University of Technology Sydney

# State Significant Development SSD9571
# Stage 2 Development Application
# Blackfriars Industry Hub
# 4-12 Buckland Street, Chippendale

## Environmental Impact Statement

October 2019

UTS

URBANAC

*Cover Image: Artists Impression of proposed Blackfriars Research Building*
*Source: Tonkin Zulaikha Greer Architects*

# Abbreviations

| | |
|---|---|
| Council | Council of the City of Sydney |
| SEPP | State Environmental Planning Policy |
| Education SEPP | SEPP (Educational Establishments and Child Care Facilities) 2017 |
| SRD SEPP | SEPP (State and Regional Development) 2011 |
| EIS | Environmental Impact Statement |
| SEARs | Secretary's Environmental Assessment Requirements |
| LEP | Sydney Local Environment Plan 2012 |
| The Act | Environmental Planning and Assessment Act 1979 |
| The Department | The Department of Planning Industry and Environment |
| The Proponent | University of Technology Sydney |
| The Proposal | The proposed development, SSD9751, the subject of this EIS |
| UNDA | University of Natre Dame Australia |
| UTS | University of Technology Sydney |

## Copyright



## Disclaimer



## Document control

| Revision | Date | Details | Author | |
|---|---|---|---|---|
| | | | Name, Position | Signoff |
| 01 | 11/09/2018 | Client and project team feedback | AC, Director | AC |
| 02 | 26/09/2019 | Issued to DoPIE for adequacy review | AC, Director | AC |
| 03 | 18/10/2019 | Final | AC, Director | AC |
| File: Macintosh HD:Users:alan:Documents:Urbanac:Clients:UTS:Blackfriars:Post Competition:Applications:Phase 5 - Stage 2 DA EIS:UTS Blackfriars Stage 2 EIS 01.docx | | | | |

# About this report

This EIS contains an assessment of the environmental impact of the proposed development set out below dealing with the matters referred to in Schedule 2 of the Regulations and was prepared by Alan Cadogan of Urbanac Pty Ltd for UTS.

**The proponent:** The Proponent is the University of Technology Sydney. The person responsible is:

- Glen Rabbitt, Director FMO, UTS

**The subject land:** The subject land is known as the Blackfriars Precinct is at 4-12 Buckland Street Chippendale, and comprises multiple lots including Lot 1 in DP832799, Lots 10-16, 18-20, 2-25 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 all owned by UTS.

***Proposed development:*** The proposal is a Crown State significant development application under Part 4 of the Act for:

- Site preparation works, including tree removal, demolition and clearance of buildings CB23 (former childcare building) and CB24 (demountable classroom)
- Removal of a low-significance terrace on the northern side of CB25 and minor alterations to an adjacent window to provide egress
- Excavation and site remediation, including archaeological excavations
- Construction of a five storey building plus rooftop plant and two basement levels, with a gross floor area of 6,000m$^2$ for educational establishment (research and development) use, including bicycle parking, signage, augmentation of and additions to utilities, and access arrangements;
- Associated landscaping and public domain works including conservation works to the heritage palisade fence, which is retained, and public art.

**The Capital Investment Value** of the proposed development has been estimated by a quantity surveyor at $42,404,384 and the estimated cost of works at $46,644,822. The Proposal will create 128 FTE construction jobs and 498 FTE operational jobs.

***State Significant Development:*** The proposed development is declared State Significant in accordance with Section 4.36 of the Act and Clause 8 of the SRD SEPP and *Schedule 1 15 Educational establishments* being development *for the purpose of an educational establishment that has a capital investment value of more than $30 million*, and is not permissible without development consent under Sydney LEP 2012.

***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.

***Disclosure of political donations and gifts:*** In accordance with Section 10.4 of the Act *Disclosure of political donations and gifts* I declare that I have made no reportable political donations to anyone in the last 2 years.

Alan Cadogan
Master of Heritage Conservation (University of Sydney), Bachelor of Architecture (UTS)
Director, Urbanac Pty Ltd, ABN 761444997, 4/18 Hornsey St, Rozelle NSW 2039

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# 1 Overview

The Secretary's Environmental Assessment Requirements (SEARs) for the Proposal were issued on 13 September 2018. A copy is included in the attachments. The table below summarises the SEARs and identifies where in this EIS they are addressed.

*Table 1. Secretary's Environmental Assessment Requirements*

| *SEARS issues to be addressed* | *Where issue is addressed* |
|---|---|
| 1. Statutory and Strategic Context<br>– Biodiversity Conservation Act 2016<br>– SEPP (State & Regional Development) 2011<br>– SEPP (Infrastructure 2007)<br>– SEPP No.64 – Advertising and Signage<br>– SEPP No.55 – Remediation of Land<br>– SEPP No.33 – Hazardous and Offensive Development<br>– SEPP (Educational Establishments and Child Care Facilities) 2017<br>– Draft SEPP (Remediation of Land)<br>– Draft SEPP (Environment)<br>– Sydney Local Environmental Plan 2012<br>Permissibility<br>Applicable Development Standards<br>Consistency with Approved Concept Development SSD6746 | Section 0<br><br>Section 4.2.10<br>Section 4.2.10 and 4.4<br><br>Section 4.6 and Table 6 |
| 2. Policies<br>– NSW State Priorities<br>– Greater Sydney Region Plan<br>– Eastern City District Plan<br>– Future Transport Strategy 2056<br>– State Infrastructure Strategy 2018-2038<br>– CPTED Principles<br>– Healthy Urban Development Checklist<br>– Better Placed | Section 4.1 |
| 3. Built Form and Urban Design | Section 6.1 and Attachments 11, 12, 16-19, 26-27, 29-32 |
| 4. Staging | Section 3.5 and 6.2 |
| 5. Environmental Amenity | Section 6.3 and Attachment 28 |
| 6. Transport and Accessibility | Section 6.4 and Attachments 42-44 |
| 7. Ecologically Sustainable Development (ESD) | Section 6.5 and Attachment 20 |
| 8. Heritage<br>– Heritage Impact Statement<br>– Archaeology | <br>Section 6.6 and Attachments 22-25<br>Section 6.6 and Attachment 10 |
| 9. Aboriginal Heritage | Section 6.7 and Attachment 5 |
| 10. Noise and Vibration | Section 6.8 and Attachment 8 |
| 11. Contamination | Section 6.9 and Attachments 35, 47 |
| 12. Utilities | Section 6.10 and Attachment 14-15, 38-39 |
| 13. Contributions | Section 4.5 and 6.11 |
| 14. Drainage | Section 6.12 and Attachments 14-15 |
| 15. Flooding | Section 6.13 and Attachments 14-15 |
| 16. Biodiversity Assessment | Section 6.14 and Attachment 13 |
| 17. Sediment Erosion and Dust Controls | Section 6.15 and Attachments 14-15 |

| *Table 1. Secretary's Environmental Assessment Requirements* | |
|---|---|
| *SEARS issues to be addressed* | *Where issue is addressed* |
| 18. Waste | Section 6.16 and Attachment 46 |
| 19. Construction Hours | Section 6.17 |
| 20. Architectural Drawings | |
| – Architectural Drawings | Attachment 12 |
| – Site Survey Plan | Attachment 40 |
| – Site Analysis Plan | Attachment 12c |
| – Sediment and Erosion Control Plan | Attachment 14 |
| – Shadow Diagrams | Attachment 12i |
| – View Analysis | Sections 5.1.8, 5.3 and Attachment 12k |
| – Landscape Architectural Drawings | Attachment 27 |
| – Design Report | Attachment 11 |
| – Geotechnical and Structural Report | Attachment 41 |
| – Accessibility Report | Attachment 6 |
| – Arborist Report | Attachment 9 |
| – Schedule of Materials and Finishes | Attachment 12j |
| 21. Consultation | Section 5 |
| 22. Environmental Risk Assessment and Mitigation | Section 8 |

# 2 The Site

## 2.1 Site Description

The proposal is located at the northern end of the UTS Blackfriars Precinct at 4-12 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.

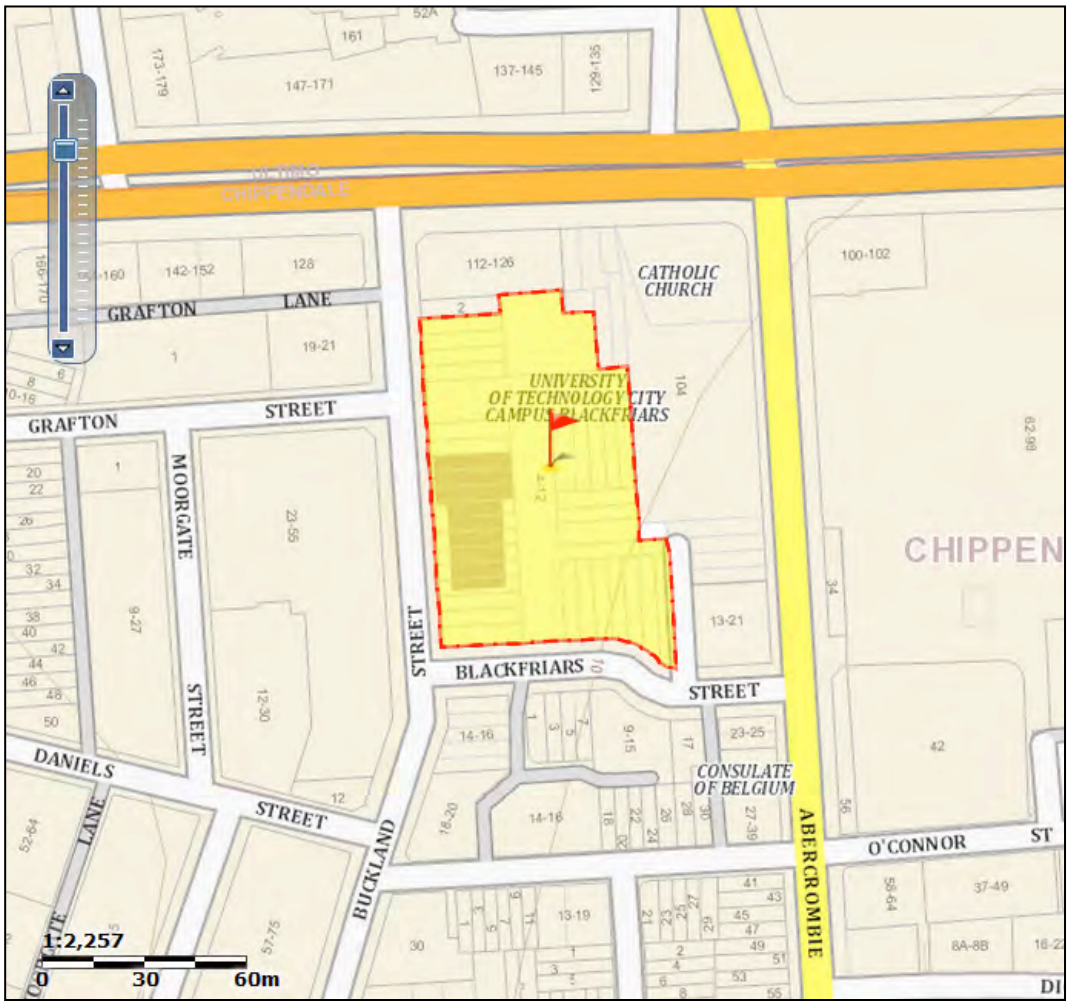


*Figure 1 Site Location*

*Source: NSW Government Spatial Services sixmaps*


*Figure 2. Site Location – Aerial Photograph*
*Source: NSW Government Spatial Services sixmaps*

## 2.2 Surrounding Development

The site contains five buildings as well as a number of smaller ancillary structures such as fencing, carparking and other minor features. The five main buildings are:

- CB28: The 2018 UTS childcare Centre incorporating CB27: the 1883 two-storey former Headmaster's Residence
- CB22: the 1883 two-storey former Infants and Girls Primary School, currently accommodating the Advanced Analytics Institute research partner (UTS CB22) and Connected Intelligence Centre
- CB23: A single-storey c1994 masonry and timber building formerly used as a childcare centre (proposed to be demolished)
- CB24: A single storey timber c1920 portable former classroom building (proposed to be demolished)
- CB25: The 1883 two-storey former Boys Primary School, currently accommodating EnergyLab and the Advanced Analytics Institute research partners.

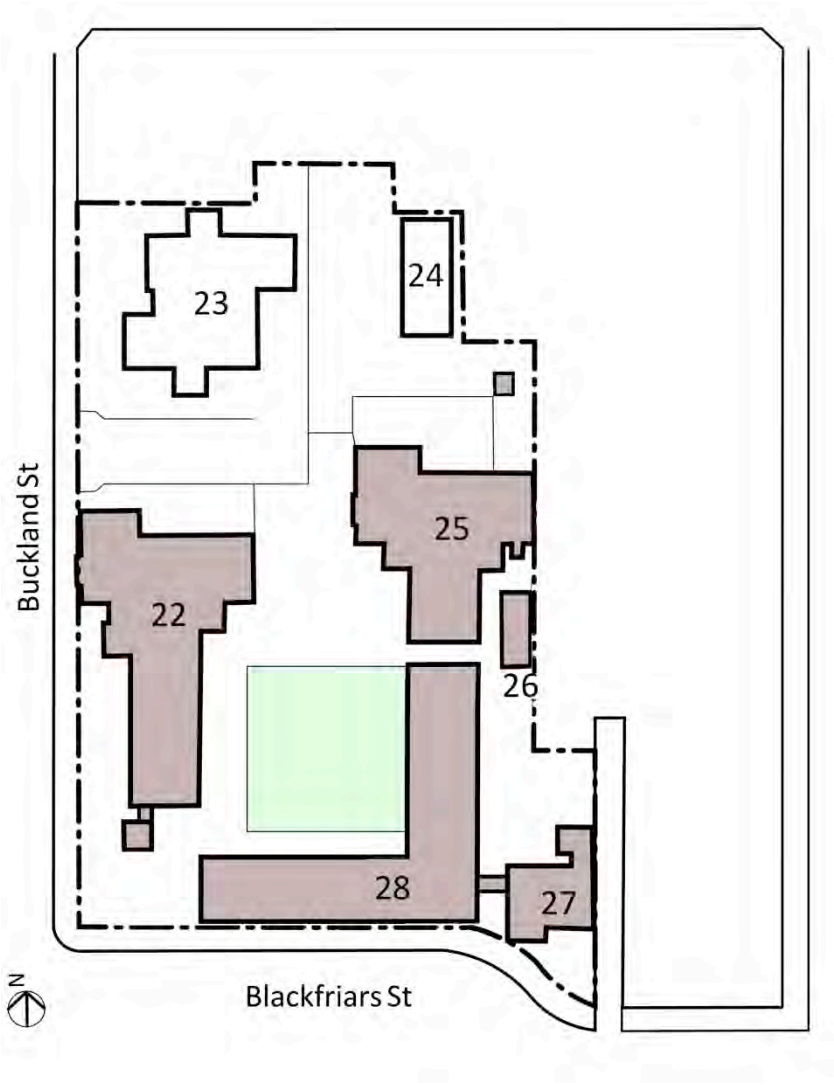


*Figure 3. Site Diagram*

Since the approval of the Concept Development SSD6467 on 11 April 2017 in a number of changes have occurred on the site. The key change is the construction of the UTS Blackfriars Childcare Centre, identified as Building CB28. This new one storey facility was approved in 2013 by the City of Sydney Council at the southern end of the site, and was completed in 2017. Fronting Blackfriars Street, the centre provides 84 places, with a floor area of 820 square metres and outdoor play areas occupying the courtyard between the heritage buildings. The approved development also included:

- demolition of Buildings CB21 a portable classroom and CB26 a toilet block
- adaptive reuse of Building CB27
- construction of a new substation north of the former Boys School building with associated high voltage underground conduiting
- construction of a permanent emergency services vehicle access into the site from Buckland Street north of the former Girls Schools building including a new permanent opening in the heritage fence
- planting of numerous trees on the site, including street trees on the footpaths adjacent to the new childcare facility

The former childcare centre building fronting Buckland Street north of the former Girls School is not currently occupied and this building and its associated outdoor structures are proposed to be demolished as part of Stage 2.

## 2.3 Surrounding area

University of Notre Dame Australia, and the St Benedict's Catholic church primarily occupy the remainder of the Blackfriars Precinct block.

The surrounding Chippendale area is in a state of transition, with warehousing, offices and creative industries, and increasing residential development changing the nature of the area.

Further to the East is the CUB development site with much bulk and scale including high-rise towers approved by the Department and currently nearing completion.

To the south and west 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.

To the northeast the main UTS campus, which has undergone significant redevelopment in recent years the most recent of which is the UTS Central building on the corner of Broadway and Jones Street completed in September 2019, and representing the last major new building of the UTS City Campus Broadway Precinct Concept Plan (BPCP).

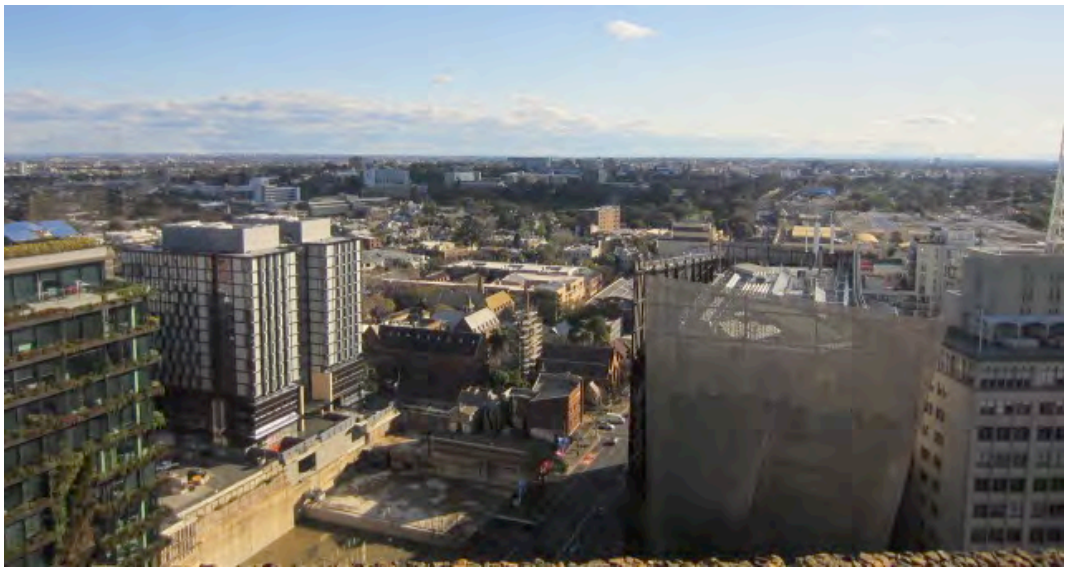

*Figure 4. View towards the site from UTS Tower in 2017*

*The view shows 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. This view of the site is now completely obscured by the new Central Park Development towers on the corner of Abercrombie Street and Broadway and accommodating the Four Seasons Hotel, and the UTS Graduate School of Health.*

# 3 The Proposed Development

## 3.1 Overview of Proposed Development

The Proposal is located at the northern end of the Blackfriars Precinct site and will be the final development on Blackfriars Precinct for the foreseeable future having utilised all of the site's available floorspace. The proposed building is consistent with the Stage 1 Concept Development approval (as modified) and comprises:

- Site preparation works, including tree removal, demolition and clearance of buildings CB23 (former childcare building) and CB24 (demountable classroom)
- Removal of a low-significance terrace on the northern side of building CB25 and minor alterations to an adjacent window to provide egress
- Excavation and site remediation, including archaeological excavations
- Construction of a five storey building plus rooftop plant and two basement levels, with a gross floor area of 6,000m$^2$ for educational establishment and commercial use, including bicycle parking, signage, augmentation of and additions to utilities, and access arrangements;
- Associated landscaping and public domain works including conservation works to the heritage palisade fence, which is retained, and public art.

*Table 2. Proposal Overview – Key Metrics*

| Aspect | Comment |
|---|---|
| Use | Educational Establishment and Commercial |
| Floorspace | 6,000m$^2$ Gross Floor Area (LEP definition) |
| Height | Maximum building height of RL30.77 to the top of the plant |
| Basement | 2 full basements |
| Access and servicing | Via Buckland Street |
| Carparking | Nil |
| Bicycle parking | 28 staff (Class 2) and 16 visitor (Class 3) bike spaces<br>End of Trip Facility including 28 lockers, 3 showers and a unisex changing room |

## 3.2 Development Objective

UTS 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 6,000 square metre building, the Blackfriars Industry Hub to house UTS and its research partners. The facility will be a new building slated 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 Industry Hub 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 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

The Proposal delivers key space contributing to the implementation of UTS's new Research Strategy that promotes collaboration with industry partners and overseas institutions and includes significant increases in research student numbers. The University also needs an increased student population base to be competitive in the international research field. Apart from increasing international rankings a strong research performance also influences private sector and community investment and contributes to the university's long-term financial stability.

The proposal builds on the legacy of the historically significant 1883 Blackfriars School precinct, complements the new Childcare Centre building and further strengthens the University's brand as a young, innovative and international institution.

## 3.3 The Proposed Development

The UTS Blackfriars Precinct Research Building is a purpose built, contemporary Industry/innovation hub, future proofed for continual evolution and change.

### 3.3.1 Use

The Proposal's use is a mix of Educational Establishment and Commercial, a result of the unique blend of university research with industry working in collaboration. This is consistent with the use approved by Concept Development Approval SSD6746 (which also allowed for ancillary retail).

### 3.3.2 Building height and envelope

The maximum height of the proposed building is RL 30.77 AHD in accordance with Concept Development Approval SSD6746.

Even though the maximum height complies with Concept Development Approval SSD6746, as it is more than provided for in the development standards of the LEP a written request to vary the development standard in accordance with Clause 4.6 is included in the attachments to this EIS.


*Figure 5. Site Sections showing the approved envelope outline in red*
*Source: TZG Architectural Drawing DA05*

### 3.3.3 Gross Floor Area

The Proposal provides a total gross floor area of 6,000m$^2$ in accordance with Concept Development Approval SSD6746.

Even though the gross floor area complies with Concept Development Approval SSD6746, as it is more than provided for in the development standards of the LEP a written request to vary the development standard in accordance with Clause 4.6 is included in the attachments to this EIS.

