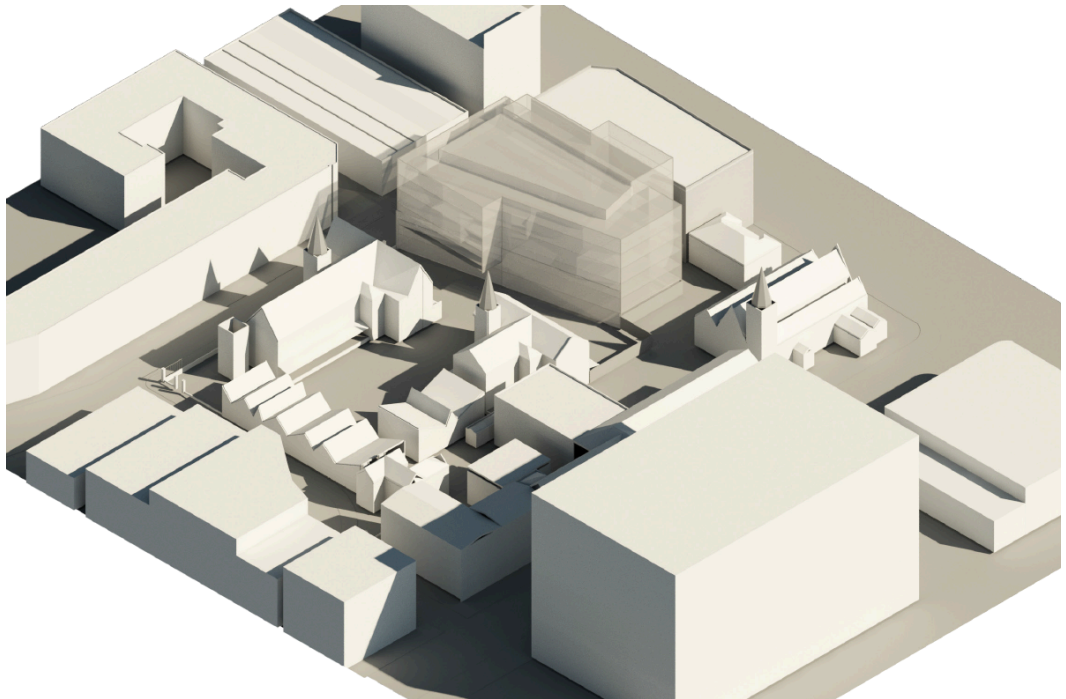


**University of Technology Sydney
Environmental Impact Statement**

**New Research Building
UTS Blackfriars Precinct
2-14 Buckland Street, Chippendale NSW**

**State Significant Development SSD 6746
Stage 1 Development Application (Use and Envelope)**



Abbreviations

The Act	The Environmental Planning and Assessment Act 1979
CMP	Conservation Management Plan
Council	City of Sydney Council
The Department	The Department of Planning and Environment
EIS	Environmental Impact Statement
SLEP2012	Sydney Local Environment Plan 2012.
The Minister	The Minister for Planning
The Proponent	University of Technology Sydney
The Regulations	The Environmental Planning and Assessment Regulations 2000
SEARS	Secretary's Environmental Assessment Requirements, issued 18 November 2014
SEPP(SRD)	State Environmental Planning Policy (State and Regional Development) 2011.
UNDA	University of Notre Dame, Australia
UTS	University of Technology Sydney

Issue

Issue 03 – final for lodging.

Document control

Revision	Date	Details	Author	
			Name, Position	Signoff
01 – Client feedback	5/10/2015	First draft issued for client comment	AC, Director	AC
02 – Final draft	8/10/2015	Incorporating client comments	AC, Director	AC
03 – Final for lodging	12/11/2015	Incorporating second raft of client comments	AC, Director	AC
File Location: Macintosh HD:Users:alan:Documents:Urbanac:Clients:UTS:Blackfriars:Stage 1 DA:EIS:Blackfriars EIS 01.docx				

About this report

This Environmental Impact Statement has been prepared by Alan Cadogan of Urbanac for the University of Technology Sydney.

The person responsible for this application is:

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The proposed development is on land at 2-14 Buckland Street, Chippendale (comprised of multiple lots including Lot 1 in DP832799, Lots 10-16, 18-20, 22-25 Sec 3 in DP466, Lots 1-14 Sec 4 in DP466, Lots 9-12 Sec 5 in DP466, Lot 221 in DP133367, Lot 1 in DP724081, and Lot 1 in DP122324).

The application is staged and this first stage is seeking approval for the use and maximum envelope, (including height and floorspace) for a new educational establishment (a facility for university research in partnership with commercial industry partners) and with a maximum height of 27.95m and a gross floor area of 6,225m². A subsequent application will seek approval for the design of the building.

This statement contains an assessment of the environmental impact of the development dealing with the matters referred to in Schedule 2 of the Environmental Planning and Assessment Regulations 2000

Disclaimer

This report was produced by Urbanac based on the client's objectives and for a specific purpose, and relies on the input of other parties. Information in this report may not be suitable for uses other than the original purpose.

Declaration

I declare that this Environmental Impact Statement:

- (i) has been prepared in accordance with Schedule 2 of the Environmental Planning and Assessment Regulations 2000
- (ii) contains all available information that is relevant to the environmental assessment of the development to which the statement relates, and
- (iii) contains information that is neither false nor misleading.



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Executive Summary

This Environmental Impact Statement (EIS) relates to the proposed development of a new university research building at 2-14 Buckland Street, Chippendale NSW (the site). This EIS is prepared in accordance with SSD-6746 Secretary's Environmental Assessment Requirements (SEARs) issued 18 November 2014 (Appendix A).

The EIS was prepared in accordance with Part 4.1 of the Environmental Planning and Assessment Act 1979, Schedule 2 of Part 3 of the Environmental Planning and Assessment Regulations 2000 and State Environmental Planning Policy (State and Regional Development) 2011.

The Proponent, the University of Technology Sydney (UTS) is a dynamic and cosmopolitan university with a vision to be a world-leading university of technology. UTS provides leadership in learning and teaching coupled with international renown in research and a world-class infrastructure that supports our vibrant intellectual environment.

The Site

The site is located west and peripheral to the Sydney CBD, within the university's Broadway Precinct, located at 2-14 Buckland Street, Chippendale, and occupying approximately half of the block between Broadway, Buckland, Blackfriars and Abercrombie Streets. The site area is 6,043 square metres.

It comprises multiple lots including Lot 1 in DP832799, Lots 10-16, 18-20, 22-25 Sec 3 in DP466, Lots 1-14 Sec 4 in DP466, Lots 9-12 Sec 5 in DP466, Lot 221 in DP133367, Lot 1 in DP724081, and Lot 1 in DP122324.

Development Proposal

The application is staged and this first stage is seeking approval for the use and maximum envelope, (including height and floorspace) for a new educational establishment (a facility for university research in partnership with commercial industry partners) and with a maximum height of 27.95m and a gross floor area of 6,225m². A subsequent application will seek approval for the design of the building.

The University is creating a unique, innovation driven industry hub at its Blackfriars precinct. This precinct will leverage the university's position at the national epicentre of the creative digital industries. The new building will house UTS commercial research partners complementing an existing building on the site that houses the UTS Advanced Analytics Institute whose work touches many sectors of the new digital economy.

Blackfriars will provide a hub for leading academics and industry partners to work side by side leading to:

- Collaboration through the open exchange of information, skills and ideas
- Development of start-up companies
- Commercialisation opportunities
- Collaborative research partnerships

The precinct will create a culture of creativity, innovation and collaboration, boosting Sydney and Australia's innovation skills, attracting investment and creating jobs.

Environmental Impact Statement

This EIS addresses the SEARs, including:

- The statutory, strategic and policy context
- Built Form and Urban Analysis
- Environmental Amenity
- Staging
- Transport and Accessibility
- Ecologically Sustainable Development (ESD)
- Heritage, Archaeology and Aboriginal Heritage
- Contamination

The assessment of the above matters within the EIS concludes that:

- The Proposal demonstrates consistency with the relevant planning instruments and addresses the issues identified in the Secretary's Environmental Assessment Requirements;
- The site is suitable for the proposed development and land use as it is complimentary to the overall Chippendale area and does not result in any significant adverse environmental impacts;
- The Proposal's environmental impacts can be appropriately mitigated as outlined under Sections 6 and 8 of this report; and
- The Proposal will have a positive economic and social impact providing employment opportunities and utilising a currently underused site close to transport infrastructure.

Mitigation Measures

The EIS identifies appropriate mitigation measures to control the environmental impacts of the proposed development during both the construction and ongoing operation of the facility. The mitigation measures address issues such as heritage, archaeology transport and accessibility, solar access and contamination.

Conclusion

The Blackfriars Precinct has been an educational precinct for over 130 years, first as a school and now as a university. This next phase will bring industry and commercial research based collaboration and innovation directly into the physical heart of Sydney's digital economy and provide direct employment for more than 300 people and indirect employment for up to another 1,200 people in the local area.

The EIS addresses the Secretary's Environmental Assessment Requirements and demonstrates that the impacts of the Proposal can be satisfactorily managed and mitigated.

It is considered that, for the reasons outlined in the EIS, the proposed development is justified and is recommended for approval by the Minister for Planning and Infrastructure.

Part 1 Introduction and Background

This Environmental Impact Statement (EIS) has been prepared for a Stage 1 development application in accordance with Section 83B of the Act for a new university research building. The staged application will seek consent for the use, building envelope, maximum floor space area within the envelope, and access arrangements for the building. The second stage application will seek consent for the design of the building within the approved envelope.

The application number for this project is SSD 6746 and the Proponent is UTS.

The EIS was prepared in accordance with:

- Part, Division 4.1 of the Environmental Planning and Assessment Act 1979;
- Schedule 2, Clause 6 and 7 of the Environmental Planning and Assessment Regulations 2000;
- State Environmental Planning Policy (State and Regional Development) 2011; and
- The Secretary's Environmental Assessment Requirements issued 18 November 2014.

1.1 The Proponent and the Project Team

This EIS has been prepared on behalf of UTS. UTS has assembled a project team of specialist consultants including:

- Urbanac – Planning and urban design
- H2O Pty Ltd – Architecture
- Paul Davies Pty Ltd – Heritage
- Aspect Pty Ltd - Landscape
- Casey Lowe Pty Ltd – Archaeology
- Dominic Steel Consulting Archaeology – Aboriginal Archaeology
- Traffic and Access Pty Ltd – Transport and Accessibility Report
- Urban Forestry Australia – Arboriculture
- Douglas Partners Pty Ltd and Coffey Pty Ltd – Contamination

Part 2 The Proposed Development

2.1 Development Objectives

The University proposes to create a unique, innovation driven industry hub at its Blackfriars precinct. This will encompass the continued use of the site's significant heritage buildings complemented by a new 6,225 square metre building, the Blackfriars Research Facility to house UTS research partners. The Blackfriars Research Facility will be a new building for research in innovative Engineering programs, including the emerging areas of Robotics, Advanced Manufacturing, Advanced Analytics, Big Data & Networking, Creative Digital, Health Manufacturing including Medical Devices and Prototyping.

The UTS Blackfriars Research Facility will be a building able to respond to the changing needs of leading research academics from the university and industry partners. The facility will aspire for a commercial research feel with an accent on transparency, collaboration and innovation, and a focus on NSW and Australia's digital economy.

The Blackfriars building will provide a hub for leading academics and industry partners to work side by side leading to:

- Collaboration through the open exchange of information, skills and ideas
- Development of start-up companies
- Commercialisation opportunities
- Collaborative research partnerships

2.2 Overview

The Proposal located at the northern end of the Blackfriars Precinct site. The proposed maximum building envelope comprises a half basement, and six floors (four typical floors of approximately 1,200 square metres with a total floorspace of 6,225 square metres.

Table 1. Proposal Overview

Aspect	Comment
Use	Mixed use comprising educational establishment, research, ancillary retail (coffee shop)
Floorspace	6,225m ² Gross Floor Area (LEP definition)
Height	27.95m maximum, providing for six storeys plus lift overruns and a basement.
Basement	The envelope provides for a half basement on the western side of the proposed envelope
Access and servicing	Via Buckland Street
Carparking	None

2.3 Use

UTS receives regular requests for space from research partners. The University's vision is that the Blackfriars Precinct would allow it to partner with research entities. The UTS Blackfriars Research Facility has worldwide precedents from similar significant research facilities

International Precedents

Internationally, the benchmark centre for projects of this kind is the Carnegie Mellon University/Robert Mehrabian Collaborative Innovation Centre in Pittsburgh, Pennsylvania, in the United States. The vision of the Robert Mehrabian Collaborative Innovation Center (RMCIC) is to create the optimal environment to serve the next generation of the university through industry collaboration. The RMCIC is a multi-story, 12,600sqm, dry-lab research facility built in 2005 to provide office and lab space for technology companies wishing to collaborate with Carnegie Mellon to create innovative new concepts and products for the marketplace.



Figure 1. Carnegie Mellon University Robert Mehrabian Collaborative Innovation Centre

The facility promotes regional economic development as Carnegie Mellon researchers work with industry to develop new technologies, business ventures, and jobs. The building creates a nexus for industry, federal, and university research, supporting start-ups, enhancing competitiveness for federal research funding, and creating a landing zone for companies. The building is a hotbed for next-generation wireless and mobile computing, robotics, and trustworthy computing applications. It is designed to respond to the changing nature of technology-based economic development.

The facility integrates corporate, university, and governmental research tenants with a focus on mobile computing, software, security, and robotics. It is home to training and conference facilities with daily instruction in Europe and Asia, and accommodates more than six hundred visitors per year. In addition, the RMCIC offers space options designed to support labs and engineering centres in addition to accelerator space for start-ups.

Current Collaborative Innovation tenants for the RMCIC include Apple, Disney, Intel Research Lab-Pittsburgh, Center for Innovative Robotics, the Parallel Data Lab's Data Center Observatory, Carnegie Mellon CyLab, and the Software Engineering Institute's Network Systems Survivability program (which includes the world-renowned CERT Coordination Center). Former tenants include Google, 3Ksoft, and Korean Information Security Agency.

Blackfriars Research Facility

Like the Carnegie Mellon CIC, UTS Blackfriars Research Facility will integrate corporate, university, and governmental research tenants with a focus on mobile computing, software, security, and robotics. It will house research focused training and conference facilities and attract corporate and research visitors. UTS's vision is for a centre that will attract new industry to the City and the State with a focus on the State's key industry sectors, fostering cross industry and cross discipline collaboration

At Blackfriars, the University is proposing a building of approximately half the size of the Carnegie Mellon CIC. This is considered to be the minimum in order to create a critical mass of research partnership organisations working collaboratively while still allowing flexibility about uptake of space as research projects develop. The university's experience is that industry partners require a minimum of 1,000 square metres with larger floor space requirements also common. This minimum is then combined with aligned University research space and collaboration space.

The facility does not require car parking, but requires an active and highly visible ground level with a prestigious building entry, reception and an observable ground level innovation space. The ground level innovation space can be two levels high with sufficient ceiling heights to support potential robotics research. This space will actively showcase the innovation and activity within the building to Buckland Street, activating the streetscape. The ground level also supports a mixing space and coffee shop. The upper levels are full floors of flexible workspace. The top level of the proposed envelope set back from the elevations and is used for roof plant and lift overrun.

2.4 Building Envelope

2.4.1 Envelope Overview

The Proposal is staged, with the first stage the subject of this EIS being for a building envelope, and with a full building design to be the subject of a second stage application. The purpose of seeking a staged consent includes:

- a desire by the Proponent to address issues of building envelope, area and height prior to undertaking a full design process for the building
- the requirement under Clause 7.20 of the SLEP2012 for the preparation of a DCP for the site, which can be alternatively satisfied by the approval of a staged development application in accordance with Section 83 of the Act.

The Envelope has been designed to address the constraints and opportunities of the site, while generating a form with acceptable impacts on the context for building which has a gross floor area of 6,225 square metres (SLEP2012 definition). The overall envelope provides more space than this area, as it contains:

- Additional area for necessary floor space in addition to the LEP definition (eg wall thicknesses, storage, vertical circulation etc)
- Additional space for the articulation of the final building design within the envelope.

The reason for proposing a building envelope that is a loose fit rather than a tight fit is to allow for the next stage of the development to achieve a very high architectural design quality and response. Some of these potentials for the next stage of development were explored as options through the process used to arrive at extent of the Envelope. These options explored included:

- A lower built form that was at the minimum recommended setback for curtilage.
- A high built form that was set back further from the heritage items
- Setbacks from Buckland Street
- Lift cores against the northern boundary in a range of locations.
- Setbacks from the northern or eastern boundaries and using the resulting space as a light court or landscaped area.
- An indented building form that responded to the alignment of the central 'quadrangle' between CB22 and CB25.
- Creating a basement to the part of the building fronting Buckland Street.

Because the proposed envelope is a 'loose fit' and the final building will be constrained by the maximum floor space within this envelope, the impacts of the final building will be significantly less than those of the envelope. To illustrate the reduced impacts, an indicative building study has also been prepared showing a more detailed hypothetical building that fits within the envelope with a gross floor area of 6225 square metres. This indicative study shows a building that has lower built form and minimum setbacks for curtilage to model one of several potential final building designs.

