommodation for up to 720 students who would otherwise have to reside off-campus. Students will have access to multiple outdoor terraces and internal common areas such as music and study rooms. All accommodation will be “visitable”, and 5% of all beds will be in fully accessible studios.

UTS has demonstrated its commitment to delivering the highest quality student housing with minimal environmental impact. All units will be naturally ventilated, water and energy efficient appliances, fittings and fixtures will be used throughout the development, operational waste will be minimised and no additional on-site car parking will be provided.

The tower has been designed to respond to its locality by minimising overshadowing and overlooking of nearby properties by incorporating deep modulations in the UPN façade of the tower and setting back the tower from the north east corner of the site. It incorporates high quality materials and forms that respond to its locality and will create an active, new address for the University on the UPN. The Harris Street façade will be articulated to complement the scale and detail of articulation of adjacent buildings while ensuring that during construction a safe working environment for UTS staff and students using the existing teaching spaces is maintained.

The scale of the development is consistent with other buildings in the locality and will fill the current gap between the adjoining Taragon and ABC buildings. Solar access to primary living areas in the residential apartments in the adjoining Taragon Building will not be impacted upon by the proposal, and privacy and acoustic screens on south-facing windows of the student housing will minimise overlooking to secondary windows. In addition, the proposal will have minimal impact on views from the public domain.

Access from Central Station to UTS will be significantly improved by providing a new fully accessible path of travel from the Ultimo Pedestrian Network to the Broadway Precinct of the UTS City Campus through the lower levels of the Peter Johnson Building to Harris Street or the Harris Street Pedestrian Bridge. A new café at the UPN entrance to the building will enliven this new entry to the Peter Johnson Building, and will also improve security of the area by providing passive surveillance.

The site is suitable for the proposal for the following reasons:

- It is currently occupied by the UTS Faculty of Design, Architecture and Building which can be readily infilled and can structurally accommodate the proposed tower.
- It is a part of the Broadway Precinct of the UTS City Campus and in the immediate vicinity of significant and multiple public transport modes.
- The proposal complements the proposed upgrade of the Broadway Precinct of the UTS City Campus and other redevelopment works in the vicinity of the site.

Approval of the proposal is sought on the following grounds:

- It will enable the University to provide affordable, high quality student housing on its primary campus.
- It enables the University to expand its teaching facilities in an existing Faculty building that can be readily augmented without expanding its footprint.
- The development is highly sustainable in that it targets the equivalent of a 5 star rating using the Green Star rating tool for Multi-unit apartments and adopts the design principles from the Residential Flat Design Code.

The development is considered to be in the public interest as State, regional and local needs will be met through the provision of new student housing on the primary campus of a major tertiary institution. The proposed development will have minimal adverse environmental effects, all of which can be effectively managed. We therefore recommend that the Minister approves the Project Application.