Floor area calculations are shown on Architectural Drawing DA16 in the attachments to this EIS

### 3.3.4 Floorplates

Within the overall floor area the floorplan and façade system have been organised taking into account well established research requirements and inevitable building evolution. Research could include works in technological, social sciences, artificial intelligence or science fields. Therefore, the floorplates have been kept as flexible and adaptive as possible.

Research requires both solitude for introspective thinking and collaborative spaces for collective thought and collegiate testing. The floor plan accordingly can provide more communal flexible spaces at its centre, close to the core, with more private spaces at the eastern and western extremities.

The floor plate is articulated to provide maximum daylight and views, reinforcing a wellness approach to the work environment. Over 70% of the area is within 6m of the facade, providing maximum daylight and reducing lighting energy. Views to the south, featuring the detailed architecture of the old school, will be a defining feature of the interiors.

### 3.3.5 Car Parking

The Proposal does not include any ancillary car parking.

### 3.3.6 Bicycle Parking

The Proposal provides 28 staff (Class 2) and 16 visitor (Class 3) bike spaces, along with an End of Trip Facility including 28 lockers, 3 showers and a unisex changing room.

### 3.3.7 Demolitions

The Proposal seeks consent to demolish Building CB23 (former childcare building) and CB24 (demountable classroom) in accordance with Concept Development Approval SSD6746.

The Proposal seeks consent for the partial demolition/removal of a low-significance terrace on the northern side of Building CB25 and minor alterations to an adjacent window to provide egress. This minor demolition is needed in order to provide the required (though infrequent) access for Ausgrid vehicles to access the substation located in the east of the site. A heritage assessment of these proposed minor alterations has been prepared by Paul Davies Pty Ltd and is located in the attachments to this EIS. The assessment has not identified any significant heritage impacts as the terrace is a later addition of low significant and the impact of the conversion of an existing window opening into a door for egress reasons is considered minimal impact especially taking into account this is not the primary frontage of the building.

These works are documented in Architectural Drawing DA34

### 3.3.8 Excavation

The Proposal includes excavation to provide for 2 full basements as well as for structure including perimeter piling.

### 3.3.9 Heritage Palisade Fence

The Proposal seeks consent for the conservation of the site's perimeter heritage palisade fence as set out in Architectural Drawing DA36 and in Heritage Drawings A01-A05 in the attachments to this EIS and in particular in accordance with the methodology set out in Heritage Drawing A01.

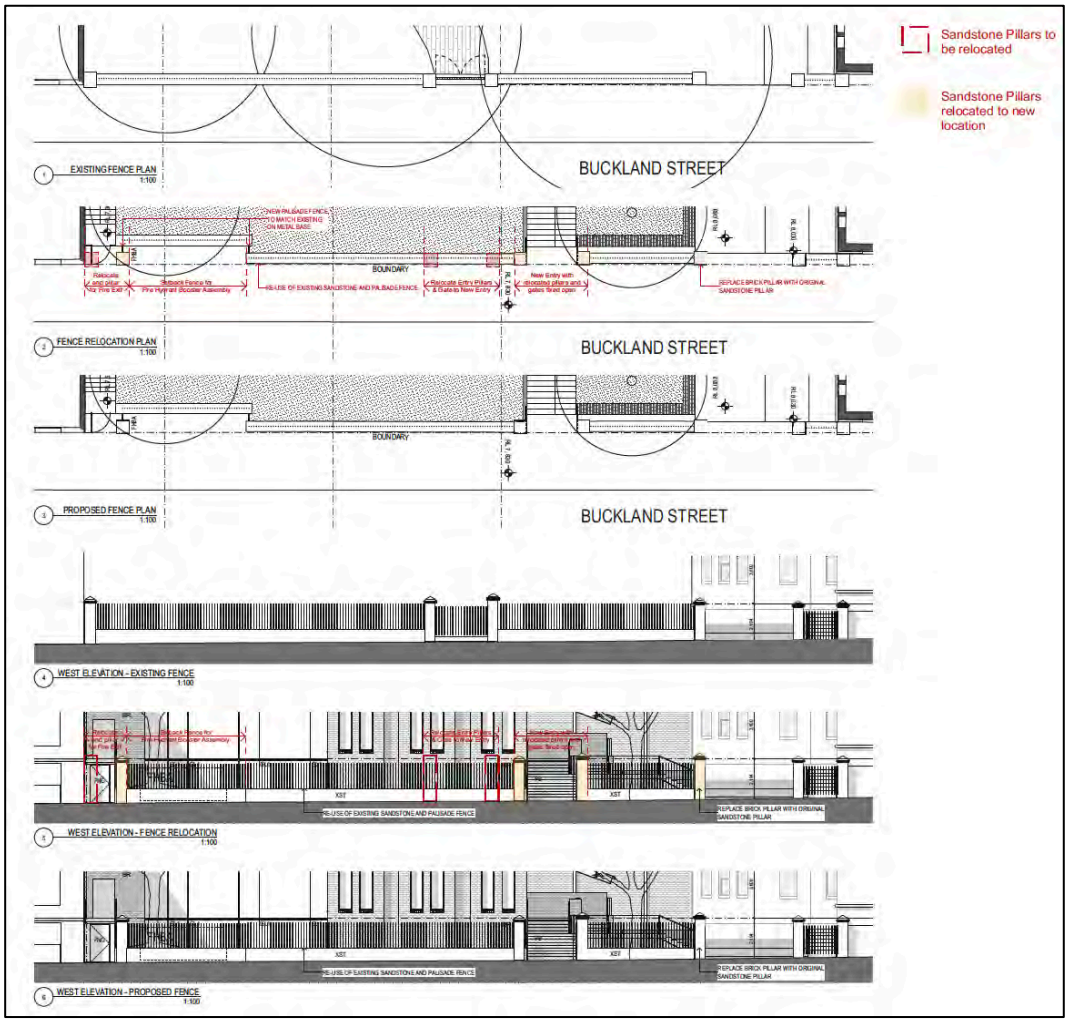


*Figure 6. Heritage Fence Works*

*Source: TZG Architectural Drawing DA36*

### 3.3.10 Removal of trees

The Proposal seeks consent to undertake the removal of the following trees already approved for removal by Concept Development Approval SSD6746:

- T33, T34, T35, T39, T40, T41, T43, T45, T50, T51, T52, T53, T53a and T54, as identified in the Arborist Report in the attachments to this EIS.

### 3.3.11 Landscaping

The Proposal provides new landscaping treatments that will retain the open space landscaped characteristics of the site. This is fully described in the Landscape Design Report prepared by James Mather Delaney Design Pty Ltd Landscape Architects, and the Design Report by Tonkin Zulaikha Greer Architects, both included in the attachments to this EIS.

The design has considered relationships between the open spaces on the site have with each other, with the street, and with the heritage buildings that frame them and proposed landscape treatments to enhance the amenity of these spaces and the setting of the site's significant heritage buildings.

Despite the removal of trees noted above, a key feature of the landscape design includes six new advanced replacement trees, with two located on the Buckland Street frontage and four within the courtyard, each capable of reaching a mature height of at least 12-14m, and with a 400L pot size and 4-5m height when planted. The deciduous species Liriodendron, which attains a mature height of 12-14m, has an elegant vertical habitat, a yellow green leaf colour and an interesting leaf shape that sits well with both the heritage character and the urban context is proposed for these six trees.

Landscaping of the Buckland Street and Blackfriars Street corner of the site, which contains a mature *Camphor Laurel* tree (to be retained), and which was outside the scope of the 2015 Childcare Development Application, is also included in the application in order to complete landscaping of the entire site and to bring the landscaping of the overall Blackfriars Precinct into harmony.

Together it is anticipated that canopy coverage of proposed tree planting across the site, including the proposed planting and the recently developed childcare courtyard planting, will reach 21% within 10 years. This figure meets and exceeds the 15% recommended canopy coverage target for Sydney CBD stated in City of Sydney Urban Forest Strategy, 2013. Accordingly the Department can be confident that the Proposal will retain the open space landscaped characteristics of the site.

### 3.3.12 Public Art

The Proposal includes a uniquely integrated environmental artwork into the transparent glass roof façade of the building. "*Rain Falls*" celebrates rainfall both as a naturally occurring event and as rainwater is harvested from the site and recirculated as a kinetic water artwork, providing evaporative cooling to enhance the building sustainability performance. Full details are provided in the Public Art Strategy and Artwork Report in the attachments to this EIS.

### 3.3.13 Operations

The Operational Plan of Management prepared by UTS FMO addresses the ongoing operations of the Proposal including:

- Hours of operation
- Use of the building outside standard hours
- Use of the courtyard space
- Use of the Level 3 Terrace
- Building Servicing and Access

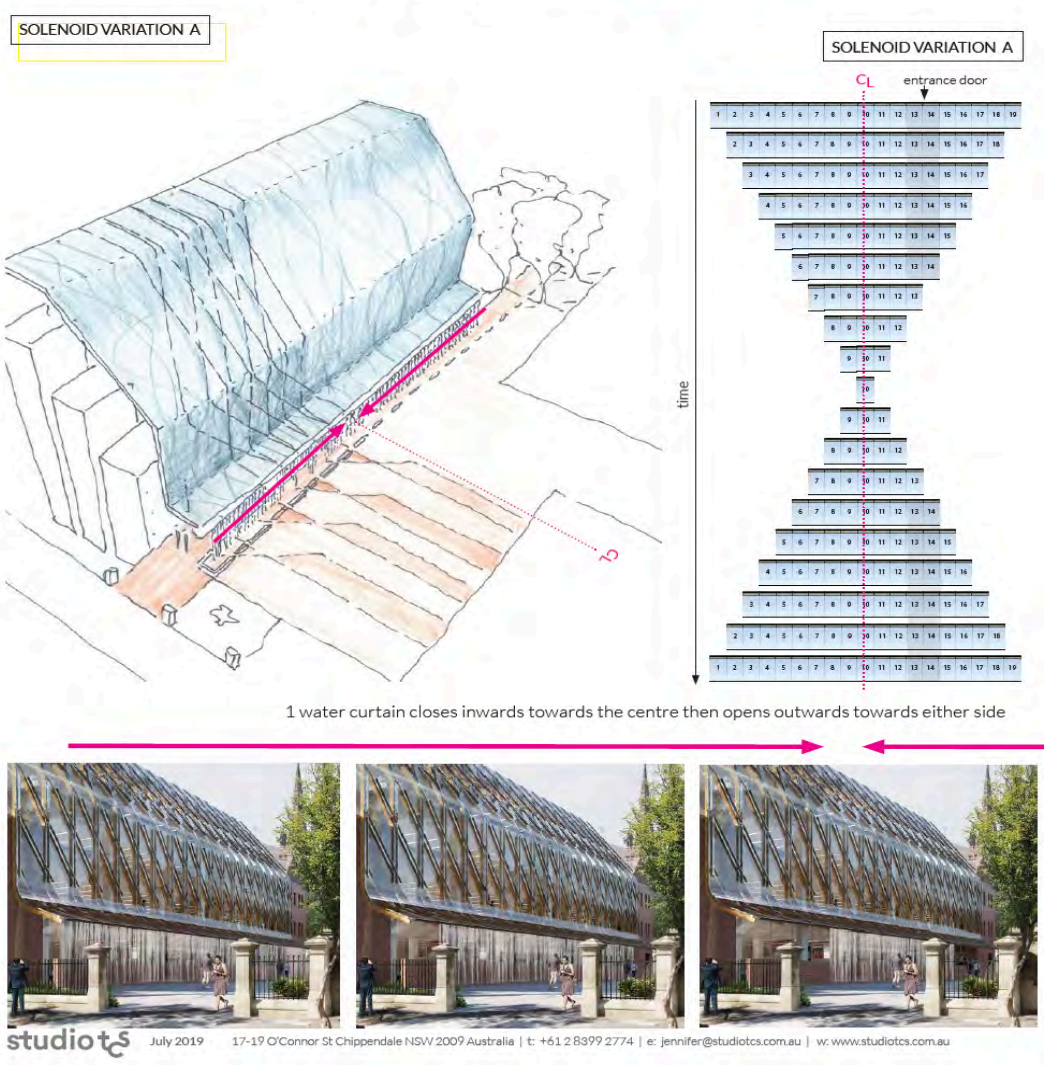


*Figure 7. "Rain Falls" – Diagram of Option 1 from the Artwork Report*
*Source: studio tcs*

## 3.4 Staging

The Proposal is not staged – construction is proposed to be undertaken as one phase. Within this phase there is a natural sequence to construction, which will involve the following activities, each potentially undertaken by separate contractors, in order:

a) demolitions and tree removal
b) full archaeological excavation
c) excavations and remediation
d) construction.

## 3.5 Future Development on the Blackfriars Site

The Proposal represents the final development on the Blackfriars Site for the foreseeable future. No further development is envisaged or permissible under the development standards applying to the site. The only development likely to occur on the site will be minor internal fitout works responding to changes in the research program accommodated by the facility from time to time, and ongoing periodic maintenance of landscaping and the site's heritage buildings to ensure they are protected and cared for in perpetuity,

# 4 Environmental Planning Context

## 4.1 Policy Context

### 4.1.1 NSW State Priorities

The NSW government has 18 official State Priorities to grow the economy, deliver infrastructure, protect the vulnerable, and improve health, education and public services across NSW. These priorities set the agenda for the NSW Government Sector over the coming years. The table below lists the priorities and, where applicable, how the Proposal aligns with or contributes to them.

*Table 3. Alignment with State priorities*

| *State priorities* | *Proposal's alignment and/or contribution* |
|---|---|
| Making it easier to start a business | • Not relevant to the Proposal |
| Encouraging business investment | • Supports industry partnerships with UTS |
| Boosting apprenticeships | • The Proposal's construction can provide opportunities for apprenticeships |
| Accelerating major project assessment | • The Proposal is a major project |
| Increasing housing supply | • Not relevant to the Proposal |
| Protecting our credit rating | • Not relevant to the Proposal |
| Delivering strong budgets | • Not relevant to the Proposal |
| Improving Aboriginal education outcomes | • Provides pathways to university education for people from diverse cultural backgrounds |
| Transitioning to the National Disability Insurance Scheme | • Not relevant to the Proposal |
| Better Government digital services | • Not relevant to the Proposal |
| Cutting wait times on planned surgeries | • Not relevant to the Proposal |
| Increasing cultural participation | • Not relevant to the Proposal |
| Ensuring on-time running of public transport | • Locates employment and education services in close proximity to public transport |
| Creating sustainable social housing | • Not relevant to the Proposal |
| Reducing violent crime | • Not relevant to the Proposal |
| Reducing adult re-offending | • Not relevant to the Proposal |
| Reducing road fatalities | • Not relevant to the Proposal |
| Improving road travel reliability | • Locates employment and education services in close proximity to public transport |

In 2019 New South Wales Premier Gladys Berejiklian set 14 new Premier's Priorities that aim to address community challenges and improve quality of life for all citizens. The table below lists the Premier's priorities and, where applicable, how the Proposal aligns with or contributes to them.

| *Table 4. Alignment with Premier's priorities* | |
|---|---|
| *Premier's priorities* | *Proposal's alignment* |
| **Bumping up education results for children:** Increase the proportion of public school students in the top two NAPLAN bands (or equivalent) for literacy and numeracy by 15% by 2023, including through a state-wide rollout of Bump it Up. | • Not relevant to the Proposal |
| **Increase the number of Aboriginal young people reaching their learning potential:** Increase the proportion of Aboriginal students attaining Year 12 by 50% by 2023, while maintaining their cultural identity. | • Not relevant to the Proposal |
| **Protecting our most vulnerable children:** Decrease the proportion of children and young people re-reported at risk of significant harm by 20% by 2023. | • Not relevant to the Proposal |
| **Increasing permanency for children in out-of-home care:** Double the number of children in safe and permanent homes by 2023 for children in, or at risk of entering, out-of-home care. | • Not relevant to the Proposal |
| **Reducing domestic violence reoffending:** Reduce the number of domestic violence reoffenders by 25% by 2023. | • Not relevant to the Proposal |
| **Reducing recidivism in the prison population:** Reduce adult reoffending following release from prison by 5% by 2023. | • Not relevant to the Proposal |
| **Reducing homelessness:** Reduce street homelessness across NSW by 50% by 2025. | • Not relevant to the Proposal |
| **Improving service levels in hospitals:** 100% of all triage category 1, 95% of triage category 2 and 85% of triage category 3 patients commencing treatment on time by 2023. | • Not relevant to the Proposal |
| **Improving outpatient and community care:** Reduce preventable hospital visits by 5% through to 2023 by caring for people in the community. | • Not relevant to the Proposal |
| **Towards zero suicides:** Reduce the rate of suicide deaths in NSW by 20% by 2023. | • Not relevant to the Proposal |
| **Greener public spaces:** Increase the proportion of homes in urban areas within 10 minutes' walk of quality green, open and public space by 10% by 2023. | • Not relevant to the Proposal |
| **Greening our city:** Increase the tree canopy and green cover across Greater Sydney by planting 1 million trees by 2022. | • The proposal will result in an urban green canopy of more than 21% within 10 years |
| **Government made easy:** Increase the number of government services where the citizens of NSW only need to "Tell Us Once" by 2023. | • Not relevant to the Proposal |
| **World class public service:** Implement best practice productivity and digital capability in the NSW public sector; and drive public sector diversity through: | • Not relevant to the Proposal |

### 4.1.2 A Metropolis of Three Cities – the Greater Sydney Region Plan

*A Metropolis of Three Cities – the Greater Sydney Region Plan* together with *Towards our Greater Sydney 2056,* its first amendment, is a future plan for a growing Greater

Sydney. It supports the vision for a metropolis of three cities that will rebalance growth and deliver its benefits more equally and equitably to residents across Greater Sydney. The Plan is a 40 year plan built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places.

To meet the needs of a growing and changing population the vision seeks to transform Greater Sydney into a metropolis of three cities:

- the Western Parkland City
- the Central River City
- the Eastern Harbour City.

This vision involves a major shift in strategic planning for Greater Sydney, which focuses on the regional significance of central and western Sydney. *Towards Our Greater Sydney 2056*, with its strategy for a metropolis of three cities provides a framework to better underpin strategic planning for a more productive, liveable and sustainable city.

The Proposal is consistent with *Towards our Greater Sydney 2056* and is well aligned to Ten Directions for the metropolis of three cities, contributing to:

- A city supported by infrastructure, by locating employment uses close to existing and planned infrastructure (objective 4)
- Jobs and skills for the city, by contributing to Harbour CBD being stronger and more competitive (objective 18)

### 4.1.3 Eastern City District Plan

The Eastern City District Plan, finalised in March 2018, provides a 20-year plan to manage growth and achieve the 40-year vision, while enhancing Greater Sydney's liveability, productivity and sustainability into the future. It is a guide for implementing *A Metropolis of Three Cities* - the Greater Sydney Region Plan at a District level and is a bridge between regional and local planning.

The District Plans contain four key themes of infrastructure and collaboration, liveability, productivity and sustainability. Ten Directions for Greater Sydney guide the delivery of the themes in a balanced way with planning priorities and actions to achieve results that provide a great quality of life for people in the District.

The plan states that the vision for Greater Sydney as a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City and a 30 minute city – will see the Eastern City District become more innovative and globally competitive, carving out a greater portion of knowledge intensive jobs from the Asia Pacific Region, and will improve the District's lifestyle and environmental assets.

This will be achieved by:

- Strengthening the international competitiveness of the Harbour CBD, supported by the Innovation Corridor, health and education precincts and the District's strategic centres
- Boosting innovation and creative industries alongside knowledge-intensive jobs growth
- Stimulating the night-time economy within a responsive regulatory environment
- Protecting international trade and freight routes
- Retaining industrial and urban services land
- Nurturing quality lifestyles through well-designed housing in neighbourhoods close to transport and other infrastructure

- Sustaining communities through vibrant public places, walking and cycling, and cultural, artistic and tourism assets
- Aligning growth with infrastructure, including transport, social and green infrastructure, and delivering sustainable, smart and adaptable solutions
- Being innovative in providing recreational and open space areas, and increasing urban tree canopy
- Transitioning to a low-carbon, high-efficiency District with precinct-scale initiatives
- Building effective responses to climate change and natural and urban hazards.

The Proposal is well aligned to these directions, especially dot point 1, 2 and 8 above and raises no issues in relation to the remaining directions.

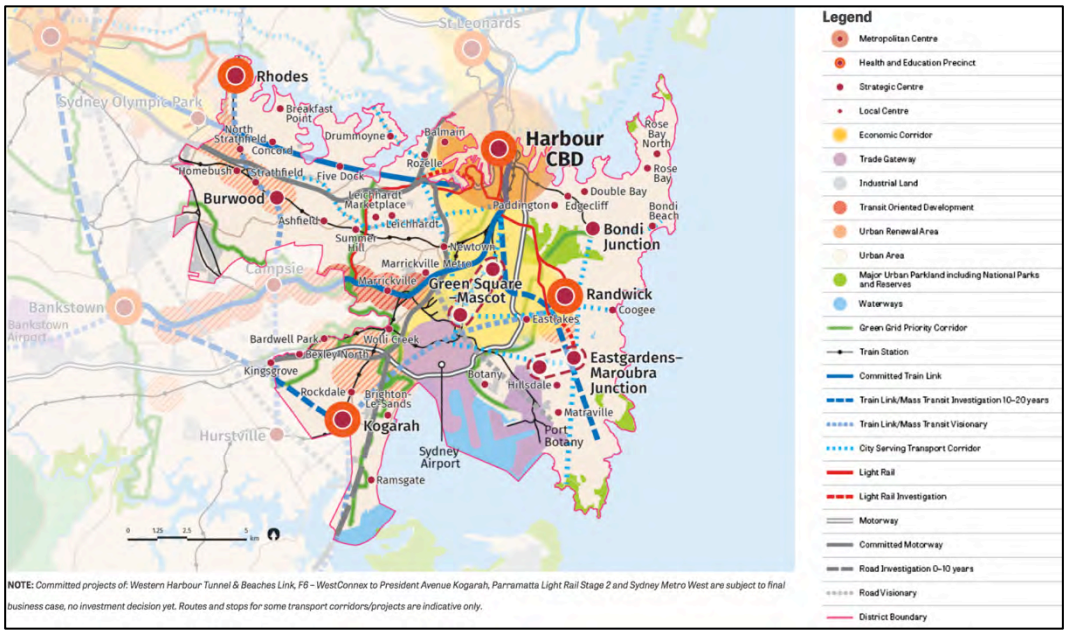


*Figure 8. Eastern City District Plan on a page*
*Source: https://www.greater.sydney/eastern-city-district-plan*

### 4.1.4 Future Transport Strategy 2056

Future Transport 2056 is an overarching strategy, supported by a suite of plans to achieve a 40 year vision for the NSW transport system. Future Transport 2056 outlines six state-wide outcomes to guide investment, policy and reform and service provision. They provide a framework for planning and investment aimed at harnessing rapid change and innovation to support a modern, innovative transport network. They are:

- Customer Focused
- Successful Places
- A Strong Economy
- Safety and Performance
- Accessible Services
- Sustainability

Chapter 3 of the strategy addresses Future Transport in Greater Sydney. The hierarchy of corridors in Greater Sydney include:

- City-shaping corridors – major trunk road and public transport corridors providing higher speed and volume connections between our cities and centres that shape locational decisions of residents and businesses.