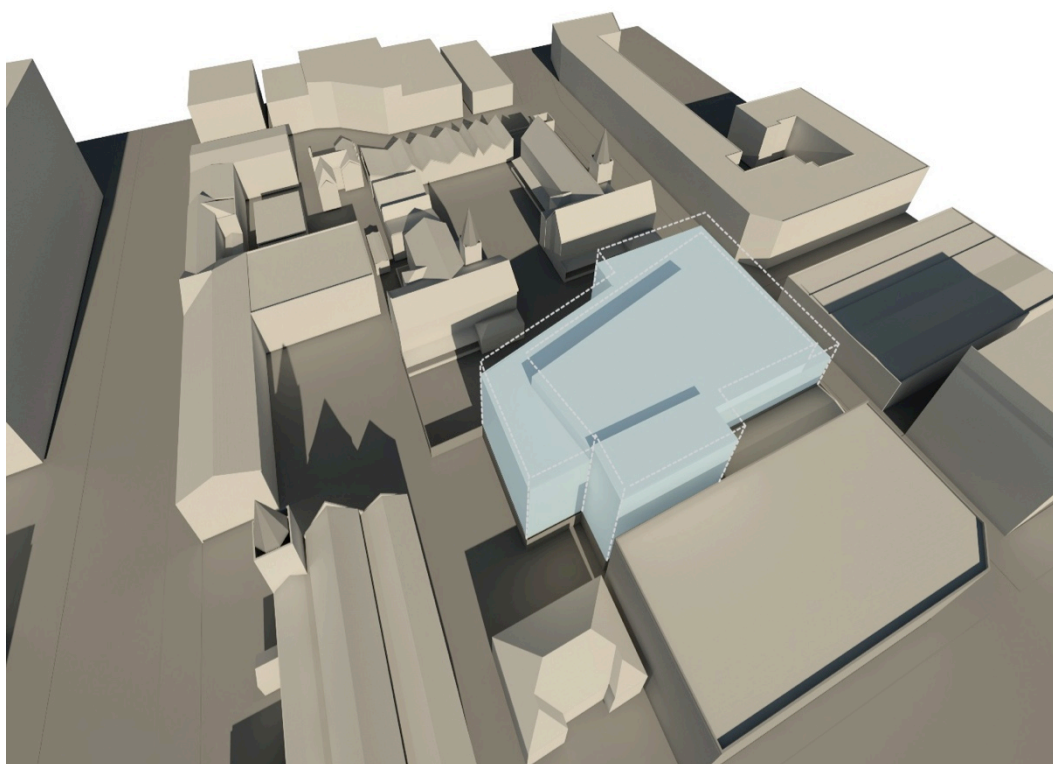


Figure 2. Extract from the Architectural Plans showing a 3D view of the proposed envelope (dotted white line) and the Indicative Study Building (light blue) in the context. The diagram illustrates the “loose fit” of the envelope, which is considered essential to enabling a high design quality for the next stage (building design). The form shown to the bottom right of the Proposal is a permissible envelope for the UNDA owned site on the corner of Broadway and Buckland Street currently a single storey structure.

Both the Proposed Envelope and the Indicative Building Study are described in Appendix 5. Consent is not sought for the Indicative Building Study as the design of the final building will be the subject of a subsequent development application. The Proponent is also considering options for a competitive design process for this stage.

2.4.2 Envelope Metrics

The proposed envelope includes the following features:

- 27.95 metres height from ground level, including plant and lift cores, and potential for a basement below
- 32.4 metre long maximum frontage to Buckland Street
- 51.1 metres maximum length from west to east
- A maximum gross floor area (as defined by the Sydney LEP 2012) for a building within the envelope of 6,225 square metres
- 1280 square metre maximum footprint for a typical level
- A minimum setback of 0m (no setback) to the northern and eastern boundaries abutting the University of Notre Dame Australia
- A minimum setback of 0m (no setback) to the Buckland street frontage
- A minimum setback of 11.1 metres from the main two storey facade of UTS Building CB22 (which aligns the southern face of the proposed envelope, with the northern face of Building CB25)
- A step in the southern face of the proposed envelope that corresponds to the 13.1 metre quadrangle separation between Buildings CB22 and CB25
- A raking setback to the southern face of the proposed envelope with a minimum dimension of 13.6 metres from the main two storey facade of Building CB25.

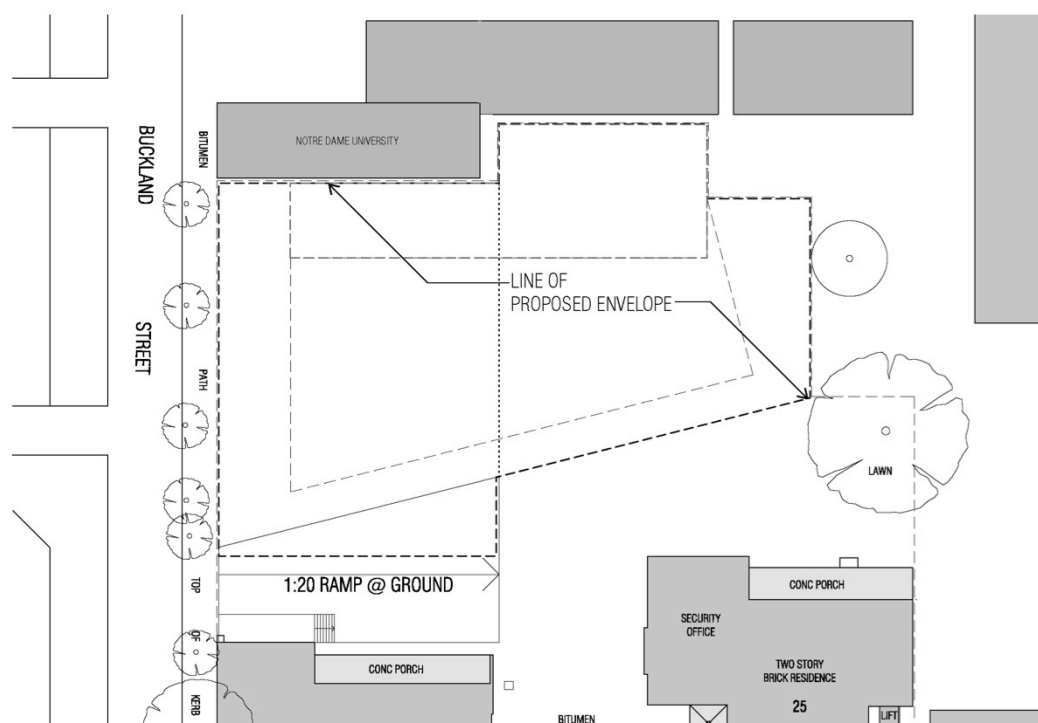


Figure 3. Extract from the architectural plans showing the proposed envelope on the site

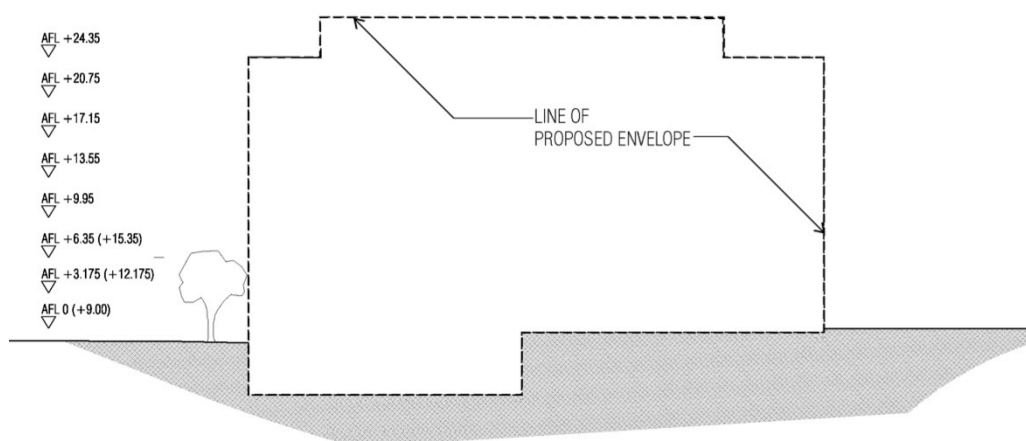


Figure 4. Extract from the architectural plans showing the proposed envelope in section

2.5 Access and carparking

UTS proposes that vehicular access would be constrained to Buckland Street. UTS does not propose to maximise permissible parking on the site due to the proximity of major public transport corridors, and due to the potential for vehicle parking to be taken up by existing public parking in the area, including at the UTS City Campus on the other side of Broadway. As a result, there will be only minimal traffic generated by the proposed use. A full traffic study is provided at Appendix 13.

Pedestrian access is from Buckland Street into 'quadrangle' at the centre of the UTS Precinct site. This will help to open up access into the site in keeping with its former uses as a school, reinterpreting former historic subdivision patterns on the site, with the new building entrance to be located on the southern face of the proposed envelope. This arrangement will also simplify access, including for people with a disability, for both heritage buildings on the site. This arrangement also facilitates a possible future connection to the 'quadrangle' space within the UNDA campus to the east if such a connection becomes desirable at a future time. In keeping with all university open spaces, this land will be accessible by the public during the normal operating hours of the university.

Servicing of the building occurs from Buckland Street, and utilises the pedestrian and quadrangle space, with strict management of deliveries to occur outside working/teaching hours in order to avoid vehicle pedestrian conflict.

2.6 Operation

The facility will operate during the standard opening hours of the university, and will operate in a manner equivalent to a commercial building.

The operation of the building is expected to give rise to normal operational impacts of typical commercial office buildings, such as standard servicing and deliveries and normal operation of air conditioning and other plant and equipment.

In relation to research, the types of research expected to be undertaken will be largely desktop based. Research undertaken at the facility will not involve wet laboratories, or industrial machinery (other than potentially robotics) and selected to ensure there are no significant noise, emissions or other impacts generated beyond those normally expected from a typical commercial office building. The full extent of any operational impacts arising out of particular building programming (eg potential for a robotics research component) and the mitigation features to be incorporated (eg building noise attenuation performance) will be determined at the next stage of the development (building design).

2.7 Environmentally Sustainable development

The UTS Environmental Sustainability Policy includes the University's commitment to ensure that its institutional practices emphasise "that UTS demonstrates and promotes the achievement of sustainable futures embracing ecological, economic and social aspects of human existence". The UTS Environmental Sustainability Policy can be viewed at www.gsu.uts.edu.au/policies/sustainability.html.

The full extent of sustainability features to be incorporated will be determined at the next stage of the development (building design). The architectural report at Appendix 6 describes the environmental opportunities, sustainability consumption targets, and water sensitive design that the subsequent stage will address.

2.8 Construction

Construction is likely to take 12 to 18 months. No significant unique construction issues have been identified for the site beyond those experienced at typical inner Sydney locations. A detailed assessment of the likely construction issues and mitigation measures will be included in the next stage of the development (building design).

2.9 Capital Value

The project has been calculated as having a capital investment value of \$35,073,057.00. The Quantity Surveyor's report is included at Appendix 2.

Part 3 The Site

The Proposal is sited at the northern end of the UTS Blackfriars Precinct at 2-14 Buckland Street, Chippendale.

The site is located west and peripheral to the Sydney CBD, within the Broadway Precinct, located on the corner of Blackfriars and Buckland Streets, Chippendale occupying approximately half of the block between those streets, Abercrombie Street and Broadway. The site area is 6,043 square metres.

It comprises multiple lots including Lot 1 in DP832799, Lots 10-16, 18-20, 22-25 Sec 3 in DP466, Lots 1-14 Sec 4 in DP466, Lots 9-12 Sec 5 in DP466, Lot 221 in DP133367, Lot 1 in DP724081, and Lot 1 in DP122324.

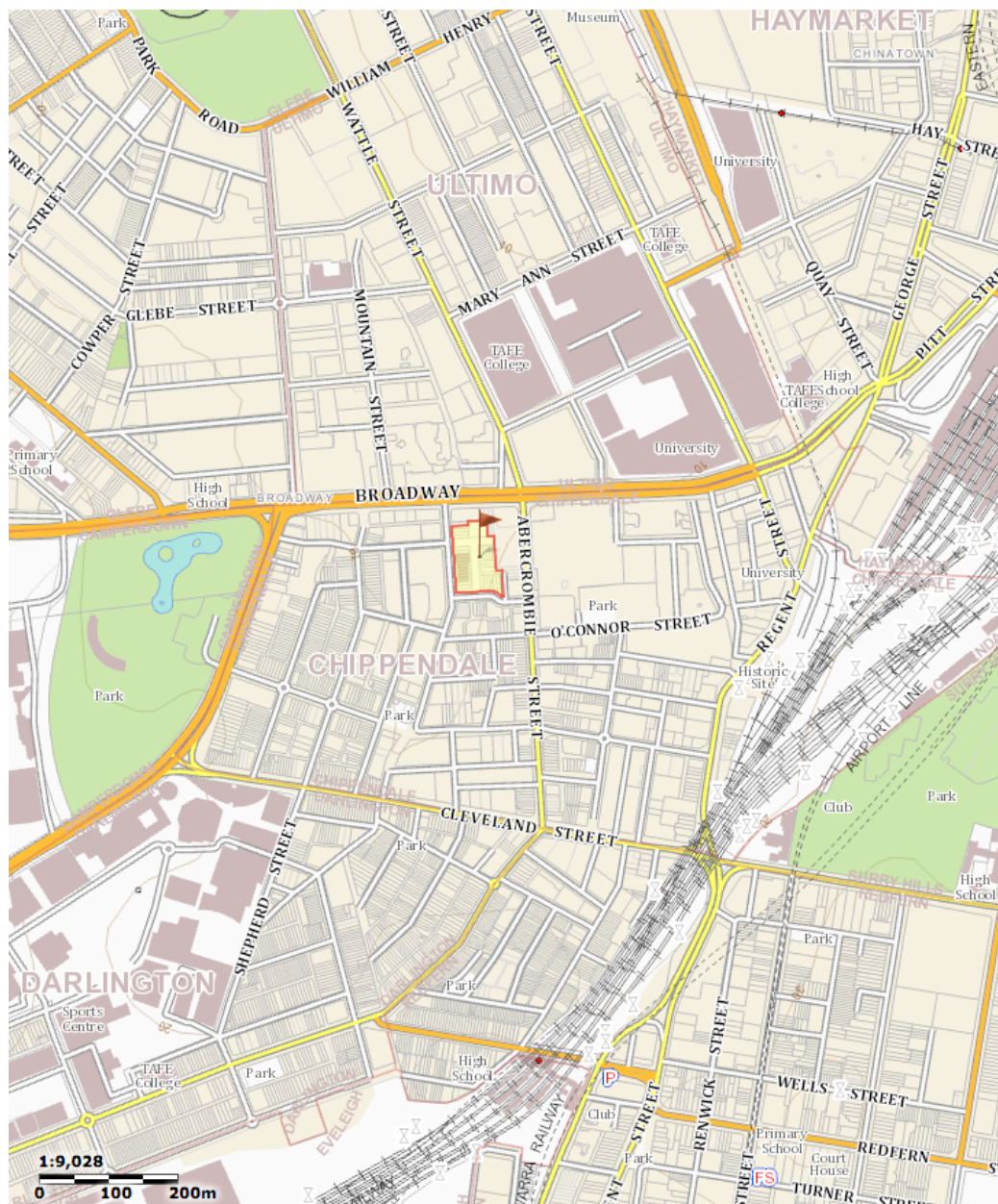


Figure 5. Location Map (source: <http://maps.six.nsw.gov.au/>)

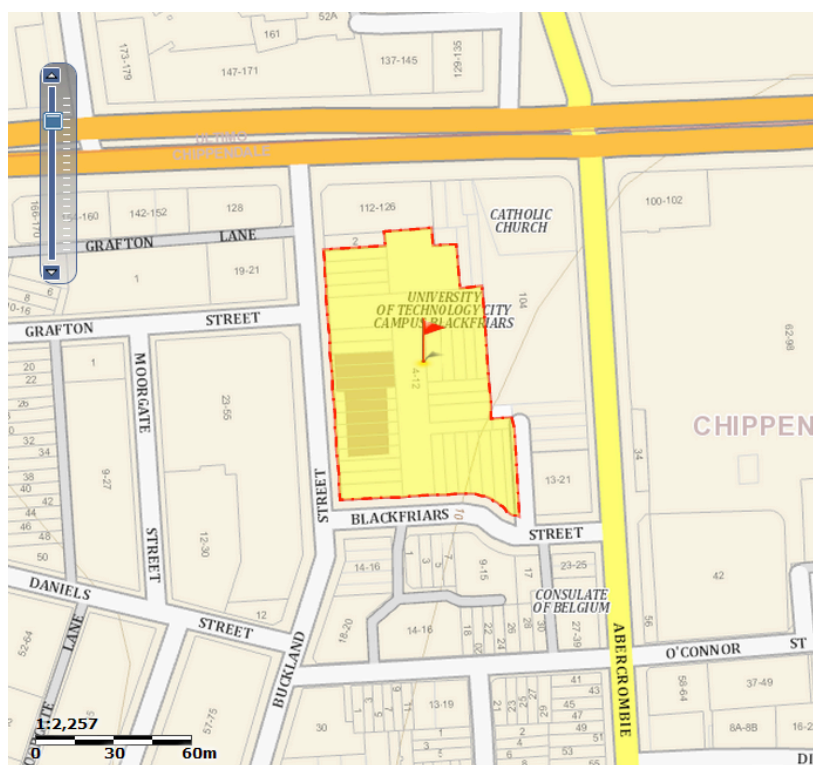


Figure 6. Location Map (source: <http://maps.six.nsw.gov.au/>)

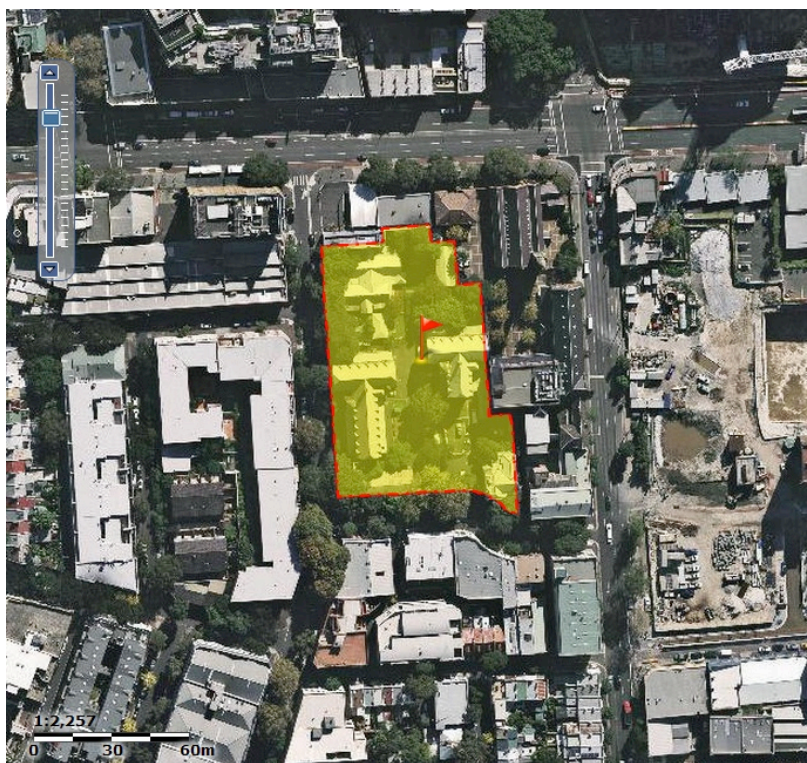


Figure 7. Aerial Photo showing the site (source: <http://maps.six.nsw.gov.au/>)

3.1 Existing Development on the Site

The site currently contains seven buildings as well as a number of smaller ancillary structures such as fencing, a vehicle access boomgate and other minor features. The

seven buildings are (using UTS's campus numbering – please refer to the following plan diagram):

- CB21. A single-storey timber c1920s portable, former classroom building
- CB22. The 1883 two-storey former Infants and Girls Primary School, currently accommodating the Advanced Analytics Institute research partner
- CB23. A single-storey c1994 masonry and timber childcare centre (50 places)
- CB24. A single storey timber c1920 portable former classroom building
- CB25. The 1883 two-storey former Boys Primary School, currently used as university teaching spaces
- CB26. A single storey toilet block constructed c1990
- CB27. The 1883 two-storey former Headmaster's Residence, currently used as residential accommodation for academics.

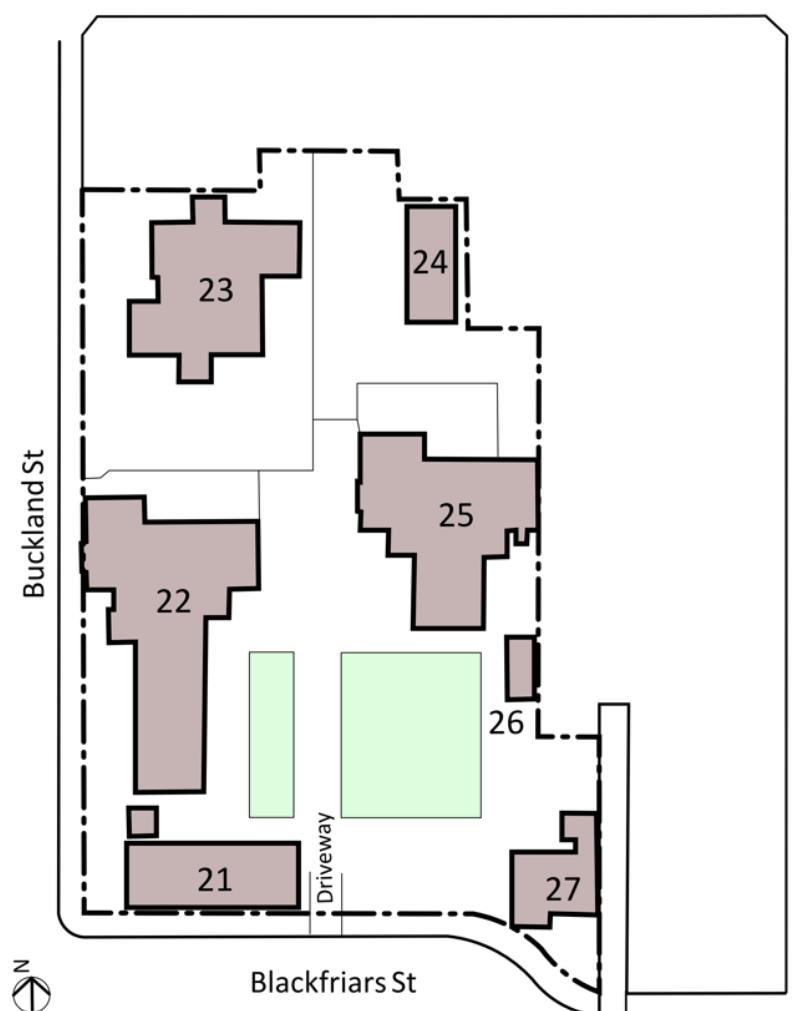


Figure 8. Site Diagram

The site and its buildings are not listed on the State Heritage Register.

Sydney LEP 2012 lists the site as a Heritage Item (Reference I170, local significance). The site is also a Heritage Conservation Area (C9 Chippendale Conservation Area).

A Conservation Management Plan has been prepared for the site by Wayne McPhee and updated by Paul Davies Pty Ltd (see Appendix 8). The CMP identifies the northern end of the site has development potential and that buildings 23 and 24 have low significance and can be demolished.



Figure 9. Looking north along the centre of the site between CB22 (left) and CB25 (right) towards the proposed envelope location



Figure 10. Looking towards Buckland Street from the middle of the site with CB22 on the left and the existing childcare centre on the right (where the proposed building it to be sited).



Figure 11. Looking towards the site from Buckland Street show.

3.2 Anticipated Development on the Site

Consent was granted on 24 April 2013 by the City of Sydney Council to a development application D/2012/1398 for a new, one-storey UTS childcare centre at the southern end of the site. The consent included removal of an existing temporary university building (Building CB21) to construct a new one storey child care centre providing 84 places. Works include the creation of a new open quadrangle play area with new landscaping works to the north of the new building (centre of the site) and will use the existing building in the south-eastern corner of the site (Building CB27) as ancillary office space for the child care centre.

The application was determined by under delegation of Council subject to conditions in and was granted a deferred commencement subject to the conditions in Part A and B which related to the provision of additional information regarding site suitability for the intended use given the potential contamination and regarding acid sulphate soils.

The development of the childcare has not yet substantially commenced, however UTS is currently in the process of undertaking the detailed documentation of the facility to enable it to proceed to construction in 2016.



Figure 12. Photomontage of the UTS childcare centre

3.3 Surrounding Area

Blackfriars EIS 04.docx. ubanac.com.au

and Abercrombie Streets and its spire is the dominant feature on the block and is contiguous with the UND campus. The remainder of the campus contains a range of heritage and more recent buildings with a built form that varies in height from one to four storeys some with tall pitched roof forms. There are a range of setbacks from street frontages and side boundaries for these buildings varying from zero to several metres. A stepped masonry wall separates the UNDA and UTS sites. On the Buckland Street frontage, a three storey building recently used as backpacker accommodation, and currently owned by UND is built on the site's northern boundary.

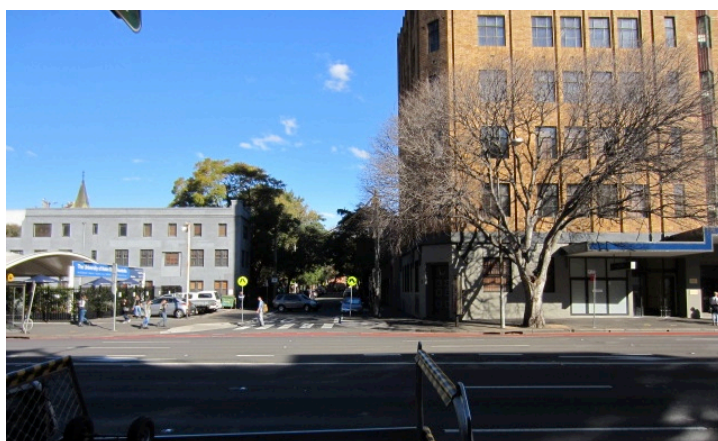


Figure 14. Buckland Street from Broadway showing the one storey café (former carwash) which has a height control under SLEP2012 of 18 (left) and 3 level UNDA building at 2 Buckland St in front of the site, and the 6 storey (plus sky sign) UNDA building (right).



Figure 15. Looking along Grafton Street towards the site, showing residential (right) and converted warehouse UNDA campus (left)

The existing development on Buckland Street in the vicinity of the proposed development includes a commercial building of six storeys in height plus an advertising billboard/skysign, on the corner of Broadway; and a converted two storey warehouse on the corner of Grafton Street. Both are understood to form part of the UND. South of Grafton Street is a residential building, 23-55 Buckland Street, of up to four storeys. Further south are commercial and residential buildings of 2-5 storeys, including warehouse conversions and newer developments.



Figure 16. View towards the site from UTS Tower showing the adjacent high rise CUB development under construction (foreground), St Benedicts church and UNDA buildings on the same block, and the mix of larger warehouse and smaller terrace forms of Chippendale.

The wider Chippendale area is in a state of transition, with existing warehousing, offices, and creative industries, changing from significant increases to the residential population of the area. To the East is the CUB development site with significantly taller buildings providing for a large new residential population, and with high-rise buildings along Abercrombie Street currently under construction. The completed Central Park components of this development also include a shopping precinct including a supermarket, and areas of public open space.



Figure 17. Looking towards the site from the corner of Broadway and Wattle Street showing the Spire of St Benedict's church (behind scaffolding) and the taller building forms along Broadway and Abercrombie Streets.

To the west and south the Chippendale area is characterised by a mix of small-scale terrace housing and larger bulkier warehouse and industrial forms with a mix of residential and commercial uses, with an emphasis on creative industries. Further west is Victoria Park, including a swimming pool and fitness centre, and Broadway Shopping Centre a major retail area, and the campus of the University of Sydney. To the northeast on the other side of Broadway is the main UTS campus currently undergoing a substantial redevelopment.

3.4 Surrounding Access

The site is very well serviced by public transport. It is 50m from the major bus artery of Broadway, carrying buses to the inner west and south-west as well as the city. The major bus interchange of Railway Square is approximately 600m from the site. Central Station is approximately 800m from the site, as is Redfern Station.

The site has two street frontages, to Buckland and Blackfriars streets. The site is near to major arterial roads of Broadway and Abercrombie Street, which provide access into the wider road network. Pedestrian access to the site is along the footpaths, and will be enhanced following the completion of the Frasers Development which will improved the pedestrian routes and permeability through to Central station.

Full access details are provided in the Transport and Accessibility Report at Appendix 13.

Part 4 Secretary's Environmental Assessment Requirements

The SEARs were issued 18 November 2014. A copy is included at Appendix 1. The table below summarises the SEARs and identifies where in this EIS they are addressed.

Table 2. Secretary's Environmental Assessment Requirements

SEARS issues to be addressed	Where is the issue addressed
- The statutory and strategic context, including - State Environmental Planning Policy (State and Regional Development) 2011 - State Environmental Planning Policy (Infrastructure) 2007 - State Environmental Planning Policy No 55 – Remediation of Land - Sydney Local Environmental Plan 2012	Part 5.1
- Policies, including: - NSW 2021 - Draft Metropolitan Strategy for Sydney 2031 - NSW Long Term Transport Master Plan 2012 - Sydney's Cycling Future 2013 - Sydney City Centre Access Strategy 2013 - Sydney's Walking Future 2013 - Healthy Urban Development Checklist, NSW Health	Part 5.2
Built Form and Urban Analysis	Parts 2, 3, 6 and Appendices 5, 6, 7, 11
Environmental Amenity	Parts 3, 6, 8 and Appendices 5, 6
Staging	Part 2
Transport and Accessibility	Parts 2, 3, 6 and Appendices 5, 6, 7, 13
Ecologically Sustainable Development	Parts 2, 6, 8 and Appendices 5, 6
Heritage	Parts 3, 6 and Appendices 7, 8
Aboriginal Heritage	Parts 6 and Appendix 10
Noise and Vibration	This issue is to be dealt with in the subsequent stage DA (full design)
Contamination	Part 6 and Appendix 14
Utilities	This issue is to be dealt with in the subsequent stage DA (full design)
Contributions	Part 5.1.6
Flooding	This issue is to be dealt with in the subsequent stage DA (full design)
Drainage	This issue is to be dealt with in the subsequent stage DA (full design)

The SEARs required that consultation with the City of Sydney Council and Transport for NSW during the preparation of the EIS. Consultation is summarised in Section 7. The agency submissions received by the Department in formulating the SEARs have also been reviewed. The key issues raised by agencies are summarized in the table below.

Table 3. Agency Issues

Agency	Issue	Response
NSW EPA	Demolition, site preparation and construction phase noise, dust, erosion and sediment, and waste management	These issues to be addressed at the next stage application (building design)
	Operational noise and vibration impacts	These issues to be addressed at the next stage application (building design)
	Assessment of the opportunities for implementing the waste management hierarchy, energy conservation, water conservation and water re-use	These issues to be addressed at the next stage application (building design)
	Clarification regarding any need for a review of the radiation management license held by UTS	No radiation-based research is proposed at the facility. Accordingly, no change is required to the UTS license.
NSW RMS	No additional issues were raised	n/a
Transport for NSW	Suggested amendments were included in the final SEARS	Refer to the Transport and Accessibility Report at Appendix 13
City of Sydney	That the EIS address the built form and urban design controls of the SLEP2012, including justifications of departures from the development standards as required by Clause 4.6(3), and addressing design excellence as required by Clause 6.21.	These are addressed in the EIS at section 2, 5, and 6. Requests to vary the height of buildings and floorspace development standards are at Appendix 3 and 4.
	Heritage, including updating the Conservation Management Plan and the archaeological assessment	Refer to the Section 3 and 6 and the Heritage and Visual Considerations Report at Appendix 7 and updated Conservation Management Plan at Appendix 8
	Landscape, including a heritage landscape assessment, arborist report, and careful consideration of the central open 'quadrangle' space, and of the heritage fence and main entrances.	Refer to the Section 3 and 6 and the Heritage and Visual Considerations Report at Appendix 7, Arborists Report at Appendix 12 and Landscape Report at Appendix 11
	Built form and architecture, including architectural and design guidelines for subsequent stages, consideration of the southern extent of the proposed envelope, minimising interference with archaeological remains, and incorporation of building plant rooms into the form.	Refer to the Section 3 and 6 the Architectural Report at Appendix 6, Heritage and Visual Considerations Report at Appendix 7 and Archaeological Report at Appendix 9
	Access and connectivity, including facilitating pedestrian connections to St Benedicts and Broadway, and careful consideration of new vehicular access to Buckland Street avoiding new openings in the existing fence where possible.	Refer to the Section 3 and 6 and the Landscape Report at Appendix 11 and Transport and Accessibility Report at Appendix 13

Part 5 Environmental Context

5.1 Statutory and Strategic Context

5.1.1 Environmental Planning and Assessment Act 1979

The objects of the EP&A Act provide the framework for consideration of the Proposal.

Table 4. Environmental Planning and Assessment Act Objectives

EP&A Act Objectives	Comments
<i>(a)(i) encourage the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment.</i>	The Proposal will support the social and economic welfare of the community through its proposed use. The Proposal will encourage the efficient use of well-serviced urban land and a development that minimised the use of natural resources.
<i>(a)(ii) encourage the promotion and co-ordination of the orderly and economic use and development of land.</i>	The Proposal encourages an economic use of the site, which is currently underdeveloped, collocated with the university.
<i>(a)(iii) encourage the protection, provision and coordination of communication and utility services.</i>	The Proposal is located to utilise existing urban communication and utility services and
<i>(a)(iv) encourage the provision of land for public purposes.</i>	The Proposal encourages use of land by a Crown institution for public purposes
<i>(a)(v) encourage the provision and co-ordination of community services and facilities.</i>	The Proposal encourages use of land by a Crown institution for uses supporting a public university
<i>(a)(vi) encourage the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats.</i>	The Proposal will have no impacts on the native plant and animal species and ecological communities.
<i>(a)(vii) encourage ecologically sustainable development.</i>	The principles of ecologically sustainable development have been considered as part of this Proposal.
<i>(a)(viii) encourage the provision and maintenance of affordable housing.</i>	The Proposal does not involve affordable housing and will not adversely impact its provision.
<i>(b) promote the sharing of the responsibility for environmental planning between the different levels of government in the State,</i>	The City of Sydney has been consulted as directed by the SEARs. This EIS addresses their specific requirements.
<i>(c) provide increased opportunity for public involvement and participation in environmental planning and assessment.</i>	The Proposal will be placed on exhibition for public comments in accordance with the Act and Regulations. The Proponent has provided opportunities for consultation with the local community in preparing this EIS.