- City-serving corridors – higher density corridors within 10km of metropolitan centres providing high frequency access to metropolitan cities/centres with more frequent stopping patterns.
- Centre-serving corridors – local corridors that support buses, walking and cycling, to connect people with their nearest centre and transport interchange.

The Proposal is consistent with the strategy by:

- Encouraging active travel (walking and cycling) and using public transport
- Aligning its location of employment and education services with existing City-serving corridors, making the best use of available resources and assets
- Contributing to optimising the network and better using existing infrastructure by supporting off-peak travel times
- Adaptively reusing an underutilised site in a way that that does not adversely impact on potential Parramatta Road public transport improvements

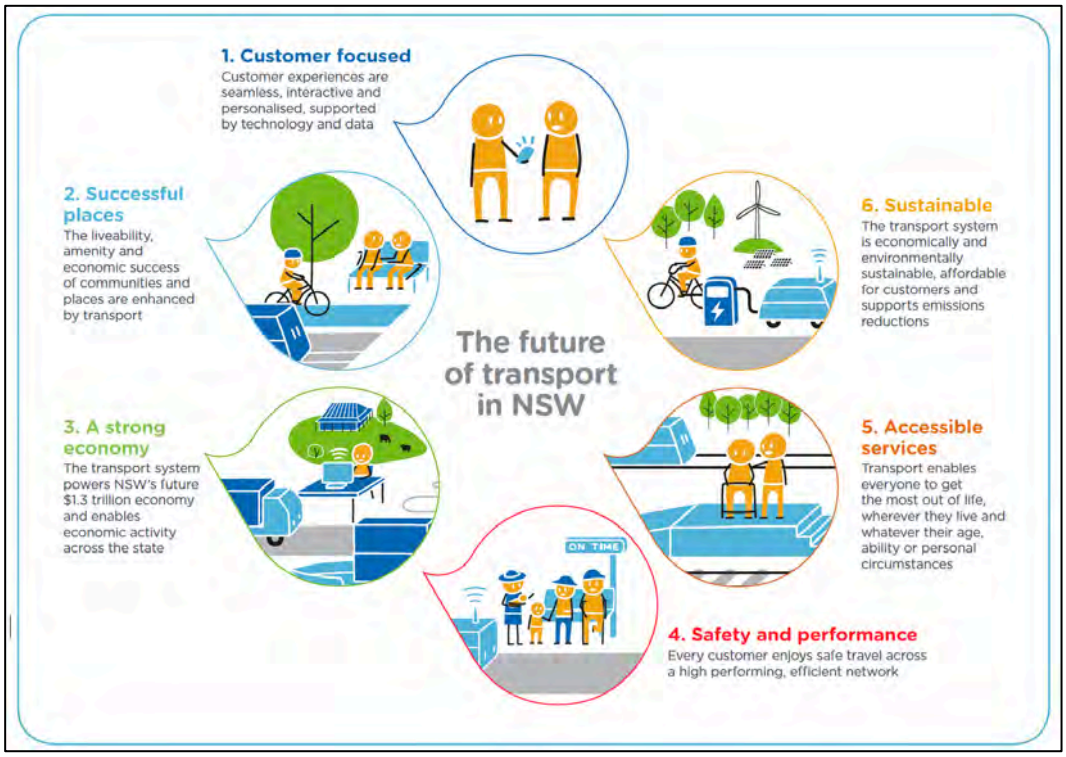


*Figure 9. Future Transport's six state-wide outcomes*

*Source: Future Transport Strategy 2056*

### 4.1.5 State Infrastructure Strategy 2018 – 2038 Building Momentum

This strategy is a 20-year infrastructure investment plan for the NSW Government that places strategic fit and economic merit at the centre of investment decisions. It assesses infrastructure problems and solutions, and provides recommendations to best grow the State's economy, enhance productivity and improve living standards for our NSW community. The strategy sets out Infrastructure NSW's independent advice on the current state of NSW's infrastructure and the needs and priorities over the next 20 years looking beyond the current projects and identifies policies and strategies needed to provide the infrastructure that meets the needs of a growing population and a growing economy.

The strategy sets six cross-sectoral strategic directions, each designed to achieve 'more with less' and embed good practice across the infrastructure lifecycle.

- Integrating land use and infrastructure planning
- Infrastructure planning, prioritisation and delivery
- Asset management – assurance and utilisation
- Resilience
- Digital connectivity and technology
- Innovative service delivery models

The Proposal aligns with the strategy by:

- Aligning its location of employment and education services with existing City-serving corridors, making the best use of available resources and assets
- Recycles existing government owned assets, by increasing the intensity of use of the UTS owned Blackfriars Site.

### 4.1.6 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. 42-44 of the guide) was undertaken and no issues of relevance were identified.

### 4.1.7 Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017)

Better Placed is an integrated design policy for the built environment of NSW. It seeks to capture our collective aspiration and expectations for the places where we work, live and play and create a clear approach to ensure we get the good design that will deliver the architecture, public places and environments we want to inhabit now and those we make for the future.

Better Placed aims to work in a number of ways, with the purpose of achieving better places for the people of NSW by:

- Advocating the importance of design for better places, spaces and outcomes.
- Supporting industry and government to deliver good design for people.
- Enabling effective design processes to be established and supported in the planning system.

The policy aims to:

- Raise awareness of what the NSW Government means by good design in the built environment.
- Provide clear, consistent, rigorous objectives to achieve good design throughout the development process.
- Outline the value of design thinking and what is involved in supporting effective design processes.

- Provide a framework for examining places and reviewing proposals from a good design perspective.
- Establish key concepts of design and shared terminology for the built environment.
- Encourage a stronger design culture and active engagement in design.

The policy includes seven objectives to define the key considerations in the design of the built environment:

- Better fit – contextual, local and of its place
- Better performance – sustainable, adaptable and durable
- Better for community – inclusive, connected and diverse
- Better for people – safe, comfortable and liveable
- Better working – functional, efficient and fit for purpose
- Better value – creating and adding value
- Better look and feel engaging, inviting and attractive

The proposal is considered to be consistent with these objectives. This is discussed in more detail in Section 6 of this EIS and in the Design Report in the attachments to this EIS, which provides a detailed assessment of the Proposal against the Better Placed objectives in its Section 08.

### 4.1.8 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.

The Proposal will contribute to a range of the Sustainable Sydney 2030 strategic directions. The primary alignment is with the City's global competitive tertiary education sector. It also has a strong alignment through its high sustainability performance and encouragement of public and active transport.

## 4.2 Statutory and Strategic Context

### 4.2.1 Environmental Planning and Assessment Act 1979

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

*Table 5. Environmental Planning and Assessment Act Objectives*

| *EP&A Act Objectives* | *Comments* |
|---|---|
| (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources, | The Proposal will promote the social and economic welfare of the community through its proposed use and through the efficient use of well-serviced urban land by a development that minimises the use of natural resources. |
| (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment, | The principles of ecologically sustainable development have been considered as part of this Proposal. |
| (c) to promote the orderly and economic use and development of land | The Proposal encourages an economic use of the site, collocated with the main university campus. |
| (d) to promote the delivery and maintenance of affordable housing, | The Proposal does not involve affordable housing (which would not be accordance with the existing approvals for the subject land) and will not adversely impact its provision. |
| e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats, | The Proposal will have no impacts on the native plant and animal species and ecological communities or their habitats. |
| (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage), | The Proposal is consistent with and has no impact on the built and cultural heritage of the subject land. |
| (g) to promote good design and amenity of the built environment, | The Proposal is the result of a design competition and demonstrates design excellence. |
| (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants, | The Proposal has been designed to achieve a high quality building and to support the health and safety of the building occupants and visitors. |
| (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State, | The City of Sydney has been consulted as a part of the preparation and design of the Proposal. |
| (j) to provide increased opportunity for community participation in environmental planning and assessment. | The preparation of the Proposal has included community consultation and further opportunities for community participation will be provided when the Proposal is placed on public exhibition during its assessment. |

### 4.2.2 SEPP (State & Regional Development) 2011

The Proposal is declared as State Significant by the SRD SEPP in accordance with *Section 8 Declaration of State significant development* because it is not permissible without

development consent under Sydney LEP 2012 and 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 Quantity Surveyors Report prepared by MBM has estimated that the capital investment value of the development exceeds $30m. Accordingly the proposed development is State Significant Development.

### 4.2.3 SEPP (Infrastructure 2007)

This policy aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services.

The Proposal is no longer defined as traffic generating development under Schedule 3 of the policy (following the commencement of the Education SEPP and the associated amendments to the Infrastructure SEPP). As a result, referral to the Roads and Maritime Services (RMS) is not required under the policy.

No other relevant clauses have been identified under the Infrastructure SEPP.

### 4.2.4 SEPP No.64 – Advertising and Signage

This policy aims to ensure that signage is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations, and is of high quality design and finish.

Part 2 of the policy is relevant to the proposed development. Clause 8 requires that a consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied:

> *(a) that the signage is consistent with the objectives of this Policy as set out in clause 3 (1)*
> *(b) that the signage the subject of the application satisfies the assessment criteria specified in Schedule 1.*

The proposal includes two wall-mounted, white acrylic, LED illuminated top-of-building identification signs – one on the North elevation and one on the West elevation for which consent is sought. There is also a standard UTS wayfinding totem sign at the Buckland Street entry for which consent is not sought as it is exempt development in accordance with Clausen 48(3) and Schedule 1 of the Education SEPP. Notwithstanding, the totem sign is shown on the drawings for completeness. It is noted that the building identification signs would meet all but one of the criteria to be exempt development under the Education SEPP (their height which is over six metres).

All signs are considered to be in accordance with the policy as well as the City's DCP, and are all of an identical layout and design as recent UTS identification and wayfinding signage within the wider area.

An assessment of the proposed development against the policy objectives and the criteria of Schedule 1 of the policy is provided at Section 0 of this EIS.

### 4.2.5 SEPP No 33 – Hazardous and Offensive Development

This aims of the policy include to amend the definitions of hazardous and offensive industries where used in environmental planning instruments, and to ensure that in considering any application to carry out potentially hazardous or offensive development,

the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise any adverse impact.

Development proposals for potentially hazardous and offensive industry or storage require assessment under State Environmental Planning Policy No.33 – Hazardous and Offensive Development (SEPP 33) and include the preparation of a Preliminary Hazard Analysis for the potentially hazardous development.

While there may be at times small quantities of various goods or equipment on site used for the purposes of the educational facility, these will be below the thresholds that would trigger SEPP 33 and accordingly a Preliminary Hazard Analysis is not required.

### 4.2.6 SEPP No.55 – Remediation of Land

This policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Clause 7 of the policy requires the consent authority to consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines before it determines a development application involving a change of use to education.

A Remedial Action Plan Report has been prepared by Douglas Partners Pty Ltd and is in the attachments to this EIS. It identifies the contaminants found on the site and outlines the methods and procedures that will be used to remediate the site to a condition suitable for the proposed land use, being educational facilities. It is considered that with the implementation of this report, the consent authority can be satisfied that the land will be made suitable for the proposed use.

### 4.2.7 SEPP (Educational Establishments and Child Care Facilities) 2017

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 "The Education SEPP" came into effect on 1 September 2017 and aims to facilitate the effective delivery of educational establishments and early education and care facilities across the State.

The policy provides for permissibility for educational establishments, however the use is already permissible under the Sydney LEP 2012.

The Proposal is beyond the size permitted by the *exempt development, complying development, or development permitted without consent* provisions of the policy.

As a result, it is considered that the policy does not apply or is not relevant and accordingly is of no use to the Proposal.

### 4.2.8 SEPP (Exempt and Complying Development Codes) 2008

This policy aims to provide streamlined assessment processes for development that complies with specified development standards by identifying types of development that are of minimal environmental impact and that may be carried out without the need for development consent as exempt or complying development.

The Proposal is beyond the size permitted by the *exempt development* provisions of the policy.

Clause 1.17A of the policy sets requirements (for all environmental planning instruments) such that the category of *complying development* is not available land identified as an item of environmental heritage or as a heritage item by an environmental planning

instrument. As the land is a heritage item, the category of *complying development* is not available to the Proposal.

As a result, it is considered that the policy does not apply or is not relevant and accordingly is of no use to the Proposal.

### 4.2.9 Draft SEPP (Remediation of Land)

This draft policy is part of a review program by the NSW Government. It is proposed the new land remediation SEPP will:

- provide a state-wide planning framework for the remediation of land
- maintain the objectives and reinforce those aspects of the existing framework that have worked well
- require planning authorities to consider the potential for land to be contaminated when determining development applications and rezoning land
- clearly list the remediation works that require development consent
- introduce certification and operational requirements for remediation works that can be undertaken without development consent.

The Department's January 2018 publication Remediation of Land SEPP – Explanation of Intended Effect states the key operational framework of SEPP 55 will be maintained in the new SEPP, which will:

- require consent authorities to consider whether the site is, or is likely to be, contaminated
- permit a consent authority to require additional information to satisfy itself as to whether the land is contaminated
- retain two categories of remediation work, being work that requires consent and work that can be carried out without consent.,

and new provisions will be added in the new SEPP to:

- require all remediation work that is to carried out without development consent, to be reviewed and certified by a certified contaminated land consultant
- categorise remediation work based on the scale, risk and complexity of the work
- require environmental management plans relating to post-remediation management of sites or ongoing operation, maintenance and management of on-site remediation measures (such as a containment cell) to be provided to council.

In light of the Proposal's compliance with the requirements of the existing SEPP 55 (noted above) it is considered that the draft policy does not give rise to any new issues or conflict for the Proposal.

At the time of writing this EIS the public consultation period had ended but the policy had not been made.

### 4.2.10 Draft SEPP (Environment)

This draft policy proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property. These environmental policies will be accessible in one location, and updated to reflect changes that have occurred since the creation of the original policies. It will incorporate revisions to current SEPPs to remove unnecessary or outdated policy, address emerging issues and locate provisions in the most appropriate level of the planning system, and involves consolidating the following seven existing SEPPs:

- State Environmental Planning Policy No. 19 – Bushland in Urban Areas
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011

- State Environmental Planning Policy No. 50 – Canal Estate Development
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
- Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No.2-1997)
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property.

As none of the existing SEPPs listed for consolidation has been identified as being relevant to the Proposal, it is considered that the Proposal similarly raises no issues or in relation the draft policy.

At the time of writing this EIS the public consultation period had ended but the policy had not been made.

### 4.2.11 Sydney Local Environmental Plan 2012

#### *Land Use 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.*

The Proposal is consistent with the zone objectives.

Under the B4 zoning educational establishments are permissible with consent.

#### *Development Standards*

The plan contains two development standards relevant to the Proposal.

*Height of Buildings*

The land is marked 'J' on the Sydney LEP Height of Buildings Map denoting a maximum height of buildings of 9m.

*Floor Space Ratio*

The land is marked 'J' on the Sydney LEP Height of Buildings Map denoting a floor space ratio for the site of 1.25:1.

For more discussion on development standards please refer to Section 4.4 below.

#### *Heritage*

The site and its buildings are shown on the Sydney LEP heritage map as a heritage item number I170 – 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).

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

Under Clause 5.10.(4) of the LEP the consent authority must consider the effect of the proposed development on the heritage significance of the item or area concerned.

A Heritage Impact Statement is provided in the attachments to this EIS.

Clause 5.10(7) contains provisions for Archaeological sites. An Archaeological Report is provided in the attachments to this EIS.

Clause 5.10(8) contains provisions relating to Aboriginal archaeology. An Aboriginal Archaeological Report is provided in the attachments to this EIS.

*Design Excellence*

Clause 6.21 of the LEP contains provisions relating to design excellence. Under this clause, the consent authority must not grant consent to a new building unless it has formed an opinion that the building exhibits design excellence. Subclause (4) sets out the matters to which the consent authority must have regard in forming its opinion.

Subclause (5) also sets out which development must undergo a design competitive process which includes the subject site captured by 6.21(5)(c) and (d). The Proposal has been the subject of a competitive design process, i.e. an architectural design competition carried out in accordance with the City of Sydney Competitive Design Policy.

The building is the winner of a competitive design process. Accordingly, it will be deemed a *building demonstrating design excellence* subject to the consent authority being satisfied in accordance with Subclauses (3) and (4).

*Development requiring or authorising preparation of a DCP*

Clause 7.20 of the LEP requires sites the preparation of a development control plan if the site area for the development is more than 5,000 square metres for sites outside Central Sydney. The total Blackfriars site at 6,043m$^2$ would normally be captured by this clause, however in accordance with Section 4.23 *Concept development applications as alternative to DCP required by environmental planning instruments* of the Act this requirement is satisfied by the Approval of Concept Development SSD6746 and a DCP is not required to be prepared.

*Car parking spaces not to exceed maximum*

Clause 7.3 sets maximum car parking allowances for various uses, but does not set a minimum. As the Proposal does not provide car parking, the maximum is not exceeded.

*Acid Sulfate Soils*

Clause 7.14 contains provisions relating to Acid Sulfate Soils. An Acid Sulfate Soils Management Plan is provided in the attachments to this EIS.

*Flood planning*

Clause 7.15 provides requirements for development on land below the flood planning level. The Proposal incorporates flood protection measures, primarily the setting of the building's ground floor level at RL 10.08m AHD. For further information please refer to the Civil Report in the attachments to this EIS.

## 4.3 Permissibility

Sydney Local Environmental Plan 2012 is the primary instrument establishing permissibility for the subject land. The subject land is zoned B4 – Mixed Use – educational establishments and commercial uses are permissible with consent.

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 Clause 43 also provides for educational establishments to be permissible in the B4 zone.

The proposal is permissible.

## 4.4 Development Standards

Sydney Local Environmental Plan 2012 is the primary instrument establishing development standards for the subject land. The plan contains two development standards relevant to the Proposal.

*Height of Buildings*

The land is marked 'J' on the Sydney LEP Height of Buildings Map denoting a maximum height of buildings of 9m.

The Proposal is higher than the height of buildings development standard for the site, in accordance with Concept Development Approval SSD6746, which has approved an envelope for the site with a height up to RL30.77.

*Floor Space Ratio*

The land is marked 'J' on the Sydney LEP Height of Buildings Map denoting a floor space ratio for the site of 1.25:1.

The Proposal has a greater floor area than the floor space ratio development standard for the site, however is in accordance with Concept Development Approval SSD6746, which has approved an envelope for the site with a gross floor area of up to 6,000m$^2$.

Despite its compliance with Concept Development Approval SSD6746, written requests for variation to these development standards in accordance with Clause 4.6 of the LEP, which provides flexibility in the application of development standards, are provided in the attachments to this EIS.

## 4.5 Contributions

The Blackfriars site is part of the South Precinct of the City of Sydney Development Contributions Plan 2015.

In accordance with its Section 1.3 the plan applies to development that needs consent, including complying development and Crown development. The following development requires a contribution:

- Development that is not excluded by Table 2 of Section 1.3.
- Development that results in a net population increase in accordance with section 2.1;

The subject development is one of the types listed in the plan's Table 2 and is therefore not excluded, and will result in a net population increase. As a result the development is identified by the plan as requiring a contribution.

Notwithstanding the above, in accordance with Section 7.11 of the Act *Contribution towards provision or improvement of amenities or services* (cf previous s 94) before the consent authority imposes a condition requiring the payment of a monetary contribution it must be satisfied that the development for which consent is sought will or is likely to require the provision of or increase the demand for public amenities and public services within the area.

An assessment of whether contributions should be levied against the Proposal in accordance with both the City of Sydney Development Contributions Plan 2015 and Section 7.11 of the Act is provided in Section 6.11.

## 4.6 Concept Development Approval SSD6746

The Stage 2 application, consistent with the winning scheme selected by the Competition Jury and subsequently developed, is completely compliant with the approved envelope for the Concept Development Approval (Stage1) for SSD 6746 approved on 11 April 2017 as modified on 26 July 2019.

Table 6. Compliance with SSD6746 Conditions of Approval *Part B Conditions to be Satisfied in Future Development Applications* sets out the matters that are to be addressed and satisfied in subsequent development applications including this application, the subject of this EIS, and provides a short description of how each condition is addressed and whether compliance has been achieved.

*Table 6. Compliance with SSD6746 Conditions of Approval Part B*

| *Conditions* | *Compliance and Comments* | |
|---|---|---|
| **Development Plans**<br>B1. All future development applications involving site and/or construction works must be supported with detailed plans which show the extent of the proposed works including the location of any proposed works, structures or services, floor plans, elevations, sections and building materials. | **Yes** | Detailed plans are provided in the attachments to this EIS, in particular the architectural drawings. |
| **Built Form and Urban Design**<br>B2. Any future building must be designed to ensure that there is no greater than 20 per cent additional overshadowing of the St Benedict's Church courtyard and the childcare centre playground at any time between 9 am and 3 pm on June 21 to ensure that adequate solar access is provided. | **Yes** | The approved envelope:<br>• does not overshadow the childcare centre playground at any time between 9 am and 3 pm on June 21 (refer to the shadow diagrams drawings DA23 and DA24 in the Architectural Drawings which are attachments to this EIS<br>• overshadows the St Benedict's Church courtyard by no more than an additional 18.4% consistent with the Concept Development approved envelope as demonstrated by drawings DA23 and DA24 in the Architectural Drawings which are attachments to this EIS and by Drawing A09 which was part of the approved SSD6746 Mod 1 Documentation, also in the attachments to this EIS |
| B3. Subsequent development application/s must demonstrate that consideration has been given to the protection and minimisation of potential amenity impacts on adjoining sensitive land uses, including overshadowing and acoustic impacts. | **Yes** | The building has been carefully designed to minimise or avoid amenity impacts on adjoining land uses. Regarding overshadowing, this issue was exhaustively examined in the recent modification application for the Concept Development envelope and Proposal is compliant with the approved envelope. In addition to the comments noted above in relation to Condition B2, the approved envelope provides for the maintenance of solar access to all apartments on Buckland Street in accordance with State-wide policy<br>In relation to acoustic impacts, the Acoustic Report prepared by ARUP and included in the attachments to this EIS has assessed the likely impacts and concluded that the Proposal is not predicted to create disturbances to surrounding receivers. For more information refer to Section 6. |
| B4. Subsequent development application/s must demonstrate:<br>a) the proposal achieves design excellence in accordance with the design excellence provisions of Sydney Local Environmental Plan 2012, including how the proposal meets the competitive design process requirements; and | **Yes** | a) The building achieves design excellence. For more information refer to Section 6 and the Design Report.<br>b) The proposal is consistent with the approved building envelope as demonstrated in drawings *DA04 – Site Plan*, and *DA05 - Site Sections* which shows the Proposal with the approved envelope shown in red. For more information refer to Section 6 of this report, and |

| | | |
|---|---|---|
| b) the proposal is consistent with the revised building envelope in condition A7 of Schedule 1 and that the building design, including services and the like, provide an appropriate relationship with neighbouring buildings. | | attachments to this EIS.<br>Note: Condition A7 was deleted as part of the approved modification application. |
| B5. Subsequent development application/s must address:<br>a) materials and detailing;<br>b) articulation and modulation to minimise bulk and massing; and<br>c) treatment of interface at ground level between the building and the public domain. | **Yes** | These requested details are provided in the design report and in the architectural drawings in the attachments to this EIS, including but not limited to:<br>• *DA25 Materials and finishes*<br>• *DA37-39 Sections 1:20* |
| B6. A study of the open spaces that exist and the relationships those spaces have to the adjacent buildings and streets be submitted with any subsequent development application. Open space areas and landscaping for the future development must demonstrate that the open space characteristics of the site have been retained and incorporated in the design of Stage 2. | **Yes** | The landscape design report prepared by James Mather Delaney Design Pty Ltd Landscape Architects, and the design report by Tonkin Zulaikha Greer Architects, both included in the attachments to this EIS, include consideration of the open spaces that exist and the relationships those spaces have to the adjacent buildings and streets, and the design and landscaping treatments that will retain the open space characteristics of the site. |
| B7. A detailed landscape plan, drawn to scale by a qualified landscape architect or landscape designer, must accompany any subsequent Stage 2 development application. The landscape plan must include:<br>a) six new advanced replacement trees, with two located on the Buckland Street frontage and four within the courtyard<br>b) the selected tree species is to be capable of reaching a mature height of at least 12-14m<br>c) the replacement trees are to have a 400L pot size and 4-5m high when planted | **Yes** | A landscape plan prepared by James Mather Delaney Design Pty Ltd Landscape Architects is included in the attachments to this EIS. The plan includes six new advanced replacement trees, with two located on the Buckland Street frontage and four within the courtyard, each capable of reaching a mature height of at least 12-14m, and with a 400L pot size and 4-5m height when planted. The deciduous species Liriodendron, which attains a mature height of 12-14m, has an elegant vertical habitat, a yellow green leaf colour and an interesting leaf shape that sits well with both the heritage character and the urban context is proposed for these trees. |
| B7A. Subsequent development application/s must include flood protection for the habitable basement levels to be integrated into the building design. Flood protection must not adversely impact the Heritage palisade fence. | **Yes** | Flood protection is provided by establishing the ground floor level at RL 10.08 in accordance with flooding advice which provide protection against the 1% AEP level + 0.5m. (Please note: Earlier proposed light wells to the basements, located in the Buckland street setback area, and which required flood protection by means of a flood fence, are no longer included in the design). For more information refer to the Civil Report in the attachments to this EIS. |
| **Eastern Elevation**<br>B7B. Subsequent development application/s must consider privacy, visual impact and overshadowing impacts from any balustrade located on the eastern elevation of the building envelope and the use of the area as a terrace, to the satisfaction of the consent authority. | **Yes** | The Level 3 terrace on the eastern side of the building has been carefully designed to minimise impacts. Privacy has been addressed by including a high balustrade on the eastern side with depth of 1m that manages potential overlooking to the east by restricting downward sightlines from people using the terrace. UTS building specifications also include mandatory 1380mm high balustrades for safety and insurance purposes, which is higher than typical minimums and also assists in managing potential overlooking. |

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| **Heritage**<br>B8A. The heritage palisade fence adjacent to Buckland Street is to be retained. Subsequent development application/s must include detail of the proposed conservation of the heritage fence and make all efforts to minimise relocation of original fabric. | **Yes** | The Proposal retains and conserves the heritage palisade fence in accordance with industry best practice, with relocation or original material minimised. Please refer to the architectural drawings, specifically DA36 – Heritage Fence Works and detailed heritage sketches SK01-SK04. |
| B8. Subsequent development application/s must include a statement of significance and an assessment of the impact on the heritage significance of the heritage items on the site in accordance with the guidelines in the NSW Heritage Manual. | **Yes** | A statement of significance, and a heritage impact statement prepared in accordance with the guidelines in the NSW Heritage Manual are provided in the attachments to this EIS. |
| B9. Subsequent development application/s must demonstrate how the design of the basement has been informed by the results of the archaeological testing. The archaeological testing must confirm where the archaeology may survive within the site and the degree to which it survives. The results of the archaeological testing must be documented in a report which outlines opportunities for conservation in situ (as a preference), development and interpretation. | **Yes** | Archaeological test trenching was undertaken in 2019, and is documented in the archaeological report in the attachments to this EIS. The report addresses:<br>• the likely location of state significant archaeology<br>• opportunities for conservation, development and interpretation, and<br>• recommendations as to how the basement design should be informed by the results<br>The report does not recommend conservation in situ but rather full archaeological excavation. |
| B10. Any proposed archaeological excavation must be supported by an Archaeological Research Design and Methodology prepared in consultation with the Heritage Council and submitted with any subsequent development application/s. | **Yes** | The Proposal includes archaeological excavation and an Archaeological Research Design and Methodology prepared in consultation with the Heritage Council is included as an attachment to this EIS. |
| B11. Subsequent development application/s must demonstrate interpretation of State significant archaeology has been incorporated into the development. | **Yes** | The archaeological report in the attachments to this EIS includes recommendations as to how State significant archaeology is to be incorporated into the development, and these are reflected in the Heritage Interpretation Strategy also in the attachments to this EIS. |
| **Transport and Accessibility**<br>B12. Subsequent development application/s must demonstrate that adequate access for service vehicles can be provided in accordance with the. | **Yes** | The proposal provides adequate access for service vehicles in accordance with Sydney Development Control Plan 2012 and this is demonstrated in the Traffic Report in the attachments to this EIS. |
| B13. Subsequent development application/s must provide adequate bicycle parking and end-of- trip facilities within the future building in accordance with the Sydney Development Control Plan 2012. | **Yes** | The proposal provides adequate bicycle parking and end-of- trip facilities in accordance with Sydney Development Control Plan 2012, in so far as it relates to the Proposal and this is demonstrated in the Traffic Report in the attachments to this EIS. |
| B14. The applicant shall liaise with Transport for NSW to ensure the development integrates with any future public transport infrastructure along Broadway and submit details of the consultation in subsequent development application/s. | **Yes** | RMS and TfNSW were consulted in the preparation of this EIS and the results of that consultation are detailed in the Traffic Report in the attachments to this EIS. |
| **Contamination**<br>B15. A Remediation Action Plan, Detailed Environmental Site Assessment and Acid Sulphate Soils Management Plan must be | **Yes** | A Remedial Action Plan Report and Acid Sulphate Soils Management Plan are included in the attachments to this EIS. The RAP Report also addresses the findings of Detailed Environmental Site Assessment in earlier |

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| submitted with subsequent development application/s. | | reports for the site that remain current. The Waste Management Plan included in the attachments to this EIS also includes an Environmental Management Systems Overview and Hazardous Materials Assessment. |
| **Noise and Vibration**<br>B16. Subsequent development application/s must identify and provide a quantitative assessment of the main noise and vibration generating sources and activities. Measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land must also be provided. The acoustic assessment must be undertaken by a suitably qualified acoustic consultant generally in accordance with the provisions of the Sydney DCP 2012. | **Yes** | An acoustic assessment by a qualified acoustic consultant is provided in the Acoustic Report in the attachments to this EIS. The report lists measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land |
| **Ecologically Sustainable Development**<br>B17. Subsequent development application/s must:<br>a) demonstrate how the principles of ESD have been incorporated into the design, construction and on-going operation of the proposal; and<br>b) demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice. | **Yes** | The Proposal incorporates the principles of ESD as described in Table 12 and in the ESD Report in the attachments to this EIS. The Proposal is designed to achieve a 5 star Green Star Design & As Built v1.2 target rating, and a minimum energy reduction percentage target, with more stringent rating targets and tools introduced as stretch items. |
| **Lot Consolidation**<br>B18. Prior to the issue of the first occupation certificate for the building, all land titles within the site are to be consolidated into one lot. | **Yes** | Lot consolidation is not required to be lodged with this application and will be addressed following determination. It is expected that this will be a condition of consent of any approval.<br>Despite this the Department has requested that a draft consolidation survey be provided with the application. This drawing is in the in the attachments to this EIS. Figure 10 at the end this table identifies the lots that are proposed to be consolidated (shown white). |
| **Public Art**<br>B19. Subsequent development application/s must include a Public Art Strategy for the site / development developed in accordance with the Sydney Development Control Plan 2012 and the City of Sydney Public Art Policy. | **Yes** | A Public Art Strategy developed in accordance with the Sydney Development Control Plan 2012 and the City of Sydney Public Art Policy =is provided in the attachments to this EIS. |
| **Flood Assessment Report**<br>B20. Subsequent development application/s must include a Flood Assessment Report prepared by a suitably qualified floodplain engineer/consultant and demonstrate the development complies with The City of Sydney Interim Floodplain Management Policy | **Yes** | A flood assessment report is included in the Civil Engineering Report in the attachments to this EIS, which demonstrates the development complies with the City of Sydney Interim Floodplain Management Policy. |
| **Arboricultural Impact Assessment**<br>B21. An Arboricultural Impact Assessment prepared by a qualified Arborist with a minimum Australian Qualification Framework (AQF) of Level 5 and written in accordance with the Australian Standard 'Protection of Trees on development sites' (AS4970-2009) must be | **Yes** | An Arboricultural Impact Assessment Report is provided in the attachments to this EIS. |

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| submitted with subsequent development application/s. | | |
| **Access and Facilities for Persons with Disabilities**<br>B22. An Access Report shall be submitted with subsequent development application/s to demonstrate that the building has been designed and is capable of being constructed to provide access and facilities for people with a disability in accordance with the *BCA*. | **Yes** | An Access Report is provided in the attachments to this EIS. |
| **Waste Facilities**<br>B23. Subsequent development application/s must provide details of the location, construction and servicing of the waste collection facilities for the proposed building. The design of facilities is to be in accordance with the City of Sydney *"Policy for Waste Minimisation in New Developments"*. | **Yes** | The Proposal has been designed in accordance with the City of Sydney *"Policy for Waste Minimisation in New Developments"* and details are provided in the Waste Management Plan in the attachments to this EIS. |
| **Signage Strategy**<br>B24. A separate development application is to be submitted seeking approval of a signage strategy for the building. The signage strategy development application must include information and scale drawings of the location, type, construction, materials and total number of signs appropriate for the building. | **Yes** | This application includes seeking consent signage. The building is a single institutional tenant/owner (UTS) unlikely to change in the foreseeable future and it involves only 2 top-of-building identification signs. Given the straightforwardness of the proposal's signage, the City of Sydney (who would be the consent authority for a signage strategy for the building) advised during consultation that it saw little value in a separate development application for a signage strategy that involved only 2 signs that were 100% consistent with recently approved UTS signage in the UTS City Campus area.<br>It is considered that nothing in the condition wording prevents the inclusion of signage as a part of the application the subject of this EIS. UTS would expect to submit a separate signage strategy application in the future should there be multiple competing sign requests from the building's users. |

## 4.7 Design Competition

As the Department is aware, during July 2017 UTS launched a single stage 'Design Excellence' Competition for the UTS Blackfriars Precinct Research Building to select an appropriate design approach and architectural consultant. The competition was carried out in accordance with the Department's endorsed competition process, and following consultation with the NSW Government Architect's Office and the City of Sydney.

Following presentations of competition submissions in August 2017, the Jury selected Tonkin Zulaikha Greer Architects' (TZG) non-conforming submission as the preferred proposal, which the Jury considered had the potential to demonstrate design excellence. Following the Jury's recommendation, TZG was invited to further develop their preferred non-complying scheme.

The Stage 2 application the subject of this EIS takes the form of the winning scheme selected by the Competition Jury and subsequently developed. For more discussion regarding the design competition refer to Section 6.1.4 below.

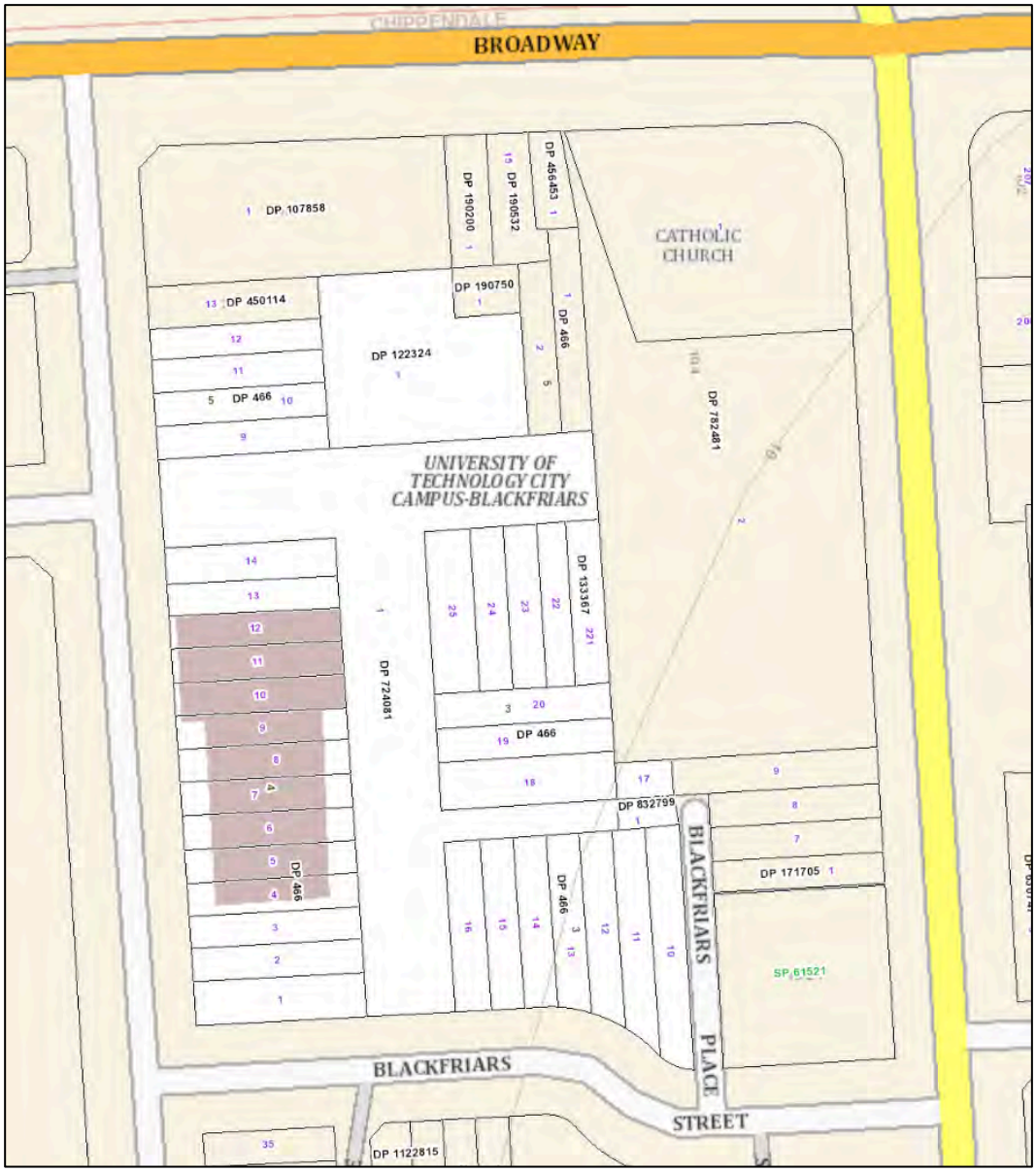


*Figure 10. Lots to be consolidated*

*Source: NSW Government Spatial Services sixmaps*

## 4.8 Other Statutory Matters

### 4.8.1 The Crown

UTS is considered to be the Crown because it is an Australian university within the meaning of the *Higher Education Act 2001*. Accordingly the application is also a Crown development application.

# 5 Consultation

### 5.1.1 Roads and Maritime Services

Roads and Maritime Services (RMS) were consulted as part of the preparation of the Traffic Report in the attachments to this EIS. No significant issues were raised.

### 5.1.2 Transport for NSW

Transport for NSW (TfNSW) was consulted as part of the preparation of the Traffic Report in the attachments to this EIS. No significant issues were raised.

### 5.1.3 City of Sydney Council

TZG architects met with City of Sydney staff Michael Soo, Maria O'Donnell and Tony Smith on 8 May, prior to the determination of Mod 1 to the Concept Development, to discuss the Mod as well as Stage 2 application (the subject of this EIS) and compliance with the design competition. Following the meeting, Council wrote to the Department removing all its objections to the Mod application. Council's letter noted concerns regarding the proposed glass flood fence and the sunken gardens/light wells behind the Buckland Street heritage palisade fence, which were matters of the detailed design of the building rather than the Mod. In response, the Proposal no longer includes the earlier proposed light wells which are replaced with deep soil landscaping at the Buckland Street level, removing the need for a flood fence from the design.

A second meeting with Council staff took place on 15 August offering further consultation opportunities. The meeting was coordinated with Andrew Rees of the City's Planning Assessment team and Team Leader responsible for the City's response to state significant development (formerly this was Michael Soo), and was attended by Council staff Allison Cronin (planning), Kate Yates (landscape) and Hui Wang (heritage) as well as TZG, Urbanac and UTS. TZG presented the Proposal and the meeting took the form of an informal question and answer session. No significant issues were raised during the meeting. Council staff asked about overshadowing and was reminded that the Department's approval of the modification (Mod 1) of the Concept Development (SSD6746) had dealt with matters of overshadowing for the approved envelope and that Council's most recent submission to the Department had removed all objections to the proposal. Council staff were requested to ensure any new comments had regard to the position described in these documents. Council staff also asked about the design competition and were reminded of the membership of the Design Competition Jury, which included Graham Jahn, Council's Director of Planning and Regulatory, and representatives of the City's Design Review Panel including Prof James Weirick and the Jury Chair, Ken Maher. UTS recommended that Council staff ensure any submission forwarded to the Department was seen by Graham Jahn to ensure that any comments were consistent with maintaining the design excellence of the proposal. No objections or significant issues emerged out the meeting.

### 5.1.4 Government Architect's Office

The Office of the Government Architect (GANSW) has been involved in the project for more than two years, with their input contributing to shaping the envelope that was ultimately approved as part of the Concept Development SSD6746. GANSW also took a key role in the Design Competition with Dillon Kombumerri of GANSW an active member of the Competition Jury and present during the Design Competition evaluations but also the subsequent presentations in October and November 2017 in which the TZG

preferred scheme underwent design development resulting in the winning design, the subject of this SSD application.

Following the approval of Modification 1 to the Concept Development SSD6746, TZG rang Dillon and followed up with an email on 7 August 2019.

The email states: *"The purpose of this email is to find out if you would like a briefing on the buildings development. The DA proposal is strictly in accordance with the Stage 1 DA with an accompanying design statement giving a written explanation as to the design intent, compliance and the technical requirements. Let me know if you would like us to come in and run you and other representatives through the project."*

No response was received.

### 5.1.5 Local Community and Stakeholder Consultation

A consultation process was undertaken following the determination of Mod 1 to the Concept Development SSD 9764 from 6 August to 15 August 2019.

A community information letter was prepared and delivered to addresses in proximity to the site. These were determined generally in accordance with Council's Development Control Plan 2012 Schedule 1 – Advertising and Notification. Whilst this Schedule does not include State Significant Development, the area for notification was determined based on the area for comparable developments (applications for educational establishments, DCP Table 1.1) corresponding to a notification area of a 50m around the site of the development as per its Figure 1.6. This is illustrated in Figure 11.