As State Significant Development, the Proposal will be assessed under Part 4 of the EP&A Act and the Minister for Planning is the consent authority.

5.1.2 State Environmental Planning Policy (State and Regional Development) 2011

The proposed development is declared as State Significant by the SEPP (SRD) in accordance with *Section 8 Declaration of State significant development*. The proposed development is specified in *Schedule 1 State significant development—general: 15 Educational establishments: “Development for the purpose of educational establishments (including associated research facilities) that has a capital investment value of more than \$30 million”*.

A report by a qualified quantity surveyor has calculated that the capital investment value of the development exceeds \$30m (see Appendix C). Accordingly the proposed development is State Significant Development.

5.1.3 State Environmental Planning Policy (Infrastructure) 2007

Part 3, Division 3 *Educational Establishments* of the SEPP describes the kind of development to which the SEPP applies. The Proposal does not correspond to the specified development as a result of its size and location on the site, and as a result it is considered that Division 3 does not apply to the Proposal.

Clause 104 of the SEPP *Traffic-generating development* is considered not to apply to the Proposal. This is because the Proposal is below the size and capacity given in Column 2 of the Table to Schedule 3. It is considered that the most comparable use is from the table is Commercial, and at 6,225m² the Proposal is well under the threshold of 10,000m² for development fronting a road that is not classified. Notwithstanding, the EIS has considered the RMS’s guidelines regarding traffic generating development (refer to the Transport and Accessibility Report at Appendix 13).

5.1.4 State Environmental Planning Policy No 55 – Remediation of Land

The SEPP applies to the Proposal and in particular, Section 7 *Contamination and remediation to be considered in determining development application*.

A Phase 2 Contamination Assessment was undertaken by Douglas Partners Pty Ltd (DP) for the site in 2009 and is at Appendix 14. The assessment used the health-based criteria for residential development with accessible soils (childcare centre to the south of the site), and the health based criteria for residential development with minimal soil access (the remainder of the site, including the land applying to the Proposal). The assessment found that the site can be rendered suitable for the Proposal, subject to the preparation and implementation of a remedial action plan.

5.1.5 Sydney Local Environmental Plan 2012

SLEP2012 applies to the Proposal. The key relevant provisions are:

Part 2

Zoning and Permissibility

The land zoning map shows the subject site zoned B4 - Mixed Use. The same zoning applies to the rest of the block and most adjacent blocks. Educational establishments are permitted with consent. The zone objectives are:

- To provide a mixture of compatible land uses.
- To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.
- To ensure uses support the viability of centres.

Part 3

Part 3 does not apply to the Proposal

Part 4 Principal Development Standards

Relevant provisions under Part 4 are:

Height of Buildings

Clause 4.3 provides for the maximum height of buildings on the site. The height of buildings map shows the maximum height for a building on the subject site as 9m.

Floor Space Ratio

Clause 4.4 provides for the maximum floor space ratio for development on the site. The floor space ratio map shows the maximum floor space ratio for a building on the subject site as 1.25:1.

Exceptions to development standards

Clause 4.6 provides for flexibility in applying certain development standards. The EIS includes written requests from the Proponent that seeks to justify the contravention of development standards for height and floor space ratio in accordance with this section (refer to Appendix 3 and 4)

Part 5 Miscellaneous Provisions

Relevant provisions under Part 5 are:

Preservation of trees or vegetation

Clause 5.9 provides for the preservation of trees or vegetation. As the site is a heritage item, clause 5.9(7) is relevant and requires development consent for the removal of any trees. The Proposal includes removal of trees identified on the public domain and landscape plan at Appendix 11. An arborist's report has been prepared in relation to the trees on the site and is included in this EIS at Appendix 12.

Heritage conservation

Clause 5.10 provides for heritage conservation and the site is identified as a Heritage Item (Former Blackfriars Public School and Headmaster Residence including interiors, fence, grounds and archaeology - Reference I170, local significance). The site is also within a Heritage Conservation Area (C9 Chippendale Conservation Area). (Note: The site and its buildings are not listed on the State Heritage Register).

A Conservation Management Plan is included within this EIS at Appendix 8, and a Heritage and Visual Considerations Report at Appendix 7.

Clause 5.10(7) contains provisions for Archaeological sites. An archaeological assessment of the Proposal is provided at Appendix 9 and an Aboriginal archaeological assessment is provided at Appendix 10.

Part 6 Local provisions—height and floor space

Relevant provisions under Part 6 are:

Design Excellence

Clause 6.21 provides for a competitive design process to be held in relation to some kinds of proposed development and applies to the Proposal. Clause 6.21(6) provides that a competitive design process is not required if the consent authority is satisfied that such a process would be unreasonable or unnecessary in the circumstances.

On the basis that this staged application is for the use and envelope for a building and does not include the design of the building (which will be the subject of a subsequent stage), it is considered that a competitive design process is not necessary or reasonable for this stage. The Proponent will address the issue of

design excellence for the finished building and any potential competitive processes in a subsequent application for the design of the building.

Part 7 Local provisions—general

Relevant provisions under Part 7 are:

Carparking

Division 1 provides for carparking. The objectives of this Division are to identify the maximum number of car parking spaces that may be provided to service particular uses of land, and to minimise the amount of vehicular traffic generated because of proposed development. Clause 7.9(3) provides the maximum number of car parking spaces for a building used for the education facilities. There is no minimum number for car parking spaces specified within the division. The Proposal does not include any carparking. This is in accordance with the division objectives, and is below the maximum parking allowances specified.

Development requiring or authorising preparation of a development control plan

Clause 7.20(2)(b) applies to the subject site because it has an area of greater than 5,000m². The clause requires that the consent authority must not grant consent for development unless a development control plan has been prepared for the land. Clause 7.20(3) provides a development control plan is not required to be prepared if the consent authority is satisfied that such a plan would be unreasonable or unnecessary in the circumstances. Clause 7.20(4) describes the information required to be included in the development control plan.

Section 83C of the Act provides that if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a staged development application in respect of that land. This staged application satisfies Clause 7.20 in accordance with Section 83C.

5.1.6 Sydney Development Contributions Plan 2006

Section 2.13 of the City of Sydney Development Contributions Plan 2006 states *“development by the Crown is subject to development contributions in the same manner as development by a private developer... [but] does not preclude Crown development from arguing a case for merit exemption in the same manner as a private developer”*.

As UTS is a Crown institution, the development is subject to the City of Sydney Development Contributions Plan 2006. It is anticipated that contributions will be dealt with in the Stage 2 development application, and that UTS would present a case for merit exemption.

5.2 Policy Context

5.2.1 NSW 2021

NSW 2021 is a plan to make NSW number one. It is a 10-year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability, and strengthen our local environment and communities. It replaces the State Plan as the NSW Government’s strategic business plan, setting priorities for action and guiding resource allocation.

NSW 2021 is based around five strategies:

- Rebuild the Economy
- Return Quality Services
- Renovate Infrastructure

- Strengthen our Local Environment and Communities
- Restore Accountability to Government

The Proposal is well aligned with key targets and priority actions within each strategy area:

Rebuild the Economy

Goal 1 - Improve the performance of the NSW economy:

- Leverage research and development activities to drive new investment opportunities in NSW
- Grow critical industries – professional services (financial, professional, legal), **manufacturing, digital economy and international education and research**

Goal 4 - Strengthen the NSW skill base:

- Grow knowledge industries
- Support high performing businesses to innovate to further enhance productivity through Industry Action Plans. The plans will identify innovation drivers and barriers within key sectors (professional services, **manufacturing, digital economy**, tourism and events, **and education and research**).

Return Quality Services

Goal 8 - Grow patronage on public transport by making it a more attractive choice

- Increase the share of commuter trips made by public transport to and from Sydney CBD during peak hours to 80% by 2016
- Increase walking and cycling

Renovate Infrastructure

Goal 20 - Build liveable centres

- Planning policy to encourage job growth in centres close to where people live and to provide access by public transport
Work closely with local councils and communities to deliver local land use controls that identify land use zonings and appropriate development outcomes to support the delivery of housing and employment targets in the metropolitan and regional strategies.

Strengthen our Local Environment and Communities

Goal 20 - Build liveable centres

- Planning policy to encourage job growth in centres close to where people live and to provide access by public transport

5.2.2 Draft Metropolitan Strategy for Sydney 2031

The Draft Metropolitan Strategy sets out the Government's vision, goals and a plan of actions for Sydney.

The Government's vision for Sydney is: a strong global city, a great place to live. To achieve this vision, the Government has set down goals that Sydney will be:

- *a competitive economy with world-class services and transport;*
- *a city of housing choice with homes that meet our needs and lifestyles;*
- *a great place to live with communities that are strong, healthy and well connected; and*
- *a sustainable and resilient city that protects the natural environment and has a balanced approach to the use of land and resources.*

The Plan sets out actions that will deliver these goals for Sydney. Each goal has a number of priority areas (directions which provide a focus for the actions).

The Proposal is well aligned to the Draft Metropolitan Strategy for Sydney 2031 goals and priority areas including:

Grow a more internationally competitive Sydney CBD

- *Create new and innovative opportunities to grow Sydney CBD office space by identifying redevelopment opportunities and increasing building heights in the right locations.*
- *Create new opportunities to grow Sydney CBD office space by expanding the CBD's footprint, particularly along the Central to Eveleigh corridor.*

Expand the Global Economic Corridor

- *Grow high-skilled jobs in the Global Economic Corridor by expanding employment opportunities and mixed-use activities.*

Grow strategic centres – providing more jobs closer to home

- *Invest in strategic centres across Sydney to grow jobs and housing and create vibrant hubs of activity.*

Support priority economic sectors

- *Support the growth of priority industries with appropriate planning controls.*

The Plan includes priorities for each subregion in Sydney. The Central subregion spans central Sydney, the eastern suburbs and the inner west of Sydney and includes the CBD. It provides priorities for the Global Sydney strategic centre, including:

Broadway and Camperdown Education and Health Precinct

- *Support education-related land uses and infrastructure around Sydney University, University of Technology Sydney, and Notre Dame University.*

Pymont-Ultimo

- *Work with the City of Sydney to... support the land use requirements of the creative digital technology knowledge hub in Pymont-Ultimo.*

The Proposal is located in the global economic corridor, and adjacent to the creative digital technology knowledge hub. It directly addresses these priorities by providing education related research uses.

FIGURE 27: Central Subregion

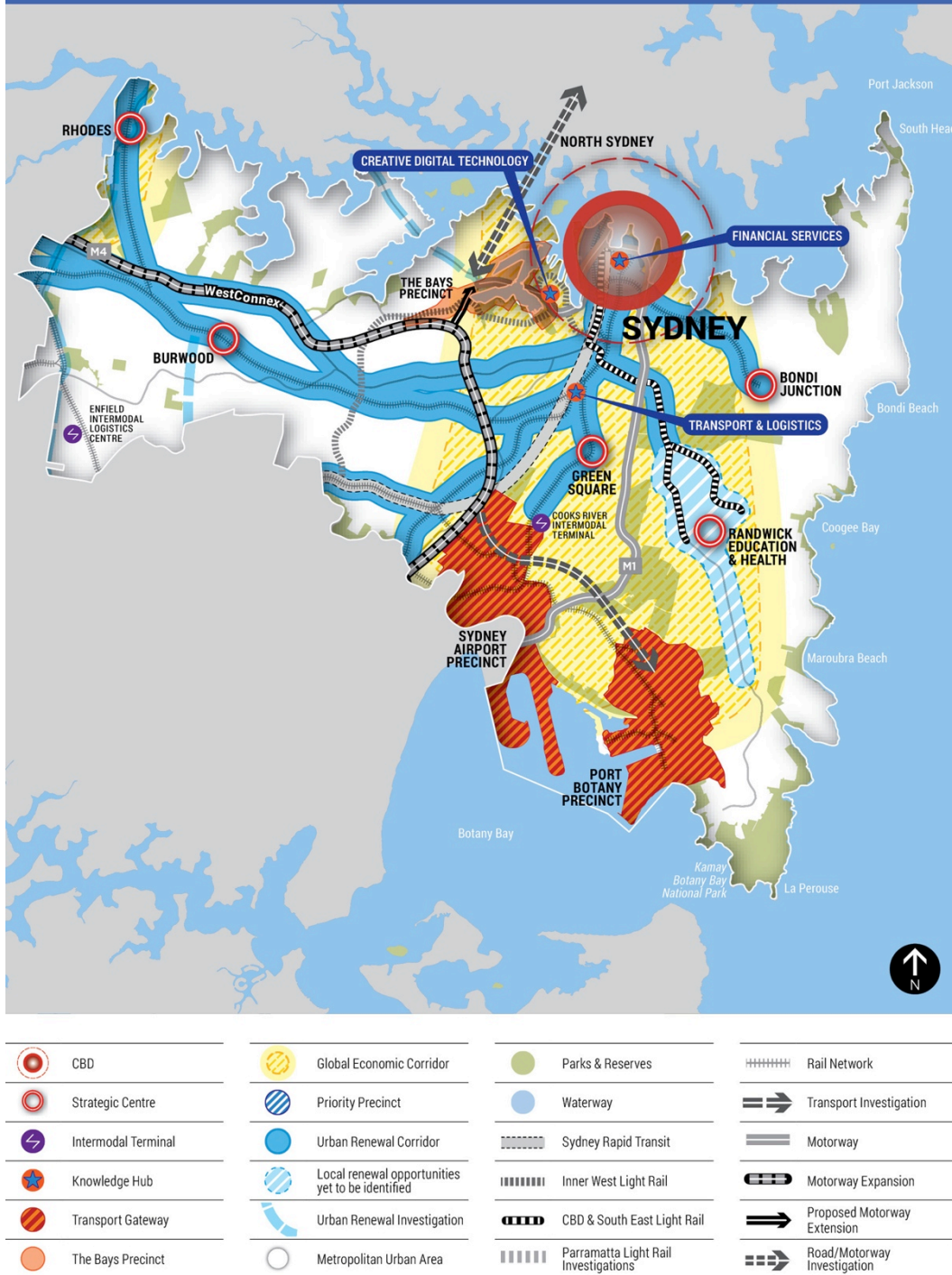


Figure 18. Central Sydney Sub Region - Draft Metropolitan Strategy for Sydney 2031

5.2.3 NSW Long Term Transport Master Plan 2012

The NSW Long Term Transport Master Plan sets the framework for the NSW Government to deliver an integrated, modern transport system that puts the customer first.

First, it identifies the challenges that the transport system in NSW needs to address to support the State's economic and social performance over the next 20 years. It guides decision-makers to prioritise actions that address the most pressing challenges. Second, it identifies a planned and coordinated set of actions (reforms, service improvements and investments) to address those challenges. It provides a map of future service and infrastructure developments that future decisions will be required to support, and against which proposed investments can be evaluated.

The Proposal is well aligned to the direction set by the plan by:

- Locating employment close to transport public transport corridors
- Reducing dependency on private vehicle use (by providing no carparking)
- Supporting the increased use of public transport, walking and cycling

5.2.4 Sydney's Cycling Future 2013

Sydney's Cycling Future presents a new direction in the way we plan, prioritise and provide for cycling in Sydney. It supports the change in culture we are seeing in Sydney with more people choosing to ride a bike for transport.

The Proposal is aligned with the policy by encouraging cycling for trips to and from the site, and by providing end-of-trip-facilities for cyclists working at and visiting the site. The details of these end-of-trip-facilities will be included in the second stage development application.

5.2.5 Sydney City Centre Access Strategy 2013

The Sydney City Centre Access Strategy aims to deliver a fully integrated transport network in Sydney's city centre that puts the customer first and meets the growing transport task. The Access Strategy clearly prioritises and allocates street space for public transport, general traffic, pedestrians, cyclists, taxis and service vehicles, helping to unlock Sydney's transport capacity.

The site is outside the Strategy boundary, which ends on Abercrombie Street (refer to the Strategy map on its page 9). Nevertheless, the Proposal is well aligned to the direction set by the strategy by:

- Locating employment close to public transport corridors
- Reducing dependency on private vehicle use (by providing no carparking)
- Supporting the increased use of public transport, walking and cycling

5.2.6 Sydney's Walking Future 2013

The goal of Sydney's Walking Future is to get people in Sydney walking more through actions that make it a more convenient, better connected and safer mode of transport. The actions it sets out aim to make walking the transport choice for quick trips under two kilometres and help people access public transport.

The Proposal is well aligned to the direction set by the plan by promoting walking to the site from nearby public transport, and reducing private vehicle use (by providing no carparking).