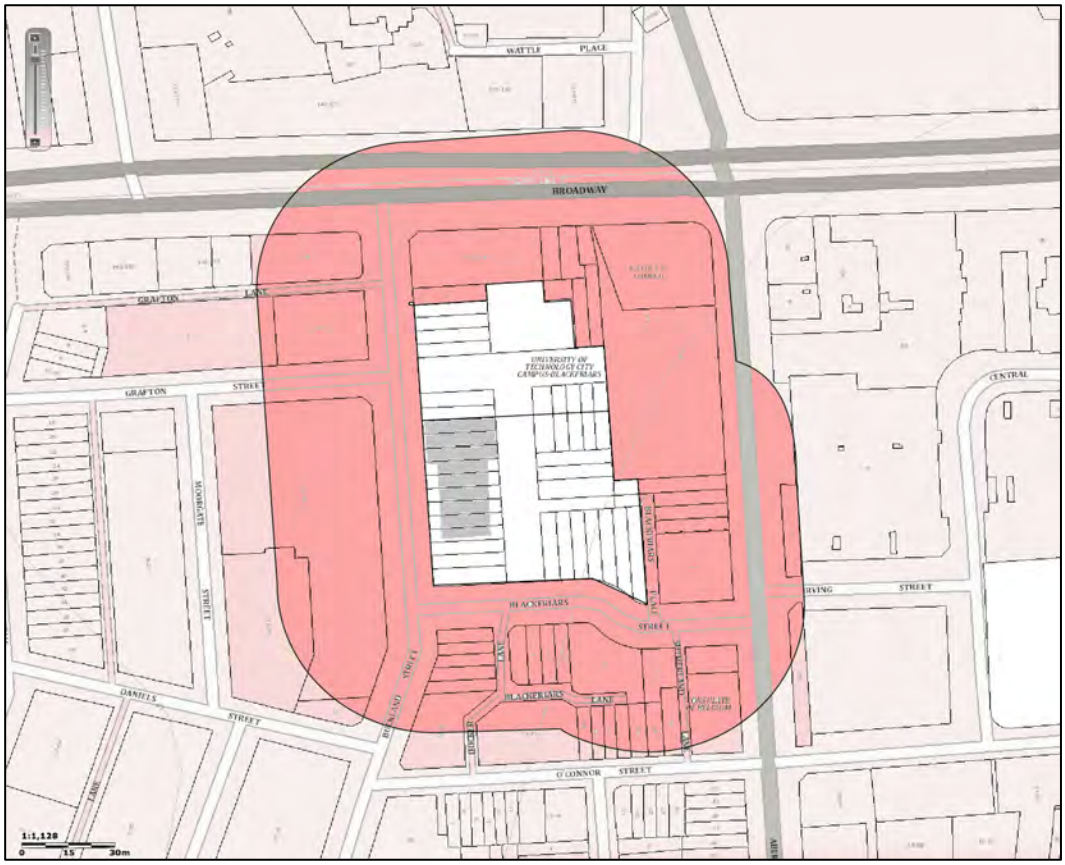


*Figure 11. Notification Diagram*

*Source: Base map NSW Land and Property Title Information six.maps.com.*

The letter invited the community to provide feedback by contacting UTS via email up until Monday 19 August or by attending a briefing regarding the project, on Wednesday 14 August between 5:30pm and 6:30pm at UTS Building 11 across Broadway from the site. A copy of the community letter is at Attachment 5.

One member of the community attended the briefing. The Proposal was discussed in detail with this person, a resident of Buckland Street, who asked about the design, the design competition, ESD and the likely timing for construction. Only one issue was raised regarding managing construction impacts, and in particular providing a contact at UTS for residents should there be issues with noise or contractor behaviour. UTS provided a business card with the appropriate contact number and email at the meeting.

No emails in relation to the project were received at the nominated UTS email address.

### 5.1.6 Other Consultation

No other relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners were identified based on the consultation processes undertaken in relation to the Concept Development application and approval. Accordingly no further formal consultation was undertaken.

# 6 Key Issues

No significant impacts have been identified in relation to the Proposal. This is consistent with it being a Stage 2 development application for the detailed design of a building, and which has been through a design competition, and an exhaustive Stage 1 Concept Development approval process, which has already dealt with and approved the Proposal's more contentious and difficult issues.

In particular, the Proposal raises no new issues or impacts in relation to the following matters, which are already approved as part of Concept Development Approval SSD6746:

- use
- building height and envelope
- gross floor area
- removal of trees
- demolitions
- overshadowing

The following matters have been identified in the SEARs to be addressed in the preparation of this EIS and form a framework for consideration of key issues:

1. Built Form and Urban Design
2. Staging
3. Environmental Amenity
4. Transport and Accessibility
5. Ecologically Sustainable Development (ESD)
6. Heritage
7. Aboriginal Heritage
8. Noise and Vibration
9. Contamination
10. Utilities
11. Contributions
12. Drainage
13. Flooding
14. Biodiversity Assessment
15. Waste
16. Construction Hours

## 6.1 Built Form and Urban Design

The Proposal has a high quality design with a carefully considered built form and urban design fit. Key features include:

- The design takes an interpretive design strategy approach, enhancing its context.
- The proposed building is highly responsive to its surrounds, with particular reference to the historic Blackfriars Precinct.
- The building's transparent façade exhibits its research, students and staff, creating a contemporary expression of UTS' focus on the future.
- A new central public space has been formed between the proposed building and the existing historic Blackfriars School buildings in anticipation of the greater population that will utilise the precinct and referencing historic quadrangle forms, with new pedestrian links, bicycle parking and landscaped seating.

- The upper façade of the proposal has been inclined to the north, creating a compositional relationship between the two generations of buildings by mirroring key proportions and geometries of the historic buildings. In addition to ordering and balancing the new public space, this approach also supports solar access into the public space and the childcare playgrounds beyond.
- The school buildings' handsome brick bay window structure that addresses Buckland Street has provided the cue for the new building's Buckland Street masonry form, rendered in 'Gertrudis Brown' Bowral bricks. The colour of the new brickwork forms a natural tonal foil to the existing brick neighbour.
- By bringing a similarly-scaled mass forward to the street alignment, the building reinforces the presence of the Blackfriars heritage buildings and clearly defines an articulated streetscape.
- The building's glazed façade surface has been nuanced to echo the curving, fluid geometry of the Blackfriars School timberwork by curving at the change in plane.
- The historic neo-gothic triangulated timberwork has become the inspiration for the new façade's structural system, allowing the two generations of architecture, expressive of different epochs, to sit comfortably along side each other.
- The parallelogram glazing geometry of the new building façade articulates and enriches the skyline just as the school buildings' highly articulated ventilation dormers and spires have done for 135 years. This geometry is emphasised by subtle changes in glass type.

For more information refer to the Design Report in the attachments to this EIS.

The comments below address the specific matters listed in the SEARs in relation to Built Form and Urban Design.

### *Height*

The maximum height of the building is already approved by Concept Development Approval SSD6746. The building complies with the approved maximum height of RL30.77 and is also entirely consistent with the height of the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

Notwithstanding the Proposal's height is considered to be in keeping with its context and has been carefully sculpted to achieve an excellent relationship to the nearby heritage buildings as well as ensuring that nearby uses are not unreasonably overshadowed and maintain reasonable levels of solar access in accordance with State-wide policy. In the block to the east, across Abercrombie Street, rising with the topography, the central park towers at more than triple the height of the Proposal form an intense urban backdrop.

### *Density*

The density of the proposal is already approved by Concept Development Approval SSD6746. The Proposal complies with the approved maximum gross floor area of 6,000m$^2$ and is entirely consistent with the density of the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

Notwithstanding, the Proposal's density is considered to be in keeping with its context, and with no significant impacts identified as arising from this proposed density. It is also noted that the proposed density is less than the floor area permitted by the planning controls for more than 15 years prior to the commencement of the current Sydney LEP.

### *Bulk and Scale*

Concept Development Approval SSD6746 has already approved an envelope for a building on the site establishing the approved bulk and scale. The Proposal is entirely

within the approved envelope. It is also entirely consistent with the bulk, scale and form of the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

Notwithstanding the Proposal's bulk and scale is considered to be in keeping with its context, achieving a high quality relationship with the adjacent heritage buildings, drawing inspiration from their gothic proportioning as set out in the Design Report in the attachments to this EIS, and enhancing their setting.

*Setbacks and Interface*

The minimum setbacks for a building on the site are established by the building envelope approved by Concept Development Approval SSD6746. The Proposal is entirely within the approved envelope and as a result achieves the minimum setbacks required by Concept Development Approval SSD6746. It is also entirely consistent with the setbacks of the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

Notwithstanding the Proposal's setbacks are considered to be in keeping with its context and achieve a high quality urban design response that references the setbacks of heritage items on the site, while being deferential in its positioning in relation to the streetscape, and carefully managing overshadowing and other amenity impacts on adjacent uses.

### 6.1.1 Design Quality and Built Form

*Built form*

Concept Development Approval SSD6746 has approved an envelope for a building on the site, establishing the extent of appropriate built form on the site. The Proposal is entirely within the approved envelope. It is also entirely consistent with the built form of the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

Notwithstanding, the Proposal's built form is considered to be in keeping with its context, achieving a high quality relationship with the adjacent heritage buildings, drawing inspiration from their gothic proportioning as set out in the Design Report in the attachments to this EIS, and enhancing their setting.

*Design Quality*

The Proposal is entirely consistent with the design competition's winning scheme and endorsed by the Design Competition Jury as achieving design excellence.

An assessment of the Proposal against the Design Excellence provisions of the LEP is provided in Section 7 of this EIS and has found, consistent with the findings of the Design Competition Jury, the Proposal is a building that demonstrates design excellence.

### 6.1.2 Digital Signage Boards

The Proposal does not include any external digital signage boards.

### 6.1.3 Better Placed

Better Placed is an integrated design policy for the built environment of NSW. It seeks to capture our collective aspiration and expectations for the places where we work, live and play and create a clear approach to ensure we get the good design that will deliver the architecture, public places and environments we want to inhabit now and those we make for the future.

The policy includes seven objectives to define the key considerations in the design of the built environment. The table on pages 62 and 63 of the Design Report (Part 3) included in the attachments to this EIS provides a detailed assessment of how the Proposal is consistent with and/or achieves the objectives of the policy and exhibits high quality design.

### 6.1.4 Design Competition

During July 2017 UTS launched a single stage 'Design Excellence' Competition for the UTS Blackfriars Precinct Research Building to select an appropriate design approach and architectural consultant. The competition was carried out in accordance with the Department's endorsed competition process, and following consultation with the NSW Government Architect's Office and the City of Sydney. Six architects were selected with three from the architects listed in the Government Architect's Strategy & Design Excellence Prequalification Scheme and one from the Government Architect's list of emerging design practices.

The Competition Jury comprised the following people:

- Prof Ken Maher (Chair), Chair of the City of Sydney, Design Advisory Panel
- Prof James Weirick, Member of the City of Sydney, Design Advisory Panel
- Graham Jahn, Director of City Planning, Development and Transport, City of Sydney
- Dillon Kombumerri, NSW Government Architect's Office
- Professor Attila Brungs, Vice Chancellor, UTS
- Glen Rabbitt, Director, UTS Facilities Management Operations

Following presentations of competition submissions in August 2017, the Jury selected Tonkin Zulaikha Greer Architects non-conforming submission as the preferred proposal, which the Jury considered had the potential to demonstrate design excellence.

The Jury recommended that the preferred architects Tonkin Zulaikha Greer (TZG) be appointed to undertake additional design refinement to address the below conditions. If resolved successfully, then it was recommended that TZG be appointed for the project.

Following the Jury's recommendation, Tonkin Zulaikha Greer was invited to further develop their preferred non-complying scheme. Submissions were made in October, and then again in November 2017.

The Stage 2 application takes the form of the winning scheme selected by the Competition Jury and subsequently developed.

Following the conclusion of the competition process TZG were engaged by UTS to further develop the winning design. This work included further design development of the winning scheme to incorporate further detailed inputs such as the site constraints arising out of flood planning, access and servicing of the substation, detailed solar analysis and a range of other minor design issues.

Figure 12, taken from the TZG Design Report at page 4 describes the evolution of the envelope from the original approval of Concept Development SSD6746 through the design competition conforming and non-conforming schemes, with the non-conforming scheme unanimously selected by the Jury for further development.

The design competition brief, and key jury reports including final comments from the Jury Chair in relation to the recently approved modification to Concept Development Approval SSD6746 bringing the envelope into alignment with the wining design and support for the Stage 2 application which is the subject of this EIS, including detail of the rigours of the competition process and its determination of a winning scheme by Tonkin

Zulaikha Greer Architects demonstrating design excellence, are in the attachments to this EIS.

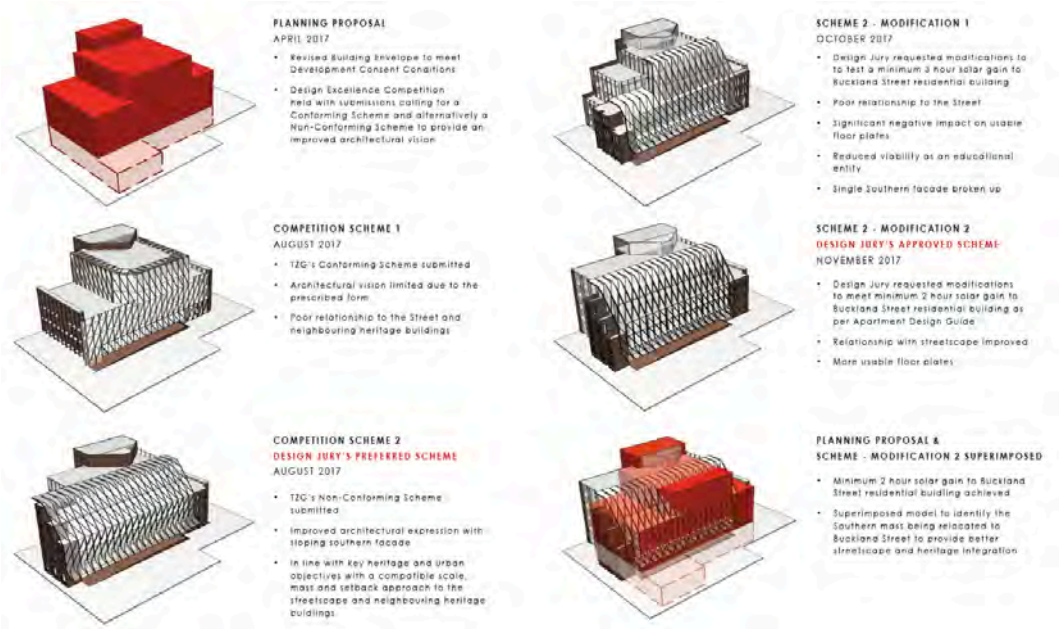


*Figure 12. Building envelope evolution*
*Source: TZG Design Report Page 4*

In particular, the Competition Jury Chair Prof Ken Maher wrote to the Department on 7 July 2019 stating:

> *I strongly recommend that the consent authority have regard to the rigours of the competition process and its determination of a winning scheme demonstrating design excellence, and that the credibility of this important process and the achievement of design excellence is not undermined. I further recommend that proposal by Tonkin Zulaikha Greer Architects be supported with regard to the Stage 1 Concept Development modification application, currently being assessed, and the subsequent Stage 2 Development Application, yet to be lodged.*

A copy of Prof Maher's full letter is in the attachments to this EIS.

Since the preparation of the Building Envelope Evolution Diagram reproduced at Figure 12, Mod 1 to Concept Development Approval SSD6746 was approved bringing the approved envelope into exact alignment with the design competition winning scheme and indicating the intent of both UTS and the Department that the Stage 2 application faithfully comply with this form.

### 6.1.5 Integration of Services

The Proposal's service systems have been developed with a team of Services Consultants including ARUP, Northrop and Evolved with flexibility and future proofing in mind.

Service risers are clustered around the core in order to maintain the flexibility of the floor 'plate'. Services in general are exposed with no concealed linings, to reduce cost and enhance flexibility. A focus on exposing the skeletals of the building and its operation allows the building itself to be a research tool.

*Ventilation*

The air supply is from ducted air supply grilles for flexibility. The floor plate is divided into zones to balance fluctuations in external temperature in order to provide a constant internal air temperature. Mechanical plant is located in the rooftop plantroom

*Electrical, Fire and Lighting*

Linear, low energy light fittings are selected. Fire pipes are located below the floor slab with sprinkler heads. A required sprinkler and hydrant booster assembly is located on the Buckland Street frontage. This assembly has been placed to balance the strict requirements of the relevant regulations while minimising heritage and visual impacts.

*Substation*

A kiosk substation has been retained at the western end of the site and access provided for periodic maintenance and replacement.

*Rainwater Recycling*

Water collected from the roof and facade is proposed to be collected at the base, treated inside a plant room and recirculated as water a feature on the facade and for evaporative cooling at the main entry.

*Façade*

High performance, clear double glazed flat and curved glass panels with low emissivity coating on surface to maximize transparency with excellent thermal performance to reduce ongoing energy costs associated with heating and cooling and provide rigorous acoustic attenuation. At its top 'Onyx Solar' photovoltaic interlayer to double glazing will generate electricity, avoid UV and Infrared transmission into the building while maximizing transparency and motorised glass louvres provide for the for natural ve*nt*ilation of the Proposal.

*Loading and Deliveries*

Loading and deliveries to the facility are via the vehicle entry on Buckland Street. The Traffic Report details how the development will be regularly serviced by small rigid vehicles (SRVs) (including waste collection) which will enter the site in a forward direction, undertake a 3 point turn within the courtyard and reverse into a service bay, the area for which is integrated into the internal courtyard between Buildings CB22 and CB25 from where it can be loaded/unloaded. Vehicles will then exit the site in a forward direction and re-join the external road network via the driveway onto Buckland Street. This process is also described in the operation plan of management.

In addition to the regular servicing, provision has been provided to accommodate a Heavy Rigid Vehicle (HRV) and a Franna Crane to undertake maintenance of the electrical substation, an event which should be noted on average only occurs once every 25 years.

*Waste handing*

Waste handling by private contract is undertaken in the same manner as for general loading. A waste bin storage has been allocated to the eastern end of the site, adjacent to and around the existing substation, please refer to Architectural Drawings DA 10 Ground Floor Plan for further details. The waste from the individual bins in the building is brought through the lift lobby and out of the main entrance to be unloaded into the waste bin area by the building manager/waste contractor, which is then collected by the waste vehicle on a regular basis. Details of waste collection, frequencies can be found in the Waste Management Report attached.

### 6.1.6 Site and Context Analysis

The Proposal's site planning and design approach including massing is established by the building envelope approved by Concept Development Approval SSD6746.

Notwithstanding, a site and context analysis of the Proposal is provided in Section 3 of the Architectural Design Report in the attachments to this EIS. This analysis is consistent with Concept Development Approval SSD6746 as well as with a raft of strategic planning and urban design analysis of the site dating back further than the approval of DA2012/1398 by the City of Sydney on 24 April 2013 which included a masterplan which provided 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 and demolition of buildings in the northern section of the site to be replaced with contemporary buildings that respond to the scale and form of nearby warehouses and designed to protect the internal landscaped quadrangle and solar access.

A detailed Site Analysis has been carried out for solar, wind, noise, and views to and from the site. The overall precinct has been analysed and new landscape strategy put in place to have a holistic approach to the site. The Design Report states:

> *As part of the Competition analysis a site context analysis has been carried out to investigate existing setbacks on the surrounding sites and streetscapes. The future [permissible envelope for a] University of Notre Dame Building has also been indicated alongside UTS Blackfriars new building to demonstrate that the new building sits well within the setbacks of the context and further increases it.*

Writing to the Department of Planning on 7 July 2019 Competition Jury Chair Prof Ken Maher stated in relation to the jury response to the final submission by TZG (refer to the attachments to this EIS for the full text of Prof Maher's letter):

> *In addition to the matters noted in the Jury Response dated 24 November 2017, the Jury gave considerable thought to the Buckland Street frontage of the design including the issues of setbacks, tree removal, solar access, urban design and heritage response. The Jury requested that the TZG design be amended, so that the stepped brick frontage of the building on Buckland Street would be closer to the street, matching the setback of the western veranda of the adjacent former Girls' School heritage building, subject to limiting any impact from overshadowing. While the Jury recognised this change would result in the loss of up to three mature trees, the Jury considered that it was imperative to resolve the heritage and urban design response of the architectural form. It was considered the replanting of advanced trees would over time offset any loss and have the potential to result in an improved landscape setting for the building as part of an holistic landscape design for the site.*

Accordingly it is submitted that not only is the Proposal consistent with design thinking for the site and its context dating back more than seven years, and scrutinised and approved by two different consent authorities, it includes updated site and contextual analysis of the highest calibre endorsed through the rigours of a design competition process and supported by a high profile expert jury of eminent peers as well as by the approval of Mod 1 to the Concept Development which brought the approved Concept Development envelope into alignment with the Design Competition winning scheme.

*Future Development Preferred Strategies*

The Proposal represents the final development on the Blackfriars Site for the foreseeable future. No further development is envisaged or permissible under the development standards applying to the site. The only development likely to occur on the site will be minor internal fitout works responding to changes in the education and research program accommodated by the facility from time to time, and ongoing periodic maintenance of landscaping and the site's heritage buildings to ensure they are cared for in perpetuity,

### 6.1.7 Landscape Strategy

The Landscape Design Report and Landscape Drawings prepared by James Mather Delaney Design Pty Ltd Landscape Architects, and the Design Report by Tonkin Zulaikha Greer Architects, which are included in the attachments to this EIS, together provide a detailed site-wide landscape strategy for the Blackfriars Site.

The strategy provides for an holistic approach to the precinct with new landscaping treatments that will retain the open space landscaped characteristics of the site, enhance the amenity of the site's open space and the settings of its significant heritage buildings.

### 6.1.8 Visual Impact Assessment

This section provides a visual impact assessment of the proposal based on the RMS visual impact assessment methodology.

Due to the densely developed nature of the Chippendale Area/Broadway area and the number of taller buildings in immediate proximity to the site, the Proposal has a comparatively limited extent of visibility beyond the site and very little visibility south into the Chippendale Conservation Area. Figure 13 shows the extent of visibility measured at the ground plane.

No significant view corridors have been identified within the extent of visibility which does not contain significant landscape features, such as a land/water interface or iconic built environment features, other than along Broadway, which arguably contains a number buildings of architectural standing. Views of these buildings however are not adversely impacted by the Proposal, which is approximately 70 metres south of Broadway and screened by buildings facing Broadway.

Within the extent of visibility, four viewpoints outside of the UTS Blackfriars site (Marked A-D on Figure 13 and listed in Table 7) were selected as representative of the surrounding built environment taking into account the topography and main pedestrian traffic flows. Each viewpoint included heritage items either on the site or adjacent to it. Viewpoints from which the proposal heavily obscured by street trees (such as further along Grafton Street), or where the views towards the proposal were at large deviation from the general path of travel for the location (such as a direct view south from the Broadway footpath) were not included as they were considered of limited analysis value.

The magnitude of change was then assessed for each location and reported in Table 8 *Magnitude of Change* using the values in Table 9.

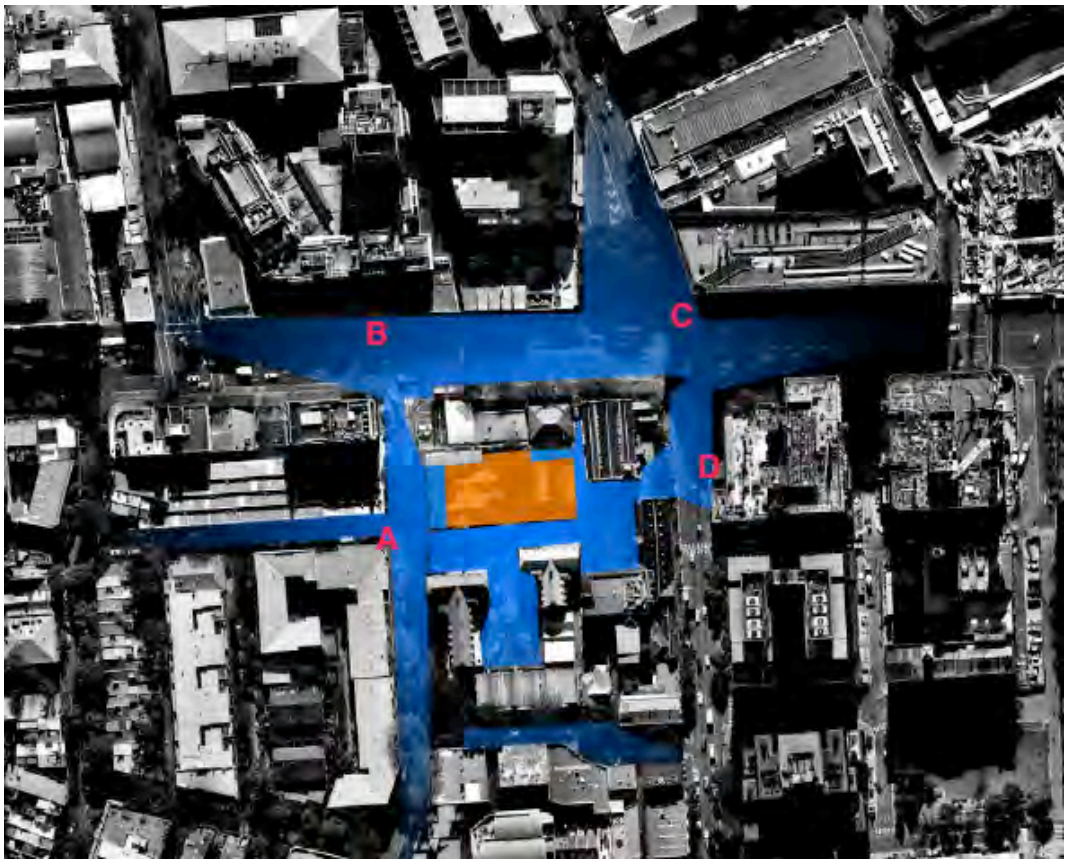


*Figure 13. Extent of Visibility Diagram*

*Table 7. Viewpoints and their sensitivity to change*

| Location | Description | Rating | Visual Sensitivity |
|---|---|---|---|
| A | Looking north east along Buckland Street, providing a view across the front of the proposal and into the site from the nearest residential uses | 2 | Visual sensitivity is high with the buildings on the Blackfriars site occupying the foreground and mid-ground of the view |
| B | Looking south east across Broadway from a position aligned with Buckland Street – being generally the position at which the Proposal comes into view for persons travelling east on Broadway | 5 | Visual sensitivity is low, determined by the Central Park buildings forming a tall backdrop to the proposal and the buildings on front of the site on Broadway forming the foreground |
| C | Looking south west from the corner of Wattle Street and Abercrombie Street representing a pause point for pedestrians and an opening of views towards the site, downhill and left of the path of travel | 4 | Visual sensitivity is low, determined by the St Benedicts Church forming the foreground and taller distant forms and the rise in the topography in the distance. |
| D | Looking west from the far side of Abercrombie Street representing views into the Chippendale Conservation Area downhill from location and along the path of travel from transport and services on Broadway | 4 | Visual sensitivity is low with the University of Notre Dame buildings and the St Benedicts Church dominating foreground views and the Proposal forming a somewhat distant backdrop |

| *Table 8. Magnitude of Change* | | | |
|---|---|---|---|
| Location | Visibility of Proposal | Resultant visual impact | Rating |
| A | The proposal forms a significant feature in the views from the viewpoint framed by the canopy of the large street trees. | The Proposal replaces view of Building CB23 framed by trees with a newer building. Height and scale impacts are managed by the street trees, which obscure the upper third of the view. | D |
| B | The Proposal forms a narrow mid-ground element against above the height of the UNDA buildings but lower than the church spire | The backdrop of taller Central Park Buildings reduces the magnitude of the change which is considered low | D |
| C | The proposal forms a narrow mid-ground element against above the UNDA buildings and to the right of the church, with building top seen against the sky | The magnitude of the change is assessed as minor despite being seen against the sky as of the context of taller buildings also in this view including the church spire and the 7 storeys plus sky sign UNDA building at the Buckland St corner. | D |
| D | The Proposal forms a background to the views from here with the UNDA Abercrombie Street building and the Church dominating the foreground | The magnitude of change is moderate increasing the height of built form seen from this location, though somewhat ameliorated by distance. | C |

| *Table 9. Visual Impact Descriptors and Impact Matrix Diagram* | |
|---|---|
| Sensitivity: | Magnitude of Change: |
| A Very High | 1 Significant and dramatic change to the entire view |
| B High | 2 Extensive change to the nature of the view |
| C Medium | 3 Moderate change to the nature of the view |
| D Low | 4 Minor impact or nature or view only partly affected |
| E Very Low | 5 Insignificant or minimal |

| | | Magnitude | | | | |
|---|---|---|---|---|---|---|
| | | A | B | C | D | E |
| Sensitivity | 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 following assessment scores for visual impact were derived using the values in Table 9 and the above matrix and are presented in Table 10, below.

| *Table 10. Visual Impact Assessment* | |
|---|---|
| Location | Overall Visual Impact Score |
| A | Low (Sensitivity 2, Magnitude D) |
| B | Very Low (Sensitivity 5, Magnitude D) |
| C | Low (Sensitivity 4, Magnitude D) |
| D | Low (Sensitivity 4, Magnitude C) |

The above assessment demonstrates that the visual impact of the Proposal is likely to be low and will not require mitigation.

### 6.1.9 CPTED

Crime prevention through environmental design (CPTED) is a multi-disciplinary approach to deterring criminal behaviour through environmental design.

In April 2001, the NSW Department of Infrastructure, Planning and Natural Resources introduced Crime Prevention Legislative Guidelines to Section 79C of the Environmental Planning and Assessment Act, 1979. These guidelines require consent authorities to ensure that development provides safety and security to users and the community.

The four main principles of CPTED are:

- Natural surveillance
- Access Control
- Territorial Reinforcement, and
- Space Management

*Surveillance*

Natural and technical surveillance provides for people using the Proposal's spaces can see what other people are doing. The Proposal includes the following in this regard:

- Clear sightlines have been provided between public external to public internal spaces at ground level, from Buckland Street into the main courtyard space
- The facade at ground level has a high level of transparency to reinforce visual connectivity between private and public spaces
- Pathways and circulation areas within the site are wide and open and well lit, and there is minimal use of constrained corridors.
- Terrace access on level 3 allows for surveillance of the courtyard (as well as improved surveillance of the adjacent Notre Dame courtyard without adversely impacting privacy).
- Consistent external lighting is provided along pathways and in site's open spaces with increased lighting at entries
- Egress paths are open and integrated into the overall design
- Landscaping has been designed to ensure that it does not provide areas of concealment
- CCTV cameras will provide additional active surveillance

*Access Control*

Public areas and facilities need to be clear in their definition of where people can and cannot go and to define boundaries. The Proposal includes the following in this regard:

- Boundary definition to the site provided by the retention of the heritage palisade fence, with building access controlled at the building perimeter
- A clear and prominent entry to the site on Buckland Street that is well surveilled
- Landscaping design that responds to pedestrian movement paths and guides people to entries and public spaces.
- External and internal way finding signage is provided to assist in clarifying access.

*Territorial reinforcement*

Well-maintained and well-used areas generate a feeling of "ownership" which reduces their perceived opportunity for criminal activity. The Proposal includes the following in this regard:

- The increased intensity of use of the site will contribute to an impression that it is being well utilised, increasing safety
- The Proposal's open spaces will encourage small groups to gather and enjoy these public areas, contributing to a sense of ownership and territory
- Consistent maintenance, graffiti and damage monitoring and management.

*Space management*

Areas need to be inviting and well-maintained with regular removal of waste, landscaping maintenance, removal of graffiti, repair of vandalism and the refurbishment of equipment/furniture. The Proposal includes the following features in this regard:

- Consistent with UTS practice the Proposal includes materials, furniture, fitments and fittings selected with an emphasis on durability, lifespan and quality that is fit for purpose
- UTS management methodologies have an emphasis on damage, graffiti and maintenance management to ensure its facilities present a clean, cared-for environment.

In light of the above it is considered that the Proposal performs well in relation to CPTED and no significant issues have been identified.

*Mitigation Measures – Built Form and Urban Design*

- Implement the architectural and landscape design

## 6.2 Staging

The proposal is not staged. Construction of the Proposal is anticipated to be undertaken as a single stage. Within this phase there is a natural sequence to construction, which will involve the following activities, each potentially undertaken by separate contractors, in order:

1. demolitions and tree removal
2. archaeological excavation
3. excavations and remediation
4. construction

*Mitigation Measures – Staging*

- None required

## 6.3 Environmental Amenity

As required by the SEARs this section addresses potential amenity Impacts on the surrounding locality

*Visual Privacy*

In relation to privacy impacts, the east facing glazing and the use of the roof on the eastern edge of Level 3 as a deck has the potential for increased overlooking of the St Benedicts Church and Notre Dame courtyard. The Notre Dame courtyard functions as a public space ancillary to an educational establishment and the church – these uses do not give rise to privacy issues in the way that, for example, residential uses might. The Notre Dame courtyard and the church are typically open to the public throughout the year and effectively public (i.e. privately owned but publicly used) spaces rather than private. Accordingly as quasi-public space, the courtyard is not adversely impacted by overlooking. To the contrary, it is generally considered highly advantageous to have good and increased levels of passive surveillance of public (and quasi-public) open spaces. The current western boundary of the St Benedicts Church and Notre Dame Courtyard is a blank masonry wall of 5m height offering no opportunities for passive

surveillance. The Proposal's Level 3 rooftop deck would improve passive surveillance of this area and act to improve the security and safety of the Notre Dame courtyard space. Accordingly, it is assessed that use of the deck and the use of glazing to the eastern elevations of the building would result in positive impacts in relation to public safety.

In relation to residential amenity, the nearest residential uses are more than 20m distant from the proposed building which distance is considered more than sufficient to provide for visual privacy noting that the ADG recommends that visual privacy is achieved by 12m separation for buildings up to 4 storeys and 18m above 5 storeys between residential uses, and notes that 6m separation between residential and commercial uses is adequate

There are no visual privacy impacts on uses to the north of the site as the north facing elevations are solid masonry without windows.

As a result it is considered that there are no significant privacy impacts arising from the Proposal.

*Visual Amenity*

No significant impacts have been identified. The building, which is in accordance with Concept Development Approval SSD6746, is composed of materials finishes and design articulation that exhibit design excellence and which establish a highly compatible and appropriate element in existing views in and around the site, designed and sited to respect the heritage buildings on the site and the heritage conservation area setting. A visual analysis has found the proposed building to be in keeping with its context, and likely to improve view quality compared to the existing development on the site. A visual impact assessment has similarly found no significant adverse impact.

As a result it is considered that there are no significant visual amenity impacts arising from the Proposal.

*Solar access and Overshadowing*

Overshadowing was comprehensively addressed in relation to Concept Development SSD6746. In its assessment report, the Department states in relation to residential properties:

> *The Department considers the proposal will not adversely affect solar access to residential properties in Buckland Street (to the west of the site). In accordance with the Apartment Design Guide (ADG), the majority of living rooms and private open spaces are able to maintain 2 hours of solar access in mid-winter.*

And in relation to the UNDA Courtyard:

> *The Department is satisfied the building envelope height will not compete with St Benedict's Church and does not increase overshadowing to the church courtyard at 3 pm in mid-winter.*

And in relation to the Childcare playground:

> *The Department also notes the proposed building envelope does not shade the child care centre playground at any point between 9am to 3pm on 21 June.*

The Architectural Drawings in the attachments to this EIS contain solar shadow diagrams that demonstrate overshadowing in compliance with the approved envelope. As the Proposal is in accordance with and fully contained within the envelope approved by Concept Development Approval SSD6746 it raises no new issues in relation to solar access and overshadowing which has already been found to be acceptable.

*Acoustic Impacts*

The Acoustic Report in the attachments to this EIS has concluded that the development "will not have a significant impact on the environment around the development site, including sensitive receivers located within the Blackfriars precinct" For a full discussion of acoustic impacts refer to Section 6.8 Noise and Vibration.

*Wind Impacts*

A Wind Report has been prepared by Vipac Engineers and Scientists Limited and is located in the attachments to this EIS. It has found that "all areas are expected to have an acceptable wind environment" and did not recommend any design amendments.

As noted above, it is considered that the Proposal, the design of which has been refined through the rigours of a stage 1 concept approval process and an architectural design competition process to minimise its environmental impacts, and that consent authority can be satisfied that a high level of environmental amenity for all surrounding land uses including residential land uses.

*View Analysis*

Perspective views of the Proposal from key vantage points and streetscape locations have been prepared by TZG and are included in the Architectural Drawings in the attachments to this EIS.

The selected locations provide a reasonable range of potential views from places where the public would typically see the built form in their day-to-day experience of the area, such along nearby streets and at key intersections as well as from within the site.

An analysis of the views shows that the bulk and scale of the proposal has been well managed and is an excellent fit in the precinct. The Proposal fits well into its context and at the approved height is entirely in keeping with its surrounds, particularly demonstrated in Images 1, 4 and 6. The articulation of the screen wall and its fine detailing produces an harmonious fit with the gothic architecture of the immediate context demonstrated in image 1, 3 and 6. The simpler brick elevations facing the north of the site provide an appropriately understated and urban backdrop to the UNDA buildings along Broadway. From Abercrombie Street the building sits comfortably as a backdrop to the UNDA courtyard and buildings providing increased passive surveillance without being overbearing.

It is considered that the views demonstrate that the building will be a very good fit for its surroundings and will be unlikely to give rise to any significant view impacts.

*Lighting Strategy*

A Lighting Report has been prepared by Arup Pty Ltd and is included in the attachments to this EIS. It describes the lighting to be employed by the Proposal including and exterior lighting strategies. The general lighting shall be warm white, while the detailed elements and landscape features are to use contrasting cool white and accent lighting. Key strategies include:

- Precinct scene setting - lighting to dim after hours
- Integrated lighting to interpretive water feature element
- Internal lighting to contribute to building night-time aesthetic
- Integrating low level lighting into furniture
- Vertical Lighting to texture facade finishes
- Up lighting to trees through courtyard
- Using pole and bollard lights to meet lighting levels required by Australian Standards


*1. Grafton Street looking east*
*Source: TZG Architectural Drawing DA27*

*2. Buckland Street looking east*
*Source: TZG Architectural Drawing **DA28***

*3. Internal courtyard looking north*
*Source: TZG Architectural Drawing **DA29***


*4. Broadway looking south-west*
*Source: TZG Architectural Drawing **DA30***

*5. Internal Courtyard looking north-west*
*Source: TZG Architectural Drawing **DA32***

*6. UNDA Abercrombie Street entry*
*Source: TZG Architectural Drawing **DA332***

*Figure 14. 3D Views of the Proposal*
*Source: TZG*

Public domain safety is specifically addressed in the report, which notes that lighting is an essential element that contributes to the community by providing safe and comfortable environments at night. The lighting strategy supports support clear hierarchy of pathways and spaces to support wayfinding throughout the campus after dark, using energy efficient, warm white light for all P7 pedestrian roads, supplied via a combination of techniques including light poles where required to meet statutory requirements.

The report also addresses light pollution, noting its potential to wash out starlight, interfere with astronomical research, disrupt ecosystems, have adverse health effects and waste energy. The lighting design will minimise light spill and light pollution by:

- limiting facade lighting to accentuate the architectural features
- Using low level down lighting into the landscape.
- Where up lighting is used ensuring it is contained by the building's entries to prevent light spill
- Utilising timer, dimmer and sensor controls to reduce lighting levels during low activity periods.

It is considered that the lighting strategies for the Proposal achieve an appropriate balance between illuminating the building, providing for public safety and controlling light pollution.

*Intensification of Use*

The Proposal's gross floor area of 6,000m$^2$ is approved by Concept Development Approval SSD6746.

The proposed use is not a good fit for the standard LEP, being a mix of Educational Establishment (research and development), Educational Establishment (tertiary institution) and commercial office, depending on the exact composition of activities and research collaborations being undertaken at any time. Some will be led by commercial and industrial entities collaborating with UTS researcher – for others the driver will be UTS. In this situation it is considered impossible and of limited value in any event to try to separate these uses.

Much of the research anticipated to be undertaken at the facility will desk-based, working with computers, producing an intensity of use comparable to many office uses. There will also be projects with a need for larger equipment that may reduce occupancy rates well below typical office expectations. The emphasis on collaboration and a workspace that encourages innovation will also result in the assignment of space to these activities rather then a traditional workstation with a seat. As a result the likely building occupancy, and the associated demands on social and physical infrastructure are likely to be less those of a similar sized building having a more traditional educational establishment or commercial use, and at the lower end of intensity envisaged by the LEP and other policy documents.

For the purposes of the deemed-to-satisfy provisions of the NCC Part 1 (the BCA) the building has been generally designed as a Class 9b. Though similar in many respects to Class 5 construction, Class 9b typically has a more onerous set of requirements. This will enable the full range of potential research projects to be located anywhere in the building. The BCA also provides guidance about a building's population for the purposes of egress and fire safety. The number of persons accommodated is given in D1.13 *Number of persons accommodated, which* assigns an occupancy of 1 person per 10m$^2$ for offices and for laboratories which of the uses listed have the most relevance. Though the building's gross floor area is 6,000m$^2$ the NCC does not assign occupancy to some areas included in GFA such as corridors and toilets. As the final fitout plans are not yet resolved for then building, an exact figure for this total area cannot be calculated

however it is reasonable to assume approximately 75% of the space will be usable and able to accommodate persons under the NCC resulting in an estimated 400-600 people using the building. This figure represents a fairly high occupancy for the kind of use envisaged and is likely to be higher than the actual population assigned to the building.

Based on a higher end estimate of a population of 600 in the building, the Traffic Report (included in the attachments to this EIS and discussed in more detail below at Section 6.4) identified that the Proposal would have no detrimental effect on the existing or future services and facilities within the vicinity of the site, should not generate a need for any infrastructure upgrades, or any need for alterations or upgrades to the existing access arrangements in relation to vehicle movements, pedestrian movements or bicycle movements.

The Proposal includes a significant upgrade and comprehensive landscaping of the open spaces of the site, which will be available for use by the Proposal's occupants and visitors, who will also have access to the significant social and community infrastructure of the main UTS City Campus only 10mins walk from the site, including sports halls, gym facilities, library, and a range of meeting rooms and other spaces.

The Proposal also includes solar energy generation, on-site stormwater detention, rainwater harvesting and a range of other measures that minimise its overall impact in terms of resource consumption and infrastructure requirements and in some cases (such as in relation to drainage) reduce impacts compared to the current situation (more information on the lack of impact resulting from the intensification of use is provided in Section 6.11).

It is also important to note that the Proposal's 6,000m$^2$ approved by Concept Development Approval SSD6746 brings the FSR for the overall site to a total of only 1.46:1 whereas the permissible FSR under the prevailing planning scheme for the land that operated for at least 15 years prior to the current LEP was 1.5:1.

In summary, no significant impacts have been identified as arising out of the intensification of use and no mitigation is required.

*Mitigation Measures – Environmental Amenity*

- Implement the lighting strategies

## 6.4 Transport and Accessibility

A Parking and Traffic Assessment Report has been prepared by ptc and is included in the attachments to this EIS, and a table identifying the matters to be addressed in accordance with the SEARs with the location within the report where the matter is addressed is provided in section 1.3 of the report. The report also details the consultation undertaken with the RMS and TfNSW.

### *Public Transport*

The existing and future public transport networks are outlined in Section 3 of the report and consist of 22 bus services available along Broadway closer than 100 metres from the site. Broadways also provides easy access to Central Station, 850m from the site, which provides access to the majority of all Sydney Train lines, NSW Train Link and Light Rail services, which service the greater Sydney region. As a result building users have easy walking access to train lines travelling direct to their destination without needing to interchange. As the site is in such close proximity to public transport no measures have

been identified as necessary to integrate the Proposal with the public transport network other than a Green Travel Plan, described below.

### *Road Network*

The existing and proposed pedestrian and cycle movements are outlined in Section 4 of the report and the existing network has been found suitable to accommodate and increase pedestrian or cyclist movements. The estimated trip generation for vehicles, public transport, pedestrians and cyclists are outlined in Section 4 and it has been found that the development should generate only minimal vehicle movement to and from the site. As a result it should have no detrimental effect on the existing or future services and facilities within the vicinity of the site, should not generate a need infrastructure upgrades, or any need for alterations or upgrades to the existing access arrangements. No alterations or upgrades are required or are proposed to the existing access arrangements.

### *Car Parking*

Section 5 of the report outlines how the Proposal does not provide any on site car parking and therefore should generate minimal movements to and from the site. As a result, the recording of the existing vehicular, within the vicinity of the site was not considered to be necessary for the assessment. Similarly SIDRA modelling has not been undertaken as it is of no value to the assessment given the minimal vehicle movements arising out of the Proposal. Section 3 outlines the available off-site parking facilities available and is has been determined that these facilities should be able to accommodate the minor demands of the development.

### *Bicycle Parking*

Section 5, also outlines the proposed development's bicycle parking provision, providing 28 staff and 16 visitor bike spaces, along with an End of Trip Facility including 28 lockers, 3 showers and a unisex changing room.

The report notes that Table 3.5 of the City of Sydney Development Control Plan (DCP) 2012 Section 3.11.3 does not specify a bicycle provision rate for research establishments and therefore, a comparable rate must be utilised.