5.2.7 Healthy Urban Development Checklist, NSW Health

The Healthy Urban Development Checklist is a guide for health services when commenting on development policies, plans and Proposals. The focus of the

checklist is on opportunities for participation in the planning and development system that Area Health Service workers are most likely to experience.

The checklist states on page 30, it is intended to be used “as an early or ‘upstream’ participation tool to provide advice or input during the developmental phase of policies, plans or proposals” or “as a feedback mechanism to assist with providing comment on draft or publicly exhibited policies, plans or proposals”. It states further that the types of plans and proposals that this checklist is intended for include “Master Plans (may also be called concept plans), Town Centre Plans, [and] Development applications for projects like large housing developments, shopping centres, and community and health care facilities.”

Despite being State significant development, the Proposal does not fit within these categories and the checklist is not intended for use on a single building scale. Notwithstanding, a review of the Proposal against the checklist’s Quick Guide questions (pp 42-43 of the guide) was undertaken and no significant issues were identified.

5.2.8 City of Sydney - Sustainable Sydney 2030 Plan

Sustainable Sydney 2030 is the City’s long term vision to be green global and connected by 2030. It includes 10 strategic directions:

- A globally competitive and innovative City
- A leading environmental performer
- Integrated transport for a connected City
- A City for pedestrians and cyclists
- A lively, engaging City Centre
- Vibrant local communities and economies
- A cultural and creative City
- Housing for a diverse population
- Sustainable development, renewal and design
- Implementation through effective partnerships

UTS has signed a memorandum of understanding with the City setting out how both organisations can work together to deliver on these directions as well as the University’s own aims.

The Proposal will contribute to a range of the Sustainable Sydney 2030 strategic directions. The primary alignment is the Proposal’s contribution as a research and innovation hub for the digital economy directly supporting the City’s global competitive tertiary education sector and creative industries. It also has a strong alignment through its high sustainability performance and encouragement of public and active transport.

Part 6 Key Issues

The key issues arising out of the proposed development are:

- Land Use
- Urban Design and Master Planning of the Site
- Floorspace
- Height
- Heritage
- Visual Impact
- Sun Access
- Transport and Accessibility
- Contamination

6.1 Land Use and Compatibility

The proposed use as an educational establishment is a permissible use under the site zoning: B4 – Mixed Use. The objectives for the B4 Mixed Use zone are:

Zone B4 Mixed Use

1 Objectives of zone

- *To provide a mixture of compatible land uses.*
- *To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.*
- *To ensure uses support the viability of centres.*

The Proposal meets the objectives of the zone as follows:

- The education establishment use on the site is permissible. It is also compatible with nearby education, commercial, residential, childcare and other uses and maintains a 130 year long use of the site as an education precinct.
- The Proposal integrates suitable educational development in close proximity to the major public transportation bus corridor on Broadway and in close proximity to major railway interchange stations, and minimises carparking and private vehicle uses by not providing carparking on the site, thereby maximising public transport patronage and encouraging walking and cycling.
- The Proposal supports the viability of centres by providing employment for the Global Sydney strategic centre, with a specific focus on education-related land uses focussed towards job creation, innovation, and new business activity in the creative digital technology sector, as identified as priorities within the Central sub-regional strategy of the Draft Metropolitan Strategy for Sydney.

Mitigation Measures – Land Use

- No mitigation required.

6.2 Master Planning of the Site

SLEP2012 Clause 7.20 *Development requiring or authorising preparation of a development control plan* applies to the subject site because it has an area of greater than 5,000m². The clause requires that the consent authority must not grant consent for development unless a development control plan has been prepared for the land. Clause 7.20(3) provides a development control plan is not required to be prepared if the consent authority is satisfied that such a plan would be unreasonable or unnecessary in the circumstances. Clause 7.20(4) describes the information required to be included in the development control plan.

Existing Masterplan

A masterplan for the site was prepared by the Proponent as part of the documentation for the childcare centre, development application D2012/1398, which was approved by the City of Sydney in 2013. A copy of the approved masterplan is at Appendix 15.

The masterplan was prepared in accordance with both South Sydney LEP 1998 (Clause 28) and Draft Sydney LEP 2011 (Clause 7.22), which was subsequently made into SLEP2012 (Clause 7.20).

The City of Sydney's planning assessment summarises the masterplan:

"The masterplan provides a number of broad planning objectives for the site addressing the desired continuation of education focused land uses, future bulk and massing of buildings, retention of heritage significant buildings and views, sustainability and access. Specific numerical standards for floor space and height have been intentionally omitted from the masterplan as it was prepared before the adoption of the Sydney LEP 2012 and therefore the adoption of statutory numerical bulk and scale standards. No firm commitment has been made for the redevelopment of the northern section of the site where the current child care centre exists however the masterplan advises that the buildings in this area are to be demolished and replaced with contemporary buildings that respond to the scale and form of nearby warehouses. Such buildings are to be designed to protect the internal landscaped quadrangle and solar access."

The Proponent considers that this masterplan satisfies the requirement for a development control plan under this Clause, and as a result the consent authority can be satisfied that preparation of a further development control plan would be unreasonable and unnecessary in the circumstances in accordance with Clause 7.20(3).

In addition it is noted that development control plans do not apply to state significant development in accordance with Clause 11 of the SEPP(SRD). As this is a state significant development application, and that there is no further development planned or possible on the balance of the site (due to its heritage buildings and the full utilisation of the site's floor space area by this Proposal and other development) it is further considered that the consent authority can be satisfied that preparation of a further development control plan would be unreasonable and unnecessary in the circumstances.

Notwithstanding the above, Section 83C of the Act provides that if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a staged development application in respect of that land. This staged application satisfies Clause 7.20 in accordance with Section 83 of the Act.

In accordance with Section 83C(3) of the Act this staged development application contains the information required to be included in the development control plan given in SLEP2012 Clause 7.20(4) (which is also the information required under the existing approved masterplan). This is summarised below in Table 5, which provides a brief description of the response and the location in this EIS where full details can be found.

Table 5. Discussion under SLEP Clause 7.20(4)

SLEP Clause 7.20(4)	Comments
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Table 5. Discussion under SLEP Clause 7.20(4)

SLEP Clause 7.20(4)	Comments
<i>(a) requirements as to the form and external appearance of proposed development so as to improve the quality and amenity of the public domain,</i>	The form and appearance of the proposed envelope has been designed to improve the Buckland Street frontage of the site by activating the streetscape with a building that is in keeping with its heritage context. Guidelines for the design of the building within the envelope are provided in the Architectural Report at Appendix 6
<i>(b) requirements to minimise the detrimental impact of proposed development on view corridors,</i>	The proposed envelope has no significant impact on view corridors and: - Minimises development in the centre of the site, creating a quadrangle and maximising visual connectivity between the site's significant heritage items - Creates a quadrangle between buildings CB22 and CB25, the Former Girls and Boys School buildings - Allows views into the site from the Buckland St to glimpse the internal heritage buildings Refer to the Heritage and Visual Considerations Report at Appendix 7 for details.
<i>(c) how proposed development addresses the following matters:</i>	
<i>(i) the suitability of the land for development,</i>	The land is well suited to the proposed development the draft metropolitan strategy Central Region identifies the land as suitable to support education-related land uses and infrastructure. Refer to section 6.1 for details.
<i>(ii) the existing and proposed uses and use mix,</i>	The proposed use maintains the <i>130 year history of education uses</i> on the site and is compatible with existing and nearby education uses and with commercial, residential, childcare and other uses, Refer to section 3 for details.
<i>(iii) any heritage issues and streetscape constraints,</i>	The proposed envelope has been designed to complement the site's significant heritage and the streetscape. Full details are described in the Heritage and Visual Considerations Report at Appendix 7. The Proposal: - Retains and conserves the three G.A. Mansfield-designed heritage structures. - Adapts and reuses interior spaces within Conservation Management Plan guidelines. - Retains the site's perimeter palisade fencing whilst providing access within Conservation Management Plan guidelines. - Maintains the curtilage of the site's heritage items within Conservation Management Plan guidelines. - Provides an internal landscaped quadrangle space between the former school buildings to maintain their visual connectivity. Refer to the Heritage and Visual Considerations Report at Appendix 7 for details.
<i>(iv) the location of any tower proposed...</i>	The Proposal is not a tower form.
<i>(v) the bulk, massing and modulation of buildings,</i>	The proposed envelope: Minimises development in the centre of the site to

Table 5. Discussion under SLEP Clause 7.20(4)

SLEP Clause 7.20(4)	Comments
	protect the curtilage of significant heritage items in accordance with the Conservation Management Plan. • Concentrates height and floorspace in a new development to the north of the site (towards Broadway) responding to the increased building heights along this busy arterial road. • Provides low scale development to the south of the site, responding to the lower scale development of Blackfriars Street, and the complementing the roof-scape and scale of the significant heritage items. • Allows demolition of Building CB21 (demountable/temporary), Building CB23 (existing childcare centre) and Building CB24 (demountable /temporary) within Conservation Management Plan guidelines. Refer to the Heritage and Visual Considerations Report at Appendix 7 and Architectural Report at Appendix 6 for details.
<i>(vi) street frontage heights,</i>	The proposed envelope: • Maintains low scale development along the street frontage of Blackfriars St of 1-2 storeys. • Concentrates development at the northern end of the site to have a street frontage height and contemporary form responding to the scale and form of nearby warehouse forms. Refer to the Heritage and Visual Considerations Report at Appendix 7 and Architectural Report at Appendix 6 for details.
<i>(vii) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity,</i>	The proposed envelope: • Minimises overshadowing of the public domain by locating higher scale development at the north of the site and lower scale development at the south end of the site • Maintains an internal quadrangle in order to ensure solar access into the centre of the site for internal occupants. Refer to the Architectural Report at Appendix 6 for details. Noise wind and reflectivity impacts will be determined with the design of the building in the second stage application.
<i>(viii) the achievement of the principles of ecologically sustainable development,</i>	The proposed envelope provides sufficient room for the detailed building, the subject of a second stage application, to include passive solar design, good natural lighting and cross ventilation and to minimise reliance on energy for heating and cooling, and investigate opportunities for alternative energy generation and for rainwater water harvesting and grey water use. These matters will be determined with the building design the subject of a second stage application. Refer to the Architectural Report at Appendix 6 for details.
<i>(ix) pedestrian, cycle, vehicular and service access and circulation requirements, including the permeability of any pedestrian network,</i>	The proposed envelope: • Minimises vehicular parking on the site recognising the site's superior access to public transport, nearby university parking and in order to complement heritage significance • Anticipates that the final building design will generate

Table 5. Discussion under SLEP Clause 7.20(4)

SLEP Clause 7.20(4)	Comments
	a need for 58 bicycle parking spaces and end of trip facilities for workers and visitors to the site, which are proposed to be provided in the consolidated UTS bicycle facility for the overall campus within Building 10, which is located very nearby on the corner of Broadway and Abercrombie Street. Refer to the Transport and Accessibility Report at Appendix 13 for details.
<i>(x) the impact on, and any proposed improvements to, the public domain,</i>	The Proposal: - Conserves original palisade fencing as a perimeter defining the site - Minimises vehicular access to the site maximising on-street parking by removing driveways Refer to the Landscape and Public Domain Report at Appendix 11 for details.
<i>(xi) the impact on any special character area,</i>	The proposed envelope has been designed to complement the Chippendale Conservation Area with a building form that is a contemporary interpretation of the area's predominant warehouse forms. Full details are described in the Heritage and Visual Considerations Report at Appendix 7 and Architectural Report at Appendix 6.
<i>(xii) achieving appropriate interface at ground level between the building and the public domain,</i>	The proposed envelope allows for the final building to be built to the street frontage with the building design the subject of a second stage application. Full details are described in the Heritage and Visual Considerations Report at Appendix 7 and Architectural Report at Appendix 6.
<i>(xiii) the excellence and integration of landscape design,</i>	A landscape concept design has been provided indicating a high quality landscape design can be achieved with the building design the subject of a second stage application. Refer to the Landscape and Public Domain Report at Appendix 11 for details.
<i>(xiv) the incorporation of high quality public art into the fabric of buildings in the public domain or in other areas to which the public has access.</i>	The Proposal allows for the final building to incorporate public art with the building design the subject of a second stage application.

Mitigation Measures – Master Planning of the Site

- No development control plan is required.

6.3 Floor Space Area

The SLEP2012 floor space development standards permit a maximum floor space ratio of 1.25:1. With a site area of 6,043m² this gives a maximum permissible floor space area of 7,554m².

Existing development on the site utilises some of this area. Existing heritage buildings on the site to be retained occupy 2,023m² and the approved new childcare centre will utilise 820m². This leaves a remaining development floorspace potential of 4,711 m². This is summarised in Table 6.

Table 6. Blackfriars Site Development Areas

Site area	6,034m ²	
Permissible floorspace	1.25:1	7,554m ²
Existing Buildings:		
Building CB22	(1,027m ²)	
Building CB25	(761m ²)	
Building CB27	(235m ²)	
Total Existing Buildings (retained)		(2,023m ²)
Approved Childcare Centre		(820m ²)
Remaining Development Potential		4,711 m²

The Proposal has a gross floor area of 6,225m², giving the total development on the site including the Proposal a floor space ratio of 1.5:1. This is above the floor space ratio development standard for the site of 1.25:1. A written request to vary this development standard is provided at Appendix 4 and sets out in full the planning justification for the departure from the standard.

UTS receives regular requests for space from research partners. The University's vision is that the Blackfriars Precinct would allow it to partner with research entities and industry to develop new technologies, new business ventures and new jobs. The university's experience is that industry partners require a minimum of 1,000 square metres with larger floor space requirements also common. This minimum is then combined with aligned University research space and collaboration space. The University considers that a building in the order of 6,000-6,500m² is the right size to attract industry partners at a range of sizes, while at the same time providing essential university and collaboration space. This is considered to be the minimum in order to create a critical mass of research partnership organisations working collaboratively while still allowing flexibility about uptake of space as research projects develop.

UTS considers that a building of 4,700m², which would be compliant with the floor space ratio development standard, would not be at a sufficient scale to yield material benefits to the University, the State or the City. A larger industry partner could dominate a building of that size and opportunities for attracting new industry to the City and the State together with cross industry and cross discipline collaboration would be lost. A larger area is therefore key to the success of a collaborative industry research centre at UTS.

Despite the increased floor area the proposed development is compatible with the existing and future character of the locality, and is consistent with the zoning for the area. It is considered that the quality of the built form of the Proposal will make a positive contribution to the visual amenity and character of the streetscape, making appropriate use of this accessible site and utilising existing infrastructure. Occupying part of the Block Fronting Parramatta Road (Broadway) the Proposal takes the form of a medium rise contemporary building that responds to the scale and form of nearby warehouses. It is a new infill building that reinforces the predominant street frontages in terms of height, setbacks and street alignment. It also responds to the height, massing and predominant proportions of the site's heritage and contributory items.

The Heritage and Visual Considerations Report by Paul Davies Pty Ltd, is supportive of the Proposal in heritage terms concluding the "development on the northern portion of the site is possible without adversely affecting heritage values or the urban setting of the school within the surrounding area".

There is no further development planned or possible on the balance of the site due to its heritage buildings and the recent approval of the single storey childcare at the south end of the site, ensuring a long term high quality setting for the heritage

buildings on the site and a certainty of built form for the longer term for the site and its setting in Chippendale.

It is also noted that for at least fifteen years prior to the making of Sydney LEP 2012, the relevant permissible floor space ratio for the site under the South Sydney Development Control Plan 1997 was 1.5:1. As a result, the density of development and land use intensity as varied by the Proposal, will be consistent with and in keeping with majority of development in the area delivered over that period under that planning control.

Mitigation Measures – Floor space area

- No mitigation is required.

6.4 Height

The proposed envelope has maximum height of 6 storeys plus plant room and lift overruns that correlates with the site opposite and that steps down from the higher zoned areas to the north and east.

The Proposal has a height of 27.95m, which is above the height of buildings development standard for the site of 9m. A written request to vary this development standard is provided at Appendix 3 and sets out in full the planning justification for the departure from the standard.

Height and the response to heritage

In its early planning for this project and its consideration of the overall Blackfriars site, UTS has sought to ensure that the heritage significance of the site was maintained and that a high quality urban design outcome for the overall site was achieved that is highly compatible with its surrounds.

The Proposal acknowledges the curtilage of the site's significant heritage items of the former Girls School and Boys School buildings and builds on the portion of the site identified in the Conservation Management Plan as suitable for development. Rather than develop a series of lower, broader buildings of an equivalent height for the overall site, the approach across the overall site opens up the space around the significant buildings and grades the height upward to the north. The approach redistributes the site's overall development potential and building massing from the Blackfriars Street (south) end of the site onto a taller building at the north of the site. With this approach in mind, UTS consciously pursued a lower than permissible childcare development at the south of the site (DA2012/1398 approved by the City of Sydney on 24 April 2013) and provided a masterplan showing this approach as part of the DA (at Appendix 15).

This approach allows the heritage items to "breathe" and is considered to provide a more appropriate heritage response than wider buildings of a lower height, and one that is respectful of the curtilage of significant items whilst still achieving the site's permissible development potential. The increase of height sought for the northern part of the site is balanced by a lowering of development height at the south.