Using the DCP commercial rate, of 1 space per 150m$^2$ GFA for staff; and every 400m$^2$ for visitors would result 40 staff and 15 visitor bicycle spaces. Using the DCP tertiary institution rate of 1 space per 10 members of staff and per 10 students would lead to 30 staff and 30 student bicycle spaces, based on a notional population split of 300 staff and 300 students.

The report however recommends that a more reliable, relevant and evidence based approach would be to provide facilities based on the actual modal split calculated from the survey data available from the 'UTS Sustainable Transport Plan' plus an allowance for growth. Applying the survey data to the proposed development, the Report calculates that the Proposal will generate a total of 35 cycling trips, and recommends a total of 44 bicycle parking spaces be provided – 28 Class 2 spaces for use by the staff or other regular users of the building, and 16 Class 3 spaces for use by visitors.

### *Emergency vehicles, service vehicles and deliveries*

Section 5 of the report, also outlines the Proposals site access arrangements for service vehicles, which can accommodate up to the size of a Small Rigid Vehicle (6.4 metre long) via the existing driveway off Blackfriars Street.

Emergency vehicle access will be effectively provided as per the existing arrangement from Buckland Street.

The vehicular access arrangements have been assessed against the requirements of AS2890.2 and AS2890.3 and vehicle swept path analysis and it has been concluded that given the site limitations, the proposed arrangements meet the intent of the standards and are fit for purpose.

*Green Travel Plan*

A site-specific Green Travel Plan will be prepared in consultation with the UTS Sustainability Group and relevant stakeholders, and this can be prior to the occupation of the building. It is noted that the plan cannot be completed until the final users of the building are known.

This plan will include the following details:

- The Key Objectives of the Green Travel Plan
- Existing Travel Conditions
- Methods of Encouraging Modal Shifts; and
- Management of the Plan

It should also be noted that, UTS has established an objective to provide bicycle parking for 10% of the maximum number of people actually on campus at any time, as part of their Cycling Strategy 2011, and committed to a significant increase in the number of bike parking facilities, showers and lockers that it will be providing on campus. It is in line with their target of achieving 25% mode share for active transport.

*CTPMP*

A Preliminary Construction Traffic and Pedestrian Management Plan has also been prepared and is included in the attachments to this EIS. It is anticipated that the CTPMP will be updated following the appointment of a principal contractor for the development and prior to the commencement of demolitions and excavations

| *Mitigation Measures – Transport and Accessibility* |
|---|
| • Update and implement the Preliminary Construction Traffic and Pedestrian Management Plan prior to the commencement of works |
| • Prepare and implement a green travel plan for the Proposal prior to the occupation of the building |

## 6.5 Ecologically Sustainable Development (ESD)

An ESD Report has been prepared by Arup Pty Ltd and is included in the attachments to this EIS. It describes how Proposal will showcase leading edge engineering programs to achieve a high performing ecologically sustainable development.

The report addresses ESD principles noting that each has a scope of coverage that extends well beyond that of a typical development such as the Blackfriars Precinct. However, it is envisages that these principles will be an overarching guide for the ongoing of the precinct and sets up a framework for ongoing ESD management structured around UTS Policies, Green Star, and Climate Change.

UTS Policies - Sustainability at UTS is embedded in the UTS Strategic Plan 2009 – 2018 and commits the university to include environmental sustainability principles and targets in all aspects of decision-making. The UTS Sustainability Strategy 2017 - 2020 provides the overarching framework guiding sustainability implementation. The strategy aims to fully integrate sustainability into campus operations, teaching and learning, research, and community engagement.

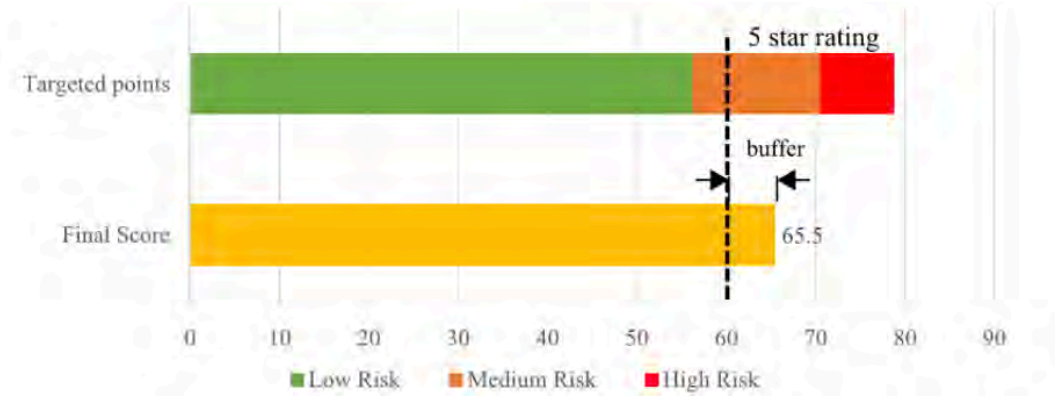


*Figure 15. Green Star target score*
*Source: ARUP ESD Report*

**Green Star** - UTS is utilising the Green Star tool developed by the GBCA to guide the application of ESD initiatives on the new development. The target rating under the tool is 5 star – equivalent to Australian Excellence in sustainable design.

To ensure that the target rating is achieved, the design team has reviewed a total of nearly 80 credit points – these have been reviewed against design and implementation risk to ensure that the minimum threshold for 5 star is exceeded. A summary of the total points targeted, and the risk-rated score is shown in Figure 15. The Green Star strategy will be finalised and implemented in the developed design stage. The overall targets are fixed and part of the University's commitment to sustainability.

### *Climate Change*

As part of the Green Star strategy, it is proposed that the project will develop a Climate Change Adaptation Plan. This will look at how the building design is developed to cope with predicted climate change impacts in the foreseeable future. It will also address resilience of the building in these circumstances. Typical strategies that will be reviewed as part of this assessment include:

- Allowance to increase services capacity
- Understanding of risk from flooding events, and appropriate mitigation
- Assessment of thermal comfort impacts in the case of increased temperatures
- Resilience of systems in extreme conditions

***Mitigation Measures – Ecologically Sustainable Development (ESD)***

- Implement the Green Star strategy and achieve a 5 Star Green Star rating

## 6.6 Heritage

### *Heritage Significance and Heritage Impact*

The site and its buildings are shown on the Sydney LEP heritage map as a heritage item number I170 – 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). The site and its buildings are not listed on the State Heritage Register.

A Heritage Impact Statement prepared by Paul Davies Pty Ltd is provided in the attachments to this EIS.

Section 5 of the statement provides an Assessment of Heritage Significance, drawn from the 2016 Conservation Plan for the site. The summary statement of significance is:

*The former Blackfriars School is of State-level historical significance for its role as host to a number of educational initiatives including the development of the State's first kindergarten, its adoption of the Montessori method of education and the development of the Blackfriars Correspondence School. The 1883 former School buildings and former Headmaster's Residence are also of State historical significance as remnants of the expansion period experienced by the Department of Education in the late 19th and early 20th centuries. The former School is also of State historical significance as a 'modern' 19th century public school and as a symbol of the State's attempt to monopolise primary education during this period.*

*The Former Blackfriars School is of State-level significance for its historical association with the development of educational reforms in the late 19th century both within Chippendale and on a State-wide basis and its historical association with its designer, George Allen Mansfield.*

*The two former School buildings and former Headmaster's Residence with the sandstone and cast iron boundary fence are of State aesthetic significance as examples of late 19th century architecture in the Victorian Free Gothic style and as fine examples of the work of a prominent Victorian architect, G.A. Mansfield.*

*The 1883 School buildings and former Headmaster's Residence are also of local aesthetic significance as a surviving late Victorian school complex in the Victorian Free Gothic style, atypical of the majority of NSW public schools at the time, although typical of Mansfield's later work.*

*The 1883 School buildings and Headmaster's Residence have local aesthetic significance as a remnant of an earlier cultural landscape now largely lost to the pressures of urban and industrial development.*

*The site of the Blackfriars school is of State Research significance as part of the former site of Cooper's Brisbane Distillery and later the Colonial Sugar Refinery, both important colonial industries linked to prominent colonial businessmen, for its archaeological potential associated with the former industries on the site and for the archaeological potential associated with its possible occupation and use by the Eora people, prior to and immediately after European settlement.*

The statement has concluded:

*"the proposal is considered to be an innovative approach to development of a new educational building on the site while respecting and enhancing the setting of the heritage significant buildings on the site" and "the proposed new Industry Hub building has been carefully designed and sited to respect the heritage buildings on the site and the heritage conservation area setting and has complied with the policies of the 2016 CMP prepared for the site, as well as all relevant LEP and DCP heritage objectives and controls".*

The Proposal also includes removal of a modern terrace attached to the northern elevation of the former Boy's School Building in order to provide for regulated access to the substation and an associated minor alteration of a window to a door. This assessment is detailed in the Supplement to the Heritage Impact Statement prepared by Paul Davies Pty Ltd and also in the attachments to this EIS. The assessment of this aspect of the Proposal has found:

*The proposed removal of the modern terrace implements the relevant CMP policies for removal of later additions and restores significance to the northern elevation of the former Boy's School Building.*

*The proposed alteration of a window to a door at the western end of the northern verandah of the former Boy's School building, without altering the width of the opening, is considered to be a minor alteration, in an area of the building which is not viewable from the street, and which has minimal heritage impact on the building.*

Accordingly it is considered that the Proposal has only minimal impacts in relation to heritage for the subject site, or in relation to any nearby heritage items and impacts can be mitigated.

*Archaeology*

An Archaeological Test Excavation Report prepared by Archaeological Management & Consulting Group, Aegis Heritage Pty Ltd is provided in the attachments to this EIS. The report addresses the archaeological potential and significance on the site and the impacts the development may have on this significance.

Three test trenches were excavated in March 2019 under a S140 Excavation Permit. Trench 1 found the Brisbane Distillery's stone floor at RL 5.01. Few architectural remains and little demolition discard underscore that the building was dismantled for salvage. The Distillery floor survives below 3.72m of levelling fills with only minor disturbed post-1878 archaeological remains. Deep test excavation in Trench 1 was complicated by subsoil conditions even more adverse than anticipated. Trench 2 removed 2.3m of post-1878 fill to reach RL 6.43 before it was flooded by groundwater and excavation ceased. Trench 3 ceased at 90cm depth for safety concerns due to two unmarked and unidentified modern services. .

The Report findings in relation to the test excavation results and the revised archaeological potential include:

- The study site has high potential for disturbed/salvaged basic architectural remains of the 1824 Brisbane Distillery but the Distillery building materials were comprehensively salvaged and the 1879 salvage and sale of "building stone and materials" likely removed all above ground material
- The reclamation fills above 19th century archaeological relics are not a homogenous single deposition event that occurred immediately after the 1878 decommission of the Distillery/Refinery.

The report summarises the revised archaeological potential based off test excavation results and historical research as follows:

*There is nil-low potential for ephemeral remains of the 1814-1824 Military Garden; High potential for disturbed basic architectural remains that survived salvage and low potential for deposits or industrial machinery for 1824-1852 Cooper's Brisbane Distillery; High potential for disturbed architectural remains and services for 1824-1878 Blackwattle Canal; high potential for disturbed yard remains from the 1824-1870 Flour Mill; high potential for disturbed yard and basic architectural remains for the 1852-1878 CSR phase of the Brisbane Distillery. Also, high potential for levelling fills, disturbed surfaces, minor architectural remains or services for both the Blackfriars Estate Subdivision 1878-1883 and the Department of Education phase 1883-1994.*

Based on the test trenching findings the Report has included a revised assessment of significance (Section 6) and a Revised Statement of Archaeological Heritage Impact (Section 7).

The Report states in relation to Heritage Impact Mitigation:

*The study site retains a range of relics significant at local and potentially State levels that are associated with the early and continuous 19th century private industrial development of Chippendale and late 19th century and 20th century public education. For details, refer to Section 6.4. Of the anticipated archaeological resource, it is currently in a salvaged truncated form, already compromised by 1994 concrete piles and may be compromised in an on-going sense as part of a heavily modified former natural water course prone to unstable subsurface conditions (Section 4.0).*

*Condition B9 of SSD 6746 requested that this archaeological report consider opportunities for conservation in situ (as a preference), development and interpretation. Though in situ conservation is the first and best line of defence for any archaeological resource, this is not a straightforward approach at this particular site with this particular proposed development (Section 7.2).*

The report has carefully considered the relationship between the Proposal's basement design and the archaeological potential of the site. It notes that the impact of the structural requirements of the building in isolation to the issue of basements and in particular its perimeter piling. Where developments are consistent with historical boundaries it notes "*contiguous piles are not such a danger to archaeology because historical development also respected property boundaries. At this study site, the historical property boundary is vast and the current site boundary cuts through former buildings.*" It also notes the expected impact of the piling from the former childcare building CB23 that is to be demolished, as well as the expected depth of the archaeological remains (at least 3.72m), which make excavation of individual piles unfeasible. The report states

*Thus, the basements are not the sole nor the major source of potential heritage impacts at site and should be considered in context with the proposed and 1994 piling and demolition and construction methodologies. If piles are required whether the two basements are in the design or not, then the basement excavation could be understood to offer archaeologists an opportunity to mitigate the uncontrolled damage that is already and unavoidably built into the design.*

The report concludes:

*…this study has concluded that the archaeological heritage impacts posed by the development could be mitigated by the full archaeological excavation and recording of the site, guided by an appropriate Research Design and Excavation Methodology and a comprehensive public interpretation of the archaeological results and the site's history and significance. The site owner may also wish to consider a public open day or invite local Sydney distillers.*

The report's key recommendations are:

*This study assessed that the site retains relics that range from potential local significance to potential State significance and has understood that the proposed development would impact those relics (Section 7.2). This study has concluded that those impacts could be mitigated by full archaeological salvage excavation, under an appropriate Research Design and Methodology, to record those relics for posterity, for research, for public interpretation and for future heritage planning in the Chippendale area.*

*If those conclusions are adopted, this study should be supplemented with the Archaeological Research Design and Methodology required by SSD 6746 Condition*

*B10 to enable the proposed development and guide the archaeological and heritage components of the ongoing project.*
*That forthcoming Research Design and Methodology could include direction to produce a Preliminary Interpretation Plan for the site's history, archaeology and heritage in response to Conditions B9 and B11 of SSD 6746. A Final Heritage Interpretation Plan for the study site could be completed once the results of full archaeological excavation are available to be incorporated.*

*Mitigation Measures – Heritage (Archaeology)*

- Full salvage excavation of the former Brisbane Distillery remains should be undertaken by suitably qualified archaeologists, under an appropriate Research Design and Methodology, and with the appropriate permissions from the NSW Heritage Council to be completed prior to the commencement of any building work other than demolition of existing structures (Building CB23, CB24 and associated structures) to ground level and any other site preparation works not involving ground disturbance. NSW Heritage Council staff are to be advised of the preliminary outcomes of the excavation prior to its completion.
- A comprehensive Site Heritage Interpretation Plan incorporating the outcomes of the archaeological excavation (both information and relics) is to be prepared and implemented prior to the occupation of the building

## 6.7 Aboriginal Heritage

Aboriginal Heritage is addressed in a report by Dominic Steel Consulting Archaeology in the attachments to this EIS. The report found no previously documented Aboriginal archaeological sites or objects occur within the study area or within close proximity. It also noted 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 levelling 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 land use and will unlikely to be found in situ in this originally active flood plain environment.*" The report assesses "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 artefacts. 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 artefacts be encountered.

*Mitigation Measures – Aboriginal Heritage*

- 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.

## 6.8 Noise and Vibration

An Acoustic Assessment Report has been prepared by ARUP Pty Ltd and addresses:

- Determination of noise limits for operational noise of the proposed development based on noise measurements of the existing noise environment
- Determination of construction noise and vibration criteria
- Recommendation of mitigation measures for construction and operational noise and vibration sources.

The noise assessment included a complete set of noise surveys to update assumptions regarding the existing noise climate.

The report has concluded that the development "will not have a significant impact on the environment around the development site, including sensitive receivers located within the UTS Blackfriars Precinct."

In relation to construction noise it has found that there will be noise impacts in surrounding uses and made detailed recommendations for the control of construction noise for the periods when an excess of the relevant NMLs is predicted. These are reproduced in the box below and included among the mitigation measures in section 8.2 of this EIS.

In relation to operational noise it considered noise from rooftop plant, patron noise from events to take place at the terrace on Level 3 and waste and recycling removal activities. It found:

- Noise modelling predictions have shown with standard acoustic treatment, noise from rooftop plant complies with established criteria.
- Management of waste and recycling removal activities associated with the Proposal would not significantly increase noise levels compared to the existing situation and no mitigation measures were required.
- Crowd noise from the use of the outdoor terrace is not predicted to create disturbances to surrounding receivers. In particular it found:

  *A worst case scenario of 100 patrons on the terrace at once has been assessed. An exceedance of evening intrusive trigger levels of 3 dB is predicted, which is considered minor, as a 2 dB increase in noise level is considered barely perceptible by the average person. Considering the likely typical use of the terrace would generate lower noise levels than predicted, and usage is likely to be sporadic, no significant disturbances due to the use of the terrace are predicted.*

  Despite these findings potential mitigation measures were also provided and have been incorporated into the Operational Plan of Management for the Proposal.

In light of these findings it is considered that the Proposal is unlikely to have significant noise and vibration impacts on nearby uses and that any potential impacts can be managed and mitigated.

| *Mitigation Measures – Noise and Vibration* |
|---|
| • Construction noise – implement the findings of the Acoustic Report, including preparing a noise and vibration management plan following the appointment of the contractor, which will specify the actual plant to be used and will include updated estimates of the likely levels of noise and the scheduling of activities, to provide effective mitigation |
| • Operational noise – Level 3 Terrace – potential mitigation (if required) – implement the plan of management, which includes the recommendations of the acoustic report mitigation should noise from the terrace causes unreasonable impacts |
| • Operational noise – Rooftop Plant – building services equipment to be used in the rooftop plant is to be provided with noise and vibration attenuation measures as required to ensure plant |

noise achieves compliant levels, including but not limited to one or more of the following:
- Specifying maximum sound power levels for plant and equipment
- Erecting barriers to shield nearby receivers
- Specifying maximum sound power levels for plant and equipment
- Acoustic louvres to control noise from plantroom ventilation openings
- Vibration isolators to reduce vibration input to the building structure
- Acoustic screens around external plant
- Sound absorptive treatments in plantroom spaces

## 6.9 Contamination

### 6.9.1 Soil and Groundwater Contamination

A Remedial Action Plan Report has been prepared by Douglas Partners Pty Ltd for the Proposal and is the attachments to this EIS. The report states:

> *Environmental assessment reports prepared by Coffey for the subject site in 1993/1994 identified past site uses including distillery, industrial (nature unknown) and a school.*
> *A review of the analytical results of the previous investigations conducted at the site by both Douglas Partners Pty Ltd (DP) in 2009 and Coffey International (Coffey) between 1993 and 1998 indicated that the majority of contaminants were at concentrations within the adopted site assessment criteria but that certain heavy metals, TPH and PAH contaminants were, present at a number of locations at concentrations which would be deemed as hotspots. The detected contaminants are generally considered to be associated with the presence of ash and slag, which is sporadically distributed in the filling material located on the site.*
> *No groundwater contamination issues have been identified.*
> *The objective of the remedial works to be undertaken is to provide a practical strategy which mitigates the potential for environmental and human health impacts posed by the presence of contaminated soil. The preferred remedial option is the isolation of the contaminated soil by covering with a properly designed physical barrier system. This involves the installation of an engineered physical barrier system to limit the exposure of site users and/or off-site receptors to contaminants. Physical barrier designs have been developed for the various areas of the proposed development including building slabs, paving, landscaping, retained trees and new tree plantings. No specific barrier system (retrofit) is intended for the existing heritage buildings which are being retained.*

The report identifies that remediation of the site as described above will make it suitable for its intended land use.

In light of these findings it is considered that the consent authority can be satisfied that the land can be made suitable for the proposed use.

### 6.9.2 Hazardous Materials Survey

The Waste Management Plan prepared by SMEC Australia Pty Ltd and in the attachments to this EIS reports the findings a hazardous materials survey conducted by HLA-Envirosciences Pty Ltd in February 2007 in relation to the structures to be demolished onsite:

*Building CB23 (former childcare):*
- No asbestos based materials were identified
- No Synthetic Mineral Fibre (SMF) was identified, however the ceiling space (not accessed during the assessment) was assumed to contain SMF thermal insulation

- No Polychlorinated Biphenyls (PCBs) were identified or considered likely
- Lead paint systems and/or dust were not tested as part of the assessment.

*Building CB24 (demountable classroom):*

- Asbestos – the rear (northern) gable end was lined with asbestos cement sheeting. Analysis identified the presence of Chrysotile asbestos. No other asbestos based materials were identified however further investigations were recommended to properly identify the interior sub board lining material
- SMF – granulated SMF thermal insulation was identified throughout the ceiling space
- No PCBs were identified or considered likely.
- Lead paint systems and/or dust were not tested as part of the assessment.

It also recommended that all inaccessible areas of both structures be assumed to contain hazardous building materials unless confirmed otherwise by a Competent Person.

***Mitigation Measures – Contamination***

- Implementation of the RAP and validation reporting

## 6.10 Utilities

### *Infrastructure Management Plan*

The Services Design Report (Mechanical, Electrical, Hydraulic and Fire Services) by Evolved Engineering Pty Ltd and the Services Drawings in the attachments to this EIS provides detailed information on the provision of utilities in relation to the Proposal's Mechanical, Electrical, Hydraulic and Fire Services including existing capacity, augmentation and easement requirements. The report has not identified any significant issues requiring mitigation.

### *Integrated Water Management Plan*

The Civil Engineering Report by Northrop Consulting Engineers and the Civil Engineering Drawings, in particular Drawing DA3.01 *Siteworks and Stormwater Management Plan* in the attachments to this EIS addresses the Proposal's responses to alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.

***Mitigation Measures – Utilities***

- Implement the Civil Engineering and Services Drawings

## 6.11 Contributions

The Blackfriars site is part of the South Precinct of the City of Sydney Development Contributions Plan 2015.