The Heritage and Visual Considerations Report by Paul Davies Pty Ltd, which accompanies the EIS for the Proposal, is supportive of the increased height in heritage terms concluding the "development on the northern portion of the site is possible without adversely affecting heritage values or the urban setting of the school within the surrounding area". It goes on to state "the consideration of new potentially larger development is not limited to creating a maximum height based on existing building height or the like. A more sophisticated response is required that allows considerations of existing built form, adjacent built form, the spatial

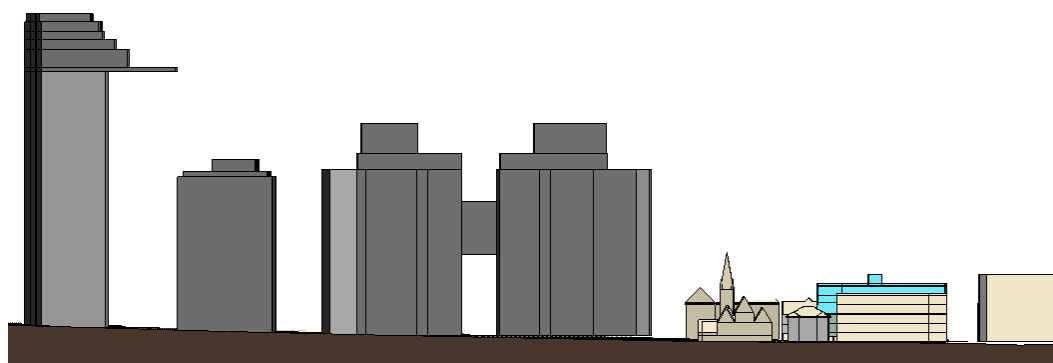
character of the area and site, the three dimensional form that new development may take and how that interacts with existing buildings, the proportion and massing and articulation of the existing buildings and how that may inform any new building, reflecting design excellence (as found in the existing buildings) in any new building and the creation of spaces between buildings that are meaningful, well-proportioned, usable and which make an equal contribution to the site as the built forms”.

Height and context

The existing heritage school buildings on the site, and the buildings on the adjoining University of Notre Dame Australia (UNDA) site have a considerable scale with an effective 4-5 storey height due to the very high floor to floor heights and additional gothic roof features and spires which are taller again. The major existing heritage buildings on the UTS site and the UNDA site already exceed the development standard. The visual studies undertaken for the Proposal establish that in significant viewing locations including public places such as Broadway and Buckland Street the gothic heritage buildings remain the dominant built features of the block. In particular, the spire of St Benedicts Church remains the highest feature on the block and will continue to be seen against the sky in views from opposite the site on Broadway. Similarly, the former Girls School, Building CB22, on Buckland Street remains a dominant feature of the Buckland Street frontage. Its high-pitched roof and gothic features will remain clearly readable in the streetscape and are not diminished by the Proposal.

On the opposite side of Buckland Street and Blackfriars Street there has been extensive adaptation of older buildings often with upper floor additions. Many infill residential building and commercial buildings in the surrounding area replicate the forms of the three-five storey buildings that are seen in this part of the Chippendale. The Proposal is in keeping with this established infill practice. Across Buckland Street from the site, the UNDA building on the Broadway corner has an effective height of 7 storeys: six floors and a sky sign. Across Broadway and Abercrombie Street the newly constructed buildings on the UTS campus and in the Frasers development have established a significantly higher built form of 45m and higher (approximately 15 storeys plus lift towers). One block further east, the UTS tower building and the Frasers residential tower are high towers that feature on the Sydney skyline and have permissible heights of over 85m in the LEP.

Based on this examination of the immediate context, the site and the immediately surrounding blocks, it is apparent that the area cannot reasonably be said to have a predominant existing character, but rather a character that includes a very broad range of building sizes and heights, which tend to be highly variable within street blocks and which tend to be taller in proximity to Broadway.



It is also noted that the future character of the southern end of the Central Sydney area can be reasonably expected to contain further high-rise development. This is because the Draft Metropolitan Strategy includes among its goals to “*Grow a more internationally competitive Sydney CBD*” with specific priorities including “*Create new and innovative opportunities to grow Sydney CBD office space by identifying redevelopment opportunities and increasing building heights in the right locations*” and “*Create new opportunities to grow Sydney CBD office space by expanding the CBD’s footprint, particularly along the Central to Eveleigh corridor.*”

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The graded response to height across the site approach described above has been specifically designed to promote view sharing for the site and its surrounds. In particular the approach allows the preservation of a lower scale form along Blackfriars Street where the Proponent has sought only to build childcare development of only one storey despite a three level development being permissible. As a result, residential and commercial development on Blackfriars Street is able to access more distant views over the childcare roof into the remainder of the UTS site, significantly improving the outlook from these adjoining developments as well as solar access to the street and residential and general overall amenity.

For the adjacent UNDA site, the Proposal has a minor impact on potential views to the south and west. The high boundary wall between the two sites that currently exists already limits ground level views on the UNDA campus to be foreground views, which will not be adversely affected by the Proposal. The higher UNDA building on Abercrombie Street has a primary aspect to the north and is offset from the footprint of the Proposal ensuring that it will still enjoy a mix of foreground, midrange and longer distance views primarily over the top of the UNDA Campus in keeping with its urban setting. These views are not significantly different to those that the site would enjoy should the development standard be strictly maintained.

The width of the proposed envelope frontage on Buckland Street has been designed to preserve views into the UTS site and establishes a 'cloistered' setting for the internal spaces that interprets the former subdivision pattern of the site prior to the construction of the (former) school buildings. There are only minor impacts on the adjacent UNDA campus buildings on Buckland Street between Grafton Street and Broadway. The nature of the Buckland Street environment is that these developments only have foreshortened views of the street and buildings opposite, plus borrowed views into the UTS site. These will be largely maintained and are not significantly different to those that the site would enjoy should the development standard be strictly maintained.

No other significant potential impacts on view sharing have been identified.

Height and overshadowing

Overshadowing impacts are discussed at Section 6.7.

Mitigation Measures – Height

- No mitigation is required.

6.5 Tree Removal

The Arborist Report by Urban forestry Australia at Appendix 12 identified that 22 trees would likely be removed as a result of the Proposal. This includes three small street trees of low retention value.

The seven remaining street trees (T24–28, 31 and 32), a palm (T49) on the adjoining St Benedict's site, and an Olive tree (T38) in the site are not expected to be impacted by future development.

The Arborist Report notes that no site or street trees are identified in any of the City of Sydney Registers of Significant Trees 2005. Not one of the 21 site trees is identified in the Conservation Management Plan as having heritage or cultural significance.

The Heritage and Visual Considerations Report by Paul Davies Pty Ltd notes in particular (p17) that "It is clear that the site trees and landscape have no heritage value and that the key landscape character of the streets, particularly Buckland Street arises from street trees."

A Public Domain Report by Aspect Pty Ltd has also been prepared showing a concept for new landscaping for the Proposal that includes new, replacement planting and an overall landscape plan that addresses the streetscape and heritage aspects of the site.

Mitigation Measures – Tree Removal

- The subsequent development application (full design of the building) to include a full landscape design based on the concept contained in the Public Domain Report including:
 - Planting new trees on the site as part of a full landscape plan to replace some of the existing planting within the site
 - Planting additional street trees to provide an avenue of planting consistent with the City of Sydney’s Street Tree Master Plan
 - Creating one clear and accessible entry to the courtyard using high quality paving, interpretive inlays and feature planting
- Despite the removal of trees on the site being considered acceptable, the subsequent development application (full design of the building) should consider any opportunities for retention of trees of high retention value in the resolution of the design, with any subsequent retention to be in accordance with recommendations of an Arborist (refer to the Arborist Report Section 4.1).

6.6 Heritage

UTS has a strong record of respecting the site’s heritage items. It has invested significant funds in the removal of low-grade infill buildings that have detracted from the heritage significance of the school buildings as well as in the conservation of the school buildings themselves including major sandstone conservation works in 2012. As a long-term custodian of this site, UTS understands the cultural significance of maintaining and growing an educational presence in a site that has had an educational focus for over 100 years.

Rather than develop a series of lower, broader buildings of an equivalent height for the overall site, the Proponent has established an approach that opens up the space around the significant buildings and grades the height upward to the north. This allows the heritage items to “breathe” and opens the centre of the site to views from Buckland Street. This approach is considered to provide a more appropriate heritage response than wider buildings of a lower height, and one that is respectful of the curtilage of significant items whilst still achieving appropriate development potential.

The Heritage and Visual Considerations Report states that an important consideration on this site (given that there are no actual physical impacts proposed to the existing heritage buildings) is how any new development responds to the spatial qualities of the site and location. It states (p15): *There is no prescribed or precise setback that can be applied but rather it is a combination of distance, shape or form of the new element, use of the space, landscape treatment, height and form of the building, materiality and actual design of the new element.*

This is one of the major reasons for pursuing a staged envelope approach for the Proposal. The Heritage and Visual Considerations Report states:

The heritage advice to this project has focused on establishing parameters for development that allow a considered building envelope to be used to create a range of design approaches that respond to the site, the setting and its heritage values. To achieve this it is necessary to create an envelope that is actually larger than the

building proposed. Without such an approach the envelope is in reality defining the outline of the building and this dictates a fixed design outcome. A tight envelope approach is not supported as it inevitably leads to un-informed and lesser quality design outcomes.

A difficulty that arises is that proposing a building envelope without a design can cause concern as to what may happen within it and how it will relate to the spatial (and heritage) characteristics of the site. In its most simple form how can a consent authority (or client) know what may be proposed within a simple envelope?

The envelope approach proposed is simple, geometric and generous to allow for good design. However it does not propose filling up the available space within it. This is managed by setting a floor space limit on the site that is considerably less than the envelope potential. This approach allows an architect to explore approaches to the site with some freedom.

Elements that will be affected by this approach are whether a design should create more internal external space and provide additional height or whether a street setback can be accommodated etc. There are a number of design approaches to future development on the site that could be developed and there is no preferred option.

Although the Proposal is currently articulated only as an envelope, the final building will incorporate a high quality architectural design with proportionality and lightweight materials designed to complement whilst being distinct from the adjacent heritage items, in keeping with heritage infill best practice. UTS recognises the need to achieve a very high architectural quality in the building's design.

The Heritage and Visual Considerations Report has found that a possible heritage impact could be the removal of the front palisade fence in part or in totality at the northern end of the site, however the Heritage and Visual Considerations Report states: *The removal of the fence is not a critical heritage action in whatever design may be proposed for the site as the existing heritage building to the south of the site is built to the street edge breaking the continuity of the fencing.*

Archaeology is separately addressed in an Archaeological Assessment by Casey Lowe Pty Ltd Archaeological and heritage consultants at Appendix 9. The report has found that there is a high potential for the northern most part of the site (at least) to have archaeological value. This has to be managed in any potential development and there are a range of ways to achieve this. The first is to design any new work to avoid known archaeological areas. In keeping with this strategy, the envelope provides for a basement level only to the western side of the site, which has been assessed as being less archaeologically sensitive. A second method is to undertake detailed archaeological investigations. The report recommends a number of strategies for the subsequent development application (full building design) to address the archaeological issues.

Aboriginal Archaeology is separately addressed in a report by Dominic Steel Consulting Archaeology at Appendix 10. The report found that no previously documented Aboriginal archaeological sites or objects occur within the boundaries of the study area or within close proximity. It also noted that the *"below ground surface profiles across the site will have been extensively disturbed by land reclamation and subsequent historic and some modern building and demolition phases via large scale excavation, grading and leveling to establish sound building platforms on the deep sandy profiles that are covered by over 4.0m of reclamation fill in places. It is likely that any Aboriginal archaeology formerly present within the uppermost soil profiles on any former dry ground if any originally existed will have*

been destroyed and/or significantly disturbed by historical landuse and will unlikely to be found in situ in this originally active flood plain environment.” The report assesses that “the proposed site redevelopment is unlikely to have an adverse heritage impact upon the Aboriginal archaeological values of the place and that no significant archaeological constraints are apparent that would restrict the Proposal proceeding as planned”.

The report notes that potential archaeology that may occur at the site will most likely comprise isolated finds and/or very low-density distributions of flaked stone artifacts. Such finds will be encountered in extensively disturbed recovery contexts that will retain minimal stratigraphic integrity. These Aboriginal objects, even if in disturbed (or fill) contexts, are nevertheless statutorily protected under the provisions of the National Parks and Wildlife Act, and the report recommended procedures to follow should such artifacts be encountered.

Mitigation Measures – Heritage

- The building is to be contained within the maximum building envelope, which has been designed to achieve an appropriate response to the site’s heritage and with appropriate setbacks to respect the curtilage of the site’s significant heritage items. Within this envelope, the next stage (building design) should address:
 - Ensuring that the view from the corner of Broadway and Abercrombie Street places the church ridge and spire against the skyline without the building intruding.
 - Locating the greatest height near the northern boundary where it is likely to be behind future adjacent development
 - Considering a streetscape height that is less than the maximum height as illustrated in the project modelling
 - Considering a reduced scale to the frontage of the heritage buildings which may result from considerations of either height or setback distances or both as well as overall building form
 - Considering a partial basement construction to allow more flexibility in the design within the envelope and reduced building massing in parts of the design.
- The subsequent development application (full building design) should be in accordance with the Conservation Management Plan for the site.

Mitigation Measures – Archaeology

- Undertake archaeological testing to inform the subsequent stage design and to determine where the archaeology may survive within the site and the degree to which it survives. The results of this testing to be written up in a report outlining opportunities for conservation *in situ*, development and interpretation.
- Avoid impacts as much as possible on the State significant archaeology of the site.
- The need for an approval for testing will depend upon the stage of the approval process. It is possible that archaeological testing may be able to be completed under a SSD approval through Planning or it may require a S140/S139(4) application to the NSW Heritage Division to be approved. In either case it will require an Archaeological Research Design to be written outlining which areas will be tested and the purpose of the testing.
- Conservation of State significant archaeology should be a key outcome for this development.
- Opportunities for interpretation should be undertaken within the proposed

new building and in the landscaping.

- An interpretation Strategy should be undertaken to achieve the best heritage and interpretation outcome.

Mitigation Measures – Aboriginal Archaeology

- Should any Aboriginal objects be discovered during future ground disturbance works at the site, then these activities within the vicinity of the find location will be required to stop and the Office of Environment and Heritage will need to be informed of the discovery in accordance with Section 91 of the National Parks and Wildlife Act.

6.7 Visual Impact

The visual impact of the Proposal was considered by the Heritage and Visual Considerations Report by Paul Davies Pty Ltd at Appendix 7 and by the Architectural Report by H2O architects Pty Ltd at Appendix 6. The architectural modelling, confirms that there are limited views to the site beyond the immediate setting due to the density and tightness of surrounding development and the height of buildings around the site.

The primary view impacts are within the UTS site itself, with the Proposal terminating the northern view of the courtyard and acting to contain this space to form a cloister in keeping with the heritage significance of the site.

Outside the site, the primary view impacts relate to the Buckland Street streetscape, where the Proposal presents a 32m long frontage to the street at a height of up to 6 levels. This street frontage is in keeping with the adjacent heights of the former Girls School on the site, which although being only 2 levels, has an effective height of around 5 storeys due to the high ceilings and pitched gothic roof form. As a result this street frontage presents as an infill building rather than a standalone development. Due to the topography and street alignment of the area, there are no significant long distance views beyond the building, with the UTS main campus and new Frasers CUB development forming a mid-long distance backdrop.

This is also the case for views from the adjacent UNDA campus. The relationship of the buildings on both the UNDA and UTS sites is that there is a mix of buildings built on the boundary and set back, with tall gothic building forms either side of a boundary fence approximately 3m high. The proposed envelope presents a narrow face to the eastern side facing the UNDA campus, which functions as the UNDA primary outdoor private space. Along the northern UNDA boundary, the UNDA buildings are currently small scale with a three-storey development on the northern boundary at Buckland Street and 1-3 storey structures along Broadway set back from the boundary. As the area is now the Proposal will be visible from Broadway in the mid ground behind these buildings. However the site between the subject site and Broadway is zoned for higher density development of up to 18 metres. It can be assumed that if development takes place on that site that the subject site will not be easily viewed from Broadway except across the church or along Buckland Street. An important consideration for the design has been to ensure that the spire of St Benedicts Church remains the highest and dominant architectural feature on the overall block and is still seen against the sky when viewed from Broadway. This is illustrated in Figure 21.

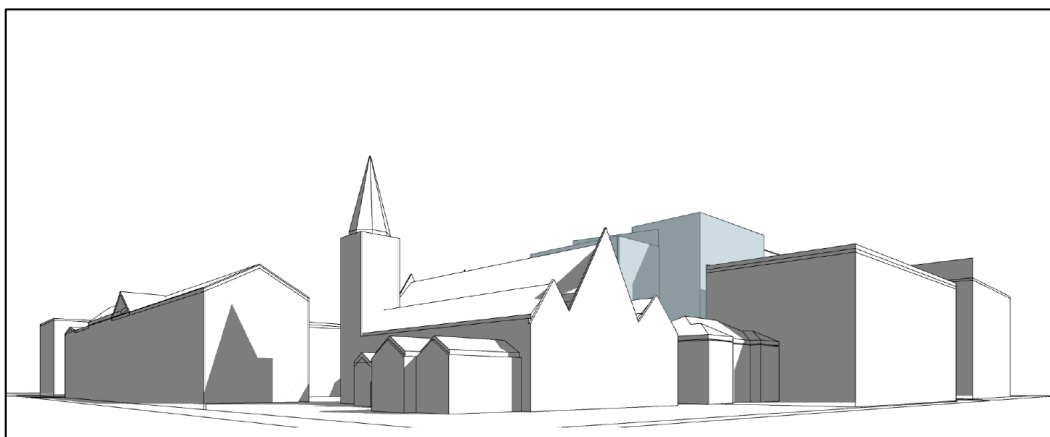


Figure 21. Architectural perspective showing the view from the Wattle Street and Broadway corner and illustrating the continuing prominence of the St Benedicts Church spire. The Proposal is coloured light blue. The form to the right (white and grey) shows a permissible envelope for the UNDA site on the Broadway and Buckland Street corner (currently this is a single storey structure).

The other visually connected buildings are the Central Park developments on the opposite side of Abercrombie Street. Their very large scale provides an eastern backdrop to this site, and most of Chippendale, that overwhelms the visual scale of the site when viewed from the west. The Proposal will be seen from these as a form in keeping with the other warehouse forms in the adjacent Chippendale area.

Mitigation Measures – Visual Impact

- No additional mitigation required.

6.8 Sun Access

The solar access and overshadowing impacts of the Proposal are fully described in the sun access diagrams in the Architectural Drawings at Appendix 5.

Because the Proposal is at the north of the UTS site, most overshadowing occurs within the UTS site. The areas where there is sensitivity in relation to overshadowing are:

1. The residential development south and west of the site on Buckland Street, known as 4 Grafton Street
2. The quadrangle space between the former girls school (CB22) and boys school (CB25) buildings on the site
3. UNDA outdoor spaces east of the site

These are discussed below.

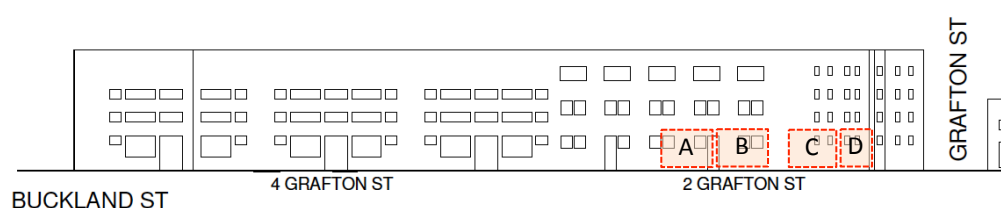
6.8.1 Shadows and 4 Grafton Street

The Proposal casts an additional shadow on the elevation of 4 Grafton Street in the early mornings. The shadows cast on 21 June are shown in drawings A5.06 to A5.09 in Appendix 5. Drawings A5.07 and A5.08 in particular show the shadow impacts in elevation on this building. The shadow affects some of the dwellings in the building towards the Grafton Street Corner with the lower windows more impacted.

The drawings also model the shadow of the existing former girls school building (CB22) and of a 9m high envelope on the site of the Proposal (which would be compliant with the SLEP2012 development standard for height of buildings). The drawing shows that the existing girls school building (CB22) which shadows windows on the elevation until approximately 10am on the winter solstice. It also shows that

9m high building would also overshadow the relevant windows on the winter solstice until approximately 9am.

The proposed envelope will cause an additional shadow on the face of this building compared to a permissible 9m envelope. The additional shadow will cover some of the windows until approximately 10.30am when the entire elevation will be free of shadow. Approximately half of these windows are on the splayed corner of the building and continue to receive sun after midday. At approximately 10.15am apartments on levels 2 and 3 of the building are not overshadowed and only the ground floor apartments are affected. The internal floor plans of 4 Grafton Street are not available to determine exactly which apartments are affected, however judging from the window configuration it is estimated that the greatest impact occurs to two east facing apartments (marked A and B on the elevational diagram below) and two north east facing apartments (marked C and D) straddling the corner on the ground floor.



All four of these apartments will still receive solar access from approximately 10.30am. The two east facing apartments lose their solar access from midday, and the north east facing apartments have solar access until the early afternoon.

The SEPP 65 Apartment Design Guide (ADG) provides design criteria for solar access to apartments, stating:

Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas; and

A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter

It is estimated that shadows cast by the Proposal will reduce the solar access below the ADG design criteria by 15 minutes for 2 apartments on the first floor and by 30 minutes for 2 apartments on the ground floor (the other affected apartments are northeast facing and have solar access after 12noon ensuring that their solar access will continue to achieve the levels in the ADG). It is further noted that the 4 Grafton Street apartment complex contains a total of 44 apartments. Under the ADG it would be acceptable for up to 6 apartments (15%) to have no solar access. As a result, it is considered that the impact is acceptable because the Proposal affects a small number of apartments of which all but two of those still achieve the ADG solar access design criteria. The two most affected apartments (which represent 4.5% of the complex) still achieve reasonable solar access (of 1.5 hours) at midwinter.

Drawing A5.06 at Appendix 5 shows that by the equinoxes, there is no additional overshadowing of east facing windows of 4 Grafton Street after 9am, and no overshadowing of northeast facing windows on the building's splayed corner.

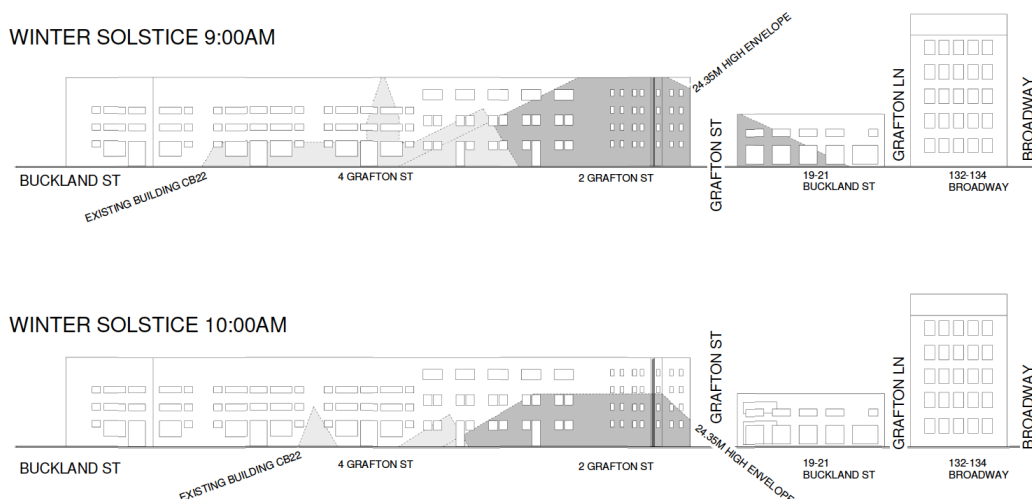


Figure 22. Winter solstice 4 Grafton Street – Elevation shadow study – extract from Drawing A5.08

It is considered that the overshadowing impact is acceptable taking into account the small number of apartments that are affected (4 out of 44), and their continued good potential solar access in the mid-late morning. It is further noted that the impacts are constrained to the short period either side of mid winter and that existing street trees shade most of the existing eastern windows all year round.

6.8.2 Shadows and the 'quadrangle'

The Proposal casts an additional shadow on the quadrangle space between the former girls school (CB22) and boys school (CB25) buildings on the site. At its worst case, during the winter solstice, the envelope has been designed to ensure that more than half the courtyard retains full sun at lunchtime. Before 11am, and from 1pm onwards the courtyard is shaded by the heritage buildings.

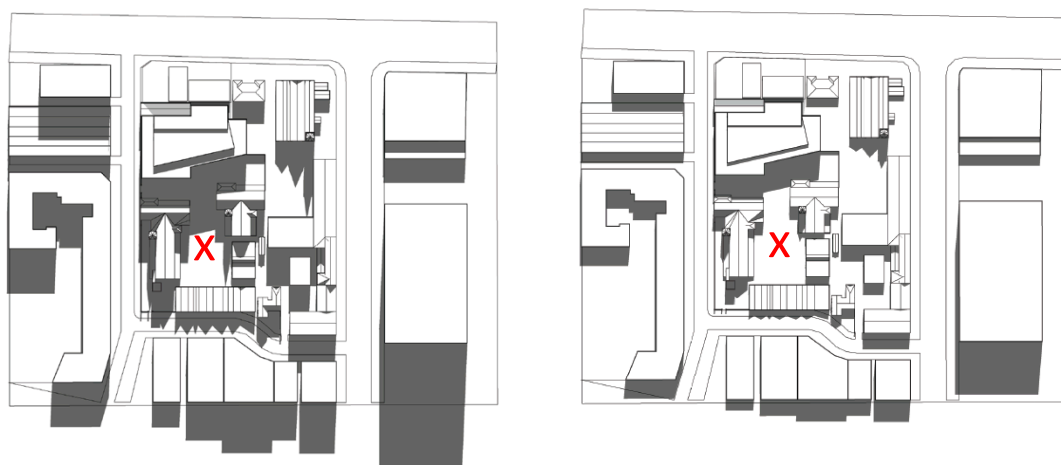


Figure 23. Winter solstice 12 noon (left) and Equinox 12 noon (right) shadow diagrams showing the good lunchtime solar access to the courtyard/quadrangle

It is considered that the overshadowing impact on the quadrangle is acceptable, with the quadrangle continuing to have excellent solar access in the middle of the day throughout the year.

6.8.3 Shadows and UNDA

The Proposal casts an additional shadow on the outdoor spaces of the adjacent UNDA campus. At its worst case, during the winter solstice, the open spaces of the UNDA courtyard retain their existing solar access for the entire morning and until

approximately 1pm, with the shadow gradually increasing until the space is in full shade by about 3.15pm. It should be noted that existing tall boundary fence between the two sites also partially shades this area (see Figure 24).

It is considered that the overshadowing impact on the UNDA courtyard spaces is acceptable, with the spaces continuing to have excellent solar access all morning and in the middle of the day throughout the year.

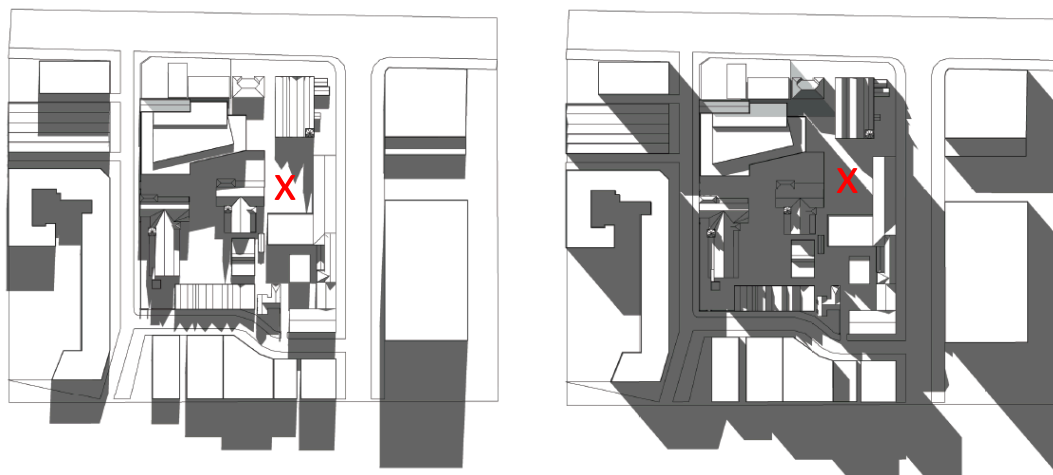


Figure 24. Winter solstice 12 noon (left) and 3pm (right) shadow diagrams showing the good lunchtime solar access to the UNDA courtyard (marked with a red “X”)

Mitigation Measures – Sun Access

- Notwithstanding that the overshadowing impacts of the envelope are considered acceptable, the subsequent development application (full design of the building) should consider opportunities for the design of the building to further reduce shadow impacts of the Proposal.

6.9 Transport and Accessibility

Parking and Traffic Consultants (PTC) have prepared a Traffic and Accessibility Assessment at Appendix 13.

The site is well serviced by public transport, including the numerous bus services that operate along Broadway and Central Railway Station, which is located within a 10 to 15 minute walking distance from the site.

The Proposal does not include off-street parking, as a result of the site location being adjacent to high frequency public transport and existing UTS and other parking facilities. The Traffic and Accessibility Assessment notes that this will assist in reducing the traffic activity associated with the building, and the associated impact on neighbours’ amenity, as well as satisfying the Secretary’s Environmental Assessment Requirements (SEARS) to encourage the use of alternative transport. This is also in accordance with the SLEP2012, which specifies maximum parking for development, but no minimum provision.

The Traffic and Accessibility Assessment found that the realistic peak hour traffic generation of the Proposal would be 60 to 65 vehicles/hour, distributed to the on-street parking along various roads within Blackfriars Precinct as well as to the three UTS owned public car parks within Broadway Precinct [there are also several other privately owned public car parks available in the area], resulting in thinly spread traffic volumes of not more than 10 vehicles/hour on any one street, significantly less than the general daily variation. As a result the Assessment concluded that there is only a negligible traffic impact arising from this proposed development and

that it will not cause any notable impact upon the operation of overall road network.

The Traffic and Accessibility Assessment also assessed the need for bicycle parking arising out of the Proposal. Using the Sydney DCP 2012 it calculated bicycle parking of 42 spaces for employees and 16 for visitors should be provided. The Assessment noted that UTS already provides bicycle parking and extensive End-of-Trip facilities for the overall campus within Building 10, which is located very nearby on the corner of Broadway and Abercrombie Street, and that this facility would satisfy the provision for bicycle access to the Proposal.

The Traffic and Accessibility Assessment also assessed the need for site servicing. Deliveries to the site utilise the quadrangle space as a shared zone and turning circle for service vehicles. The servicing of the site is to be managed to occur outside peak pedestrian times.

Mitigation Measures – Transport and Accessibility

- The Proponent is to ensure that the building users are provided with access to the existing UTS bicycle parking facilities within Building 10 of the main university campus.
- The subsequent development application (full design of the building) should include a plan for managing deliveries to the site using the shared pedestrian space.

6.10 Contamination

Douglas Partners Pty Ltd prepared a Phase 2 Contamination Assessment for the site for UTS in March 2009. Environmental assessment reports were also prepared by Coffey for the subject site in 1993/1994 in association with earlier Proposals by UTS for childcare (which was approved by Council in 2013) and student housing (which did not proceed to a development application). Both reports are provided at Appendix 14. Supplementary reports were also prepared by Douglas Partners in 2014 in relation to the potential for Acid Sulphate Soils on the site (at Appendix 14) a Site Audit Assessment was completed by Enviroview in 2015 (also at Appendix 14).

The assessments identified past site uses including distillery, industrial (nature unknown) and school. The assessments also identified deep filling beneath the site, containing some elevated concentrations of Heavy Metals, Polycyclic Aromatic Hydrocarbons (PAH), and Total Petroleum Hydrocarbons (TPH). No significant groundwater contamination was reported.

The 2009 report assessed potential contamination for uses including student accommodation, childcare, and student facilities with the laboratory test results assessed against the health based criteria for residential development with accessible soils (childcare centre), and the health based criteria for residential development with minimal soil access (remainder of site). With regard to petroleum hydrocarbons, the NSW EPA Contaminated Sites: Guidelines for Assessing Service Station Sites (1994) threshold concentrations for sensitive land were adopted as the site assessment criteria.

The results of the soil analysis indicate that the majority of organic and inorganic contaminant concentrations in all sampled soils were within the adopted site assessment criteria. No groundwater contamination issues were identified.

Based on the results of the assessment, the reports found that the site can be rendered suitable for the Childcare development (subsequently approved) subject to the preparation and implementation of a remedial action plan (RAP). A remediation method of “cap and contain” was considered the most appropriate

method for the site, together with an Environmental Management Plan for the long term management of the capping system, ensuring its long term integrity and safety for any persons potentially exposed to the capped materials.

It is considered that, on the basis that the assessments found that the site can be rendered suitable for the significantly more sensitive use of childcare, the consent authority can be satisfied that the site can be made suitable for the less sensitive use of educational establishment (university).

Mitigation Measures – Contamination

- Preparation of a Remediation Action Plan for the site in relation to the subsequent stage application (full building design) once the full extent of excavations is known.
- A long-term site management plan is to be prepared at the conclusion of the remediation as required by the Remediation Action Plan and must be implemented.
- The remediation works, validation reporting and long-term site management plan must be reviewed by a NSW EPA Accredited Site Auditor with consideration as to whether the site is suitable for the proposed land use, subject to the compliance with the long-term site management plan.
- Preparation of an Acid Sulphate Soil Management Plan (ASSMP) for the site in relation to the subsequent stage application (full building design) once the full extent of excavations is known.

6.11 Design Excellence

UTS has a strong record of achievement in design excellence in recent years recognised in its new city campus buildings including:

- Dr Chau Chak Wing Building – UTS Business School [CB08] designed by Frank Gehry
- Engineering and IT Building [CB11] designed by Denton Corker Marshall
- Faculty of Science and Graduate School of Health Building [CB07] designed by Durbach Block Jagers with BVN Architecture
- Alumni Green designed by ASPECT Studios

One of UTS's motivations for the staged approach for this Proposal was to deal with planning issues of use, height and floor area ahead of the more detailed design. By establishing a building envelope that sets the maximum parameters for a final building, UTS then intends to undertake an architectural design process to focus on the quality and response of the final building within these parameters. This is because there are a range of different design approaches for a final building within the envelope each with a range of responses to existing built form, adjacent built form, the spatial character of the area and site, the three dimensional form that new development may take, the response to the proportion and articulation of the existing buildings, and the creation of spaces between buildings that are meaningful, well-proportioned, usable and which make an equal contribution to the site as the built forms.

UTS will use the next stage application (building design) to address matters of design excellence and the process (competitive or otherwise) to achieve the best result.

Mitigation Measures – Design Excellence

- Ensure that the building envelope provides space for a range of high quality design outcomes to deliver the building's required area.
- This EIS contains design guidelines in the Architectural Report at Appendix 6 and the Heritage and Visual Considerations Report at Appendix 7 should be used as inputs to the subsequent building design (forming the subsequent stage development application).

Part 7 Consultation

7.1 Agency Consultation

7.1.1 Roads and Maritime Services (RMS)

The RMS has provided their requirements as outlined in the SEARs. These requests have been addressed in the Transport and Accessibility Report at Appendix 13.

7.1.2 City of Sydney Council

UTS met with Council staff from the City of Sydney on 17 August 2015 to discuss the proposed development. The issues discussed included UTS's approaches to heritage, archaeology, landscaping, traffic and access, urban design, floorspace and height. Council staff indicated general support for the staged development application approach and noting that the design quality of the final building would be very important. Council staff raised discussion points around:

- The potential for a competitive design excellence process as part of the next stage application
- The approach to heritage including if there would be an updated CMP [confirmed at the meeting and at Appendix 8], and the approach to the perimeter fence.
- The need for justification under Clause 4.6(3) of the LEP (Exemptions to Development Standards) to address solar access for nearby residential development on Buckland Street and for the UNDA.
- Concern regarding the fit of the final building within the larger envelope, and the need for design and heritage guidelines for the second stage application.

Council staff did not raise any objections to the Proposal at the meeting. Council staff did not provide written feedback from the meeting.

7.1.3 Local Community and Stakeholder Consultation

A consultation process was undertaken over ten days from 31 August to 11 September. A community information letter was prepared and delivered to addresses in close proximity to the site including all addresses on Blackfriars Street and Buckland Street between Blackfriars Street and Broadway. The community was invited to provide feedback by contacting UTS or by attending a briefing regarding the project, which occurred on Friday 11 September at 8.30am. No members of the community attended the briefing. No telephone calls were received by UTS.

Part 8 Compilation of Mitigating Measures

8.1 Environmental Risk Assessment

The Department has requested that the EIS include an environmental risk assessment to identify potential environmental impacts associated with the proposal. The assessment undertaken comprised a qualitative assessment consistent with AS/NZS ISO 31000:2009 *Risk management—Principles and guidelines* (Standards Australia 2009). The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures. Comment on residual risk (the remaining level of risk following implementation of mitigation and management measures) is also provided.

It should be noted that the assessment is not intended to be exhaustive, rather it focuses on key impacts.

Risk comprises the likelihood of an event occurring and the consequences of that event. For the proposal, the following descriptors were adopted for 'likelihood' and 'consequence'.

Table 7. Risk Descriptors

Likelihood:	Consequence:
A Almost certain	1 Widespread irreversible impact
B Likely	2 Extensive but reversible (within 2 years) impact or irreversible local impact
C Possible	3 Local, reversible (within 2 years) impact
D Unlikely	4 Local, reversible, short term (<3 months) impact
E Rare	5 Local, reversible, short term (<1 month) impact

Risk scores for likely and potential impacts were derived using the following risk matrix.

		Likelihood				
		A	B	C	D	E
Consequence	1	High	High	Medium	Low	Very Low
	2	High	High	Medium	Low	Very Low
	3	Medium	Medium	Medium	Low	Very Low
	4	Low	Low	Low	Low	Very Low
	5	Very Low	Very Low	Very Low	Very Low	Very Low

The results of the environmental risk assessment are presented in Table 9. This provides a risk rating prior to any mitigation and a residual risk rating after mitigation. The risk assessment has been based on information available at the time of finalising the EIS.

Table 8. Environmental Risk Assessment

Aspect	Potential impact	Unmitigated Risk			Treatment	Residual Risk		
		L	C	R		L	C	R
Amenity	Adverse winter solar access to open spaces on the site	C	4	L	Stage 2 design to consider opportunities to increase solar access	D	4	L
	Adverse winter solar access to open spaces of the UNDA	C	4	L	Stage 2 design to consider opportunities to increase solar access	D	4	L
	Adverse winter solar access to adjacent residents	C	4	L	Stage 2 design to consider opportunities to increase solar access	D	4	L
Biodiversity	Loss of existing trees on site impacts local habitat	B	3	M	Implement landscape and public domain plan in Stage 2	D	3	L
Heritage	Impacts on existing heritage building curtilages	D	2	L	Continued heritage input into Stage 2 (building design)	D	2	L
Archaeology	Impact on archaeological relics	C	2	M	Archaeological test investigations and continued archaeological input into Stage 2	D	2	L
Transport and Accessibility	Additional demand for on street parking	C	2	M	Implementation of Green Travel Plan (Stage 2).	D	2	L
Contamination	Suitability of the site for the development	B	3	M	Implement RAP	D	4	L
Design Excellence	The development does not achieve design excellence	C	2	M	UTS to establish design guidelines for Stage 2 and appropriate design process	D	2	L
Flooding	Development impacted by major flooding event	C	4	L	Building design (Stage 2) to respond to flood levels	D	5	V
Ecologically sustainable development	Irreversible increase in energy and water usage and waste generation	B	3	M	Final building to comply with UTS environmental guidelines	D	4	L
Construction impacts	Dust, noise and vibrations from construction activities impact adjacent residents and businesses	B	2	H	Implement a construction management plan in accordance with the DECCW <i>Interim Construction Noise Guideline</i> and standard CBD construction hours (Stage 2)	B	4	L
	Traffic impacts during construction	B	3	M	Implementation of Construction Traffic Management Plan (Stage 2)	C	4	L

Key: L = likelihood, C = consequent, R = risk rating

8.2 Compilation of Mitigating Measures

Measures to mitigate the environmental impacts associated with the Proposal throughout this EIS are compiled in the table below. UTS commits to undertaking these mitigation measures during construction and operation of the Proposal.

Table 9. Compilation of Mitigating Measures

Mitigation Measures – Land Use

- No mitigation required.

Mitigation Measures – Master Planning of the Site

- No development control plan is required.

Mitigation Measures – Floor space area

- No mitigation is required.

Mitigation Measures – Height

- No mitigation is required.

Mitigation Measures – Tree Removal

- The subsequent development application (full design of the building) to include a full landscape design based on the concept contained in the Public Domain Report including:
 - Planting new trees on the site as part of a full landscape plan to replace some of the existing planting within the site
 - Planting additional street trees to provide an avenue of planting consistent with the City of Sydney's Street Tree Master Plan
 - Creating one clear and accessible entry to the courtyard using high quality paving, interpretive inlays and feature planting
- Despite the removal of trees on the site being considered acceptable, the subsequent development application (full design of the building) should consider any opportunities for retention of trees of high retention value in the resolution of the design, with any subsequent retention to be in accordance with recommendations of an Arborist (refer to the Arborist Report Section 4.1).

Mitigation Measures – Heritage

- The building is to be contained within the maximum building envelope, which has been designed to achieve an appropriate response to the site's heritage and with appropriate setbacks to respect the curtilage of the site's significant heritage items. Within this envelope, the next stage (building design) should address:
 - Ensuring that the view from the corner of Broadway and Abercrombie Street places the church ridge and spire against the skyline without the building intruding.
 - Locating the greatest height near the northern boundary where it is likely to be behind future adjacent development
 - Considering a streetscape height that is less than the maximum height as illustrated in the project modelling
 - Considering a reduced scale to the frontage of the heritage buildings which may result from considerations of either height or setback distances or both as well as overall building form
 - Considering a partial basement construction to allow more flexibility in the design within the envelope and reduced building massing in parts of the design.
- The subsequent development application (full building design) should be in accordance with the Conservation Management Plan for the site.

Mitigation Measures – Archaeology

- Undertake archaeological testing to inform the subsequent stage design and to determine where the archaeology may survive within the site and the degree to which it survives. The results of this testing to be written up in a report outlining opportunities for conservation *in situ*, development and interpretation.
- Avoid impacts as much as possible on the State significant archaeology of the site.

Table 9. Compilation of Mitigating Measures

- The need for an approval for testing will depend upon the stage of the approval process. It is possible that archaeological testing may be able to be completed under a SSD approval through Planning or it may require a S140/S139(4) application to the NSW Heritage Division to be approved. In either case it will require an Archaeological Research Design to be written outlining which areas will be tested and the purpose of the testing.
- Conservation of State significant archaeology should be a key outcome for this development.
- Opportunities for interpretation should be undertaken within the proposed new building and in the landscaping.
- An interpretation Strategy should be undertaken to achieve the best heritage and interpretation outcome.

Mitigation Measures – Aboriginal Archaeology

- Should any Aboriginal objects be discovered during future ground disturbance works at the site, then these activities within the vicinity of the find location will be required to stop and the OEH will need to be informed of the discovery in accordance with Section 91 of the NPW Act.

Mitigation Measures – Visual Impact

- No additional mitigation required.

Mitigation Measures – Sun Access

- Notwithstanding that the overshadowing impacts of the envelope are considered acceptable, the subsequent development application (full design of the building) should consider opportunities for the design of the subsequent building to further reduce shadow impacts of the Proposal.

Mitigation Measures – Transport and Accessibility

- The Proponent is to ensure that the building users are provided with access to the existing UTS bicycle parking facilities within Building 10 of the main university campus.
- The subsequent development application (full design of the building) should include a plan for managing deliveries to the site using the shared pedestrian space.

Mitigation Measures – Contamination

- Preparation of a Remediation Action Plan for the site in relation to the subsequent stage application (full building design) once the full extent of excavations is known.
- A long-term site management plan is to be prepared at the conclusion of the remediation as required by the Remediation Action Plan and must be implemented.
- The remediation works, validation reporting and long-term site management plan must be reviewed by a NSW EPA Accredited Site Auditor with consideration as to whether the site is suitable for the proposed land use, subject to the compliance with the long-term site management plan.
- Preparation of an Acid Sulphate Soil Management Plan (ASSMP) for the site in relation to the subsequent stage application (full building design) once the full extent of excavations is known.

Mitigation Measures – Design Excellence

- Ensure that the building envelope provides space for a range of high quality design outcomes to deliver the building's required area.
- This EIS contains design guidelines in the Architectural Report at Appendix 6 and the Heritage and Visual Considerations Report at Appendix 7 should be used as inputs to the building design (forming the subsequent stage development application).

Part 9 Justification of the Proposal

9.1 Justification and Benefits

Sydney, NSW and Australia's international competitiveness and future growth relies on growing the innovation economy and the digital sector. The NSW government has recognised this through their Digital Economy Industry Action Plan which states *a strong and vibrant digital economy will be an essential factor in helping to... drive economic growth in NSW.*

UTS's vision is to create a unique, innovation driven industry hub at its Blackfriars precinct, leveraging off its position at the national epicentre of the creative digital industries. UTS needs to expand its connections with industry and its research capacity and requires a space of sufficient capacity and quality that will attract quality industry partners. The key drivers include new knowledge, new jobs and investment into the City and the State. The key investment is in a new 6,225 square metre building that will house research partners working collaboratively with the university.

This important facility will encourage new research and innovation in the digital economy, as well as support the creation of new jobs in the creative industries sector in the heart of Sydney's global economic arc. This is well aligned to the Metropolitan Strategy's support of the City's global competitive tertiary education sector, supporting innovation, strengthening the educational cluster around Broadway, and creating jobs close to existing housing and transportation.

UTS receives regular requests for space from research partners. The University's vision is that the Blackfriars Precinct would allow it to partner with research entities. This would expand and complement the University's existing collaborations including the Centre for Health Economics Research and Evaluation (CHERE) housed in building CB05D and the Institute for sustainable Futures (ISF) in building CB10. The new building will complement an existing building (CB22) housing the UTS Advanced Analytics Institute. The Institute's work touches many sectors of the new digital economy. There are also plans in place to collocate a start-up incubator with the Institute.

Blackfriars will provide a hub for leading academics and industry partners to create a culture of creativity, innovation and collaboration. The project will boost Sydney and Australia's innovation skills, attracting investment and creating jobs in the digital economy and creative industries. The proposed building area of 6,225 square metres is considered to be a minimum in order to create a critical mass of research partnership organisations working collaboratively while still allowing flexibility about uptake of space as research projects come online.

It has been estimated that the project will create 35 full time equivalent jobs for the period of construction and 300 permanent full time equivalent new innovation research jobs. While most sectors have a multiplier effect, the innovation sector has the largest multiplier of all. Research by PwC based on Enrico Moretti's *The New Geography of Jobs*, 2011, has identified that four new local jobs were created for every one new high-tech job in general scientific research/innovation hub. Accordingly the project is estimated to generate up to 1,200 additional local jobs in the Central Sydney area.

9.2 Alternatives

The project cannot be accommodated on the main City Campus due to the lack of available space, and because the University's experience is that collaborative industry research activities perform best when they have proximity to academics while at the same time having some separation from teaching spaces (eg The Institute for Sustainable Futures, Centre for Health Economics Research and Evaluation). Industry partners require a location close to a commercial environment, and 'salt and peppering' the new hub throughout the new campus would not succeed.

The University considers that the Blackfriars site is the only option for the creation of this facility currently available. The scale at Blackfriars also ensures an appropriate campus feel for the precinct, which is important to the identity of the facility and the success of the project. No alternative sites for the Proposal have been identified. The likelihood of finding a suitable site at a reasonable price is also highly problematic in the current Sydney property market, which is at record highs. The prolonged lead time involved in finding and procuring another site would likely mean that the Proposal would be delayed for a significant period of time and may never be built. This would result in a loss of public benefit arising out of the loss of the Proposal's jobs, multiplier jobs, revenue, and research and development in priority industries for the City and the State. There is also a very real risk that the opportunity for such a centre could be lost to other institutions including competitor institutions outside NSW.

9.3 Ecologically Sustainable Development

The UTS Environmental Sustainability Policy includes the Proponent's commitment to ensure that its institutional practices emphasize "that UTS demonstrates and promotes the achievement of sustainable futures embracing ecological, economic and social aspects of human existence". The UTS Environmental Sustainability Policy can be viewed at www.gsu.uts.edu.au/policies/sustainability.html. The following table sets out a response to the principles of ecologically sustainable development justifying the carrying out of the development

Table 10. Principles of ecologically sustainable development

Principles of ecologically sustainable development	Response
the precautionary principle , namely, that 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. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequences of various options,	The Proposal does not cause threats of serious or irreversible environmental damage.
inter-generational equity , namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations	The Proposal maintains the health, diversity and productivity of the environment for the benefit of future generations.
conservation of biological diversity and ecological integrity , namely, that conservation of biological diversity and ecological integrity should be a	The Proposal has no significant impact on biological diversity and ecological integrity.

Principles of ecologically sustainable development	Response
fundamental consideration	
improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as: (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.	The full extent of sustainability features to be incorporated will be determined at the next stage of the development. The architectural report at Appendix 6 describes the environmental opportunities, sustainability consumption targets, and water sensitive design that the subsequent stage will address.

Conclusion

This EIS has been prepared to consider the environmental impacts of a proposed maximum envelope (including height and floorspace) for a new educational establishment (a facility for university research in partnership with commercial industry partners) on the UTS Blackfriars site at 4-12 Buckland Street, Chippendale NSW. The Proposal is staged, and a subsequent application will seek approval for the design of the building.

This assessment has addressed the issues required in the Secretary's Environmental Assessment Requirements issued on 18 November 2014 and in accordance with Part 4.1 of the Act and Schedule 2 Part 3 of the Regulations.

The justification for the Proposal includes:

- The Proposal demonstrates a high degree of consistency with the relevant strategic policy, environmental instruments and other matters identified in the Secretary's Environmental Assessment Requirements
- The Proposal will result in minimal environmental impacts, all of which can be mitigated by implementing the mitigation measures identified in Part 9 of this EIS
- The Proposal is highly in keeping with its context and with surrounding development and with acceptable impacts on its surrounds
- The Proposal encourages new research and innovation in the digital economy, as well as support the creation of new jobs in the creative industries sector in the heart of Sydney's global economic arc in accordance with key State and metropolitan policy
- The Proposal's departures from development standards are fully justified and supported by relevant requests to vary the standards in accordance with Clause 4.6 of the SLEP2012
- The existing transport infrastructure supports the proposed development which minimises the use of private vehicles and encourages the use of public transport
- The Proposal will create 300 permanent full time equivalent jobs, with an anticipated multiplier of four, leading to the creation of up to 1,200 local jobs in the central Sydney economy

It is considered that the Proposal has substantial merits, and it is requested that the Minister approve the Proposal under Section 89D of the Act subject to the mitigation measures identified in this EIS.