In accordance with its Section 1.3 the plan applies to development that needs consent, including complying development and Crown development. The following development requires a contribution:

- Development that is not excluded by Table 2 of Section 1.3.
- Development that results in a net population increase in accordance with section 2.1;

The subject development is one of the types listed in the plan's Table 2 and is therefore not excluded, and will result in a net population increase. As a result the development is identified by the plan as requiring a contribution.

Net population increase for educational establishments is assigned according to the Table 7: *Workforce occupancy rates – other development*, and for Tertiary institution – universities is one additional worker per 40m$^2$ of floor space and nil visitors and nil residents.

The Proposal will add 6,000m$^2$ this equates to an additional 150 workers.

The Proposal will demolish:

- Building CB23 with an estimated GFA of 360m$^2$
- Building CB24 with an estimated GFA of 90m$^2$

Accordingly the net increase in floor area will be 5550m$^2$, which at 40m$^2$ per worker equates to a net increase of 139 workers.

Using the formula from the Plan's Section 2.1 *Calculating the contribution* and the applicable rate from its Table 3*: Contribution rates, as at 13 September 2015* at $4,443 per worker for the south precinct to contribution under the plan would be:

Contribution = The net population increase of residents, workers and visitors × The contribution rate per resident, worker and visitor

i.e. Contribution = 139 × $4,443 per additional worker at September 2015

i.e. Contribution = $617,577 at September 2015

In order to index the contribution, the following formula from Section 2.1 of the Plan is used:

$$\text{Contribution}_{\text{at consent}} = \text{Contribution}_{\text{Plan (Sep 2015)}} \times (\text{CPI}_{\text{Consent}} \div 108.3_{\text{June 2015 CPI value}})$$

i.e. $\text{Contribution}_{\text{at consent}}$ = $617,577 x (115.9 $_{\text{June 2019}}$ ÷ 108.3)

i.e. $\text{Contribution}_{\text{at consent}}$ = $617,577 x 1.07

i.e. $\text{Contribution}_{\text{at consent}}$ = $660,915.74*

*This figure was accurate at the time of writing, however the Consumer price index (All Groups Index) for Sydney will update on October 31

### *Causal Nexus*

Despite the above under Section 7.11 *Contribution towards provision or improvement of amenities or services* (cf previous s 94) of the Act before the consent authority imposes a condition requiring the payment of a monetary contribution it must be satisfied that development for which development consent is sought will or is likely to require the provision of or increase the demand for public amenities and public services in the area.

The nominated facilities and infrastructure for which contributions are being levied are located largely within the far south of the Sydney local government area well removed from the UTS site and for the most part separated by the significant physical barrier of the main rail line between Central and Eveleigh railway lines. Accordingly, the prospect of UTS staff employed in at the Blackfriars Precinct utilising them is very low and arguable non-existent. The application of causal nexus is based on the principle that an increase in population as a result of development will place greater demand on existing public facilities or require the provision of new public facilities. A detailed examination of the schedule of works in the plan indicates that, by and large, the nominated new facilities will not be utilised by workers employed at the proposed development, and that the increase in workers will not contribute to the need for the nominated infrastructure. Thus

the physical nexus between the proposed development and the demand for services is extremely weak at best and non-existent at worst as set out below:

- Open Space: The open spaces described in the plan are generally located some considerable walking distance from the Blackfriars Campus and are unlikely to be used during work hours. Only two open space works are nominated by the plan within reasonable walking distance of the site – one is a pathway upgrade at victoria park and the other is a shade structure to a children's playground. Neither is likely to be used by workers at the UTS site. Accordingly it is considered the consent authority cannot reasonably be satisfied that the increase in worker population will contribute to the need for the plan's nominated open space works. Moreover, as part of the recent UTS city campus redevelopment a large area of landscaped open space (approximately 7000sqm) has been provided (Alumni Green) for use by staff and students and is open to the general public. The Proposal will similarly open up the interior of the Blackfriars Site as an outdoor landscaped space for use by staff and students and open to the general public. These university open spaces, which are available for use by the public, are considered to constitute a material public benefit within the meaning of Section 7.11(5) of the Act and must be taken into consideration before imposing a condition under Section 7.11(1).
- Community facilities: It is considered highly unlikely that staff in the proposed development would use the community facilities listed in the plan as UTS provides considerable and generally superior similar facilities on campus specifically for use by students and staff, and has made significant investments in this area over the past few years. The on-campus facilities include the 1700sqm gym in Building CB04 and the recently completed multi-purpose sports hall adjacent to the gym providing an additional 1800sqm of recreation space for sports such as basketball, badminton and the like, as well as the UTS library. The University also has a number of off-campus sports facilities. In addition, should a member of staff require a hall or similar for a social activity, numerous such spaces are available for use by staff. UTS space is also available to external bodies and community groups. UTS also operates two child care facilities (within walking distance of the proposed development – one on the same site) providing daily capacity for upwards of 200 children of staff and students at the UTS City Campus, with unused places available for non UTS parents. As the demand for places from the UTS student body is low, the quantum of provision for staff is deemed adequate to cater for any additional demand likely to arise from the relatively small number of new staff to be employed in the proposed development. These university facilities, many of which are available for use by the public, are considered to constitute a material public benefit within the meaning of Section 7.11(5) and (6) of the Act and must be taken into consideration before imposing a condition under Section 7.11(1). Conversely, the nearest facilities in the South Precinct nominated by the plan are more than 2km distant at Zetland, Alexandria, Green Square and St Peters and as a result are too far away to be of any practical use to workers at the Blackfriars Site and as a result unlikely to require augmentation as a result of the increased worker population arising from the development. Accordingly it is considered the consent authority cannot reasonably be satisfied that the increase in worker population has any demonstrable relationship whatsoever with the plan's nominated community infrastructure.
- Traffic and transport: UTS is committed to reducing dependence on private vehicles, and to this end, the development does not provide any car parking with the result that the vast majority of staff will use public transport. Therefore, increased demand

on the road system in the locality arising from the new workers of the proposed development is negligible. The nearest traffic infrastructure nominated by the plan is for traffic calming in three streets unlikely to be used by the workers of the development as they do not connect the site with nearby public transport, and cycleway works several blocks east of the site. There is thus only a very weak causal nexus between the development and the proposed road infrastructure nominated by the plan. Accordingly it is considered the consent authority cannot reasonably be satisfied that the increase in worker population will contribute to the need for the plan's nominated traffic and transport works.

- Stormwater drainage: The Proposal will not contribute to any need for enhancement of the existing drainage infrastructure, but rather it will lessen the need. This is because the Proposal provides on-site stormwater detention and rainwater harvesting. Thus the amount of run-off from the building will be negligible and less than currently is discharged from the site. In addition it is noted that the drainage works nominated by the plan are all more than 2km distant from the site and located within a different catchment from the Blackfriars Site (being in the Cooks River catchment not the Sydney Harbour catchment). Accordingly it is considered that the consent authority cannot reasonably be satisfied that the increase in worker population has any demonstrable relationship whatsoever with the plan's nominated drainage works.

*Levying the Crown*

It is noted that the plan does not specifically exempt the Crown from the payment of a levy, while it does exempt schools. Notwithstanding, it is considered that one public institution - in this case UTS a not-for-profit University registered as a charity with the Australian Charities and Not-for-profits Commission - should not be paying development contributions to another public service - in this case the Council. In its role as an education and research institution UTS provides an essential public service to the community and its facilities are available for use by the public in general. This contribution should be considered sufficient to offset any perceived demand from the proposed development on the City's services and infrastructure in the southern precinct.

Circular No.D6 - *Crown Development Applications and Conditions of Consent* issued by the Department of Urban Affairs and Planning 1995, which remains current, is relevant in this regard as it clarifies that development by the Crown under Part 4 or Part 5A of the EP&A Act should generally be exempt from Section 7.11 (cf S.94) contributions.

The Circular states that 'Crown activities providing a public service lead to significant benefits for the public in terms of essential community services and employment opportunities'... and 'these activities are not likely to require the provision of public services and amenities in the same way as developments undertaken with a commercial objective'.

In relation to Crown applications for education services, Circular D6 indicates that contributions should only be sought for drainage and specific local road upgrades and traffic management. Circular D6 recommends that no contributions should be levied for open space, community facilities, parking, and general local and main road upgrades. The Circular further states that there must be a nexus between the proposed development and the demonstrated need for additional public facilities arising from the development. As detailed above there is no nexus between the facilities the plan proposes and the proposed development.

It is also relevant to note that, consistent with Circular D6 no contributions were required from UTS on any previous major stages of development identified under the Concept Plan Approval for the City Campus Masterplan.

*Recommendation*

In light of the above it is considered the consent authority cannot reasonably be satisfied that the increase in worker population resulting from the Proposal will contribute to the need for the City of Sydney Development Contributions Plan 2015 nominated facilities and infrastructure and as a result should not impose a condition of approval requiring a contribution. This would also be consistent with the directions given by Circular D6.

If, contrary to the above view, the consent authority is of a mind to impose a condition requiring a contribution, then it is considered that it must far less than the amount suggested by the City of Sydney Development Contributions Plan 2015 and must not include any amounts for open space, community facilities, or drainage works and a nil or reduced amount for traffic works. In addition, if a contribution were to be imposed, it is considered that the consent authority must take into account the material public benefit provided by the Proposal's open space landscaped courtyard as well as the University's provision of other community facilities and open space at its nearby Main City Campus, and the amount of any contribution must be significantly reduced accordingly.

*Mitigation Measures – Contributions*

- As the consent authority cannot reasonably be satisfied that the increase in worker population resulting from the Proposal will contribute to the need for the facilities and infrastructure nominated in the City of Sydney Development Contributions Plan 2015 no contribution is required in accordance with s7.11 of the Act

## 6.12 Drainage

The Civil Engineering Report by Northrop Consulting Engineers in the attachments to this EIS addresses drainage, outlining the stormwater management strategy developed for managing stormwater runoff quantity and quality for the Proposal.

The main objectives of the stormwater management strategy are:

- To ensure sediment and erosion control measures can mitigate the risk of sediment runoff during the construction of the development;
- To achieve the required site storage requirement (SSR) and permissible site discharge (PSD) rate for the proposed on-site stormwater detention (OSD) system;
- To ensure water quality measures can meet the pollutant reduction levels specified.

These are reflected in the Civil Engineering Drawings also in the attachments to this EIS. Implementation of these objectives is shown in drawing DA3.01 *Siteworks and Stormwater Management Plan* in the Civil Engineering Drawings attached to this EIS.

The Proposal satisfies the OSD design specifications stipulated by Sydney Water based on the area of works, which are a SSR of 44m$^3$ and a PSD of 70L/s. In order to achieve these, the Proposal includes an OSD with a volume of 50m$^3$ and orifice plate of 183mm diameter, which achieves the required maximum discharge rate. The Proposal also includes an 87m$^3$ rainwater holding tank to provide non-mains water for irrigation of planting and supply for the proposed water feature.

*Mitigation Measures – Drainage*

- Provide on-site stormwater detention with a minimum site storage requirement volume of 44m$^3$ and a maximum permissible site discharge of 70L/s as per Sydney Water requirements

## 6.13 Flooding

The Civil Engineering Report by Northrop Consulting Engineers in the attachments to this EIS addresses flooding in its Section 2. The Report considered the mainstream and local area flooding constraints associated with the site including review of:

- City of Sydney Blackwattle Bay Catchment Floodplain Risk Management Plan 2015
- City of Sydney Interim Floodplain Management Policy 2014
- Site specific Flood Assessment report by WMA Water 2016

The report also considered the impacts of climate change as stipulated in Councils Floodplain Management Policy.

To comply with City of Sydney (Council) requirements the Report confirms, based on flood modelling assessment prepared by WMA Water, the Flood Planning Level for the Proposal (which includes basements) is to be 10.08mAHD (1% AEP level + 0.5m).

This level has subsequently been adopted as the level for the building's ground floor ensuring that all ingress points to the building are at or greater than this level.

*Mitigation Measures – Flooding*

- The ground floor slab (and any other ingress points to the basement such as ventilation ducts, windows, light wells, lift shaft openings, risers and stairwells) are to be set at RL10.08 to protect the basements from inundation for all flood events up to and including the 1% AEP level + 0.5m.

## 6.14 Biodiversity Assessment

Applications for State Significant Development are to include an assessment of the Proposal's biodiversity impacts in accordance with the requirements of the Biodiversity Conservation Act 2016 (the BC Act), including the preparation of a Biodiversity Development Assessment Report (BDAR) unless this requirement is waived in accordance with the BC Act and EP&A Act.

An assessment of the potential for biodiversity impacts as identified by the Act and the Regulations was carried out in relation to the Proposal. No potential for biodiversity impacts was identified. Based on this assessment, in accordance with Section 7.9 (2) of the Act, UTS requested that the Planning Agency Head and the Environment Agency Head determine that the Proposal is not likely to have any significant impact on biodiversity values and that no further biodiversity assessment under the Biodiversity Conservation Act 2016 or the Biodiversity Conservation Regulations 2017 is required in relation to the Proposal. The Request for a BDAR Waiver was lodged through the Department's Major Projects website in October 2018. In response to a request by the Department a revised Request was submitted in March 2019. Following a request in May 2019 from the Office of Environment and Heritage, a supplementary report was submitted in July 2019 considering the potential of the site to provide habitat for microbats. The supplementary report found no evidence of microbat activity on the site.

A waiver for the preparation of a BDAR was granted by the Office of Environment and Heritage dated 20 August 2019, and by the Department of Planning and Environment dated 23 August 2019. Copies of the letters advising of the waivers are in the attachments to this EIS.

Notwithstanding the above, UTS has also had regard to the Arborist Report prepared by Andrew Morton of Earthscape Horticultural Services (in the attachments to this EIS) which considered the potential of the vegetation on the site to provide wildlife habitat and which states (Section 5.2.2):

*All of the trees are exotic (introduced) or non-local native species that would be of some benefit to native wildlife. However, none of the trees contain cavities that would be suitable as nesting hollows for arboreal mammals or birds or other visible signs of wildlife habitation.*

On the basis of the information prepared for the BDAR Waiver requests and in the Arborist Report, it is considered the Proposal is not likely to have any significant impact on biodiversity values or on flora and fauna.

*Mitigation Measures – Biodiversity Assessment*

- None required

## 6.15 Sediment Erosion and Dust Controls

The objectives of sediment and erosion control for the development site are provided in the Civil Engineering Report by Northrop Consulting Engineers in the attachments to this EIS. They are to ensure that adequate measures are implemented prior to the commencement of construction and are maintained throughout the construction period to control sediment and erosion within the site. It proposes sediment and erosion control measures in accordance with:

- Principals outlined in the NSW Department of Housing Manual, "Managing Urban Stormwater,
- Soils and Construction", 4th Edition, March 2004 ("Blue Book").
- City of Sydney guidelines and specifications.

The proposed sediment and erosion control measures are also shown in drawing DA2.01 *Concept Sediment and Erosion Control Plan* in the Civil Engineering Drawings attached to this EIS. The measures will include but are not limited to:

- Temporary Construction Access;
- Dust Control Hessian;
- Mesh and gravel inlet filters; and
- Geotextile inlet filters.

*Mitigation Measures – Sediment Erosion and Dust Controls*

- Prior to any demolition or earthworks commencing on site, erosion and sediment control measures are to be implemented generally in accordance with the design drawings. These measures should be considered as a minimum, and the contractor must to modify the measures as required to suit the construction program, sequencing and techniques. These measures will include but are not limited to:
  - Temporary Construction Access;
  - Dust Control Hessian;
  - Mesh and gravel inlet filters; and
  - Geotextile inlet filters.

## 6.16 Waste

A Waste Management Plan has been prepared by SMEC Australia Pty Ltd and in the attachments to this EIS. It describes how the Proponent will minimise the generation of waste, reduce the amount of waste for disposal, appropriately manage waste streams in accordance with legislation, policies and guidelines, and best practice during the proposed demolition, construction phases and ongoing operations at the site. Considered a "Live Reference Document", the WMP required regular updating throughout the redevelopment.

The plan establishes the following targets for the management of waste for the project:

- Avoid the unnecessary production of waste where practical to do so
- Dispose of waste materials in accordance with legislative requirements
- Achieve specified numerical waste re-use / recycling targets (see its Appendix A)

No significant issues or impacts have been identified, and no and no special mitigation measures are required beyond those that would normally form the basis of any conditions of approval.

*Mitigation Measures – Waste*

- Waste management is to be implemented in accordance with the Waste Management Plan prepared by SMEC Australia Pty Ltd

## 6.17 Construction Hours

It is proposed that the construction hours will be in accordance with standard City of Sydney construction hours for areas outside the city centre, which at the time of writing this EIS were between the hours of 7.30am and 5.30pm Mondays to Fridays and 7.30am and 3.30pm Saturdays with no work to occur on Sundays or public holidays.

It is expected that the Proponent will be required to provide and implement a Construction Management Plan and Construction Traffic Management Plan prior to the commencement of works as part of the conditions of any approval.

*Mitigation Measures – Construction Hours*

- Construction hours in accordance with standard City of Sydney construction hours for areas outside the city centre

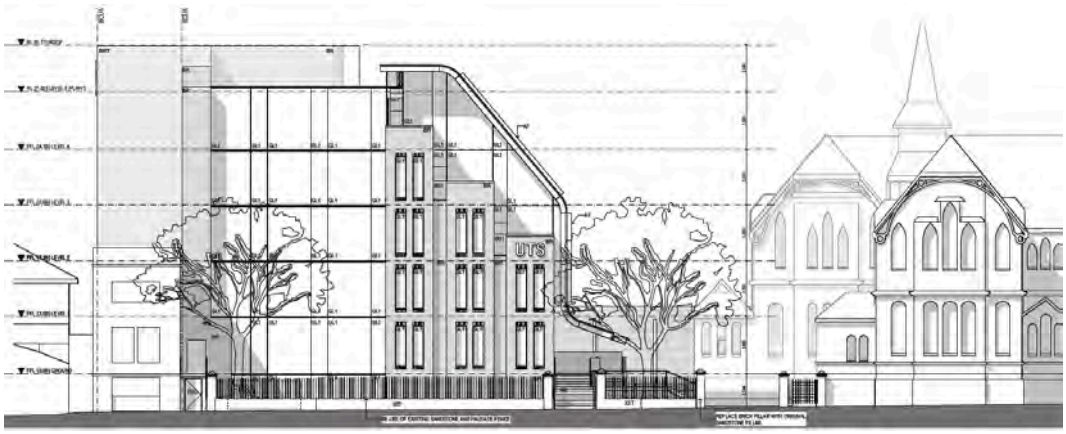


*Figure 16. West Elevation*
*Source: TZG*

# 7 Planning Assessment

An assessment of the proposed development was carried out in relation to the relevant matters for consideration under Section 4.15(1) of the Environmental Assessment Act 1979 and the results are presented in the following sections.

## 7.1 The provisions of any environmental planning instrument – Section 4.15 (1)(a)(i)

### 7.1.1 SEPP (State and Regional Development) 2011

The Proposal is declared as State Significant by the SRD SEPP in accordance with *Section 8 Declaration of State significant development* because it is not permissible without development consent under Sydney LEP 2012 and 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 estimated that the capital investment value of the development exceeds $30m (see Attachment 3). Accordingly the proposed development is State Significant Development.

### 7.1.2 SEPP (Educational Establishments and Child Care Facilities) 2017

It is considered that the land on which the proposed development is proposed to be located does not satisfy the test of being within the boundaries of an existing university and as a result none of the *exempt*, *complying* or *development permissible without consent* categories of development under the policy are available for the proposed development.

### 7.1.3 SEPP No. 55– Remediation of Land

Clause 7(1) of SEPP No. 55 outlines a consent authority "must not consent to the carrying out of any development on land unless *it has considered whether the land is contaminated.*

An Environmental & Hazardous Materials Assessment has been prepared by SGA Environmental for the subject building (see Attachment 14). Its environmental assessment consisted of consideration of potential impacts to soil and groundwater which included a review of previous reports, an assessment of soil, geological and hydrogeological setting review of historical site uses, review of regulatory notices under relevant environmental legislation, and site inspection. Its findings include that the site is suitable for commercial uses and that low-risk hazardous materials present on site were appropriately managed.

In light of these findings, and as the proposed development is entirely internal within an existing approved building and does not involve any excavations or ground disturbance, it is considered that the consent authority can be satisfied that the land is suitable in its present state for the proposed use.

### 7.1.4 SEPP No. 64 – Advertising and Signage

Under Clause 8 of the policy a consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied:
(a) that the signage is consistent with the objectives of this Policy as set out in cl.3 (1) and
(b) that the signage the subject of the application satisfies the assessment criteria specified in Schedule 1.

An assessment of the proposed development in relation to clause 3(1)(a) and Schedule 1 is provided in the table below.

| *Table 11. SEPP 64 Assessment* | | |
|---|---|---|
| *SEPP 64 Clause 3(1)(a)* | *Proposed Development* | *Complies* |
| To ensure that signage (including advertising):<br>(i) is compatible with the desired amenity and visual character of an area, and<br>(ii) provides effective communication in suitable locations, and<br>(iii) is of high quality design and finish | The proposed signs:<br>• are compatible with the desired amenity and visual character of an area providing wayfinding and building identification for the UTS Blackfriars Campus and are applied to the building in a manner that is consistent with building identification signage on nearby buildings;<br>• Provide effective communication to assist with building identification and wayfinding, consistent with the Sydney DCP controls in relation to building identification signage<br>• Are high quality using an aluminium light box shaping the individual letters, with white concealed LED illuminated UV coated opal acrylic fronts. | Yes |
| *SEPP 64 Schedule 1* | *Proposed Development* | *Complies* |
| **1 Character of the area**<br>• Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?<br>• Is the proposal consistent with a particular theme for outdoor advertising in the area or locality? | The proposed signs are:<br>• In keeping with the surrounding area of the subject site and with the signage on a number of other buildings in the immediate vicinity. | Yes |
| **2 Special areas**<br>• Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas? | The signs do not detract from the amenity or visual quality of the Chippendale Conservation Area and in particular are directed north and east, away from the conservation area and intended. | Yes |
| **3 Views and vistas**<br>• Does the proposal obscure or compromise important views?<br>• Does the proposal dominate the skyline and reduce the quality of vistas?<br>• Does the proposal respect the viewing rights of other advertisers? | The proposed signs:<br>• Do not obscure or compromise important views, being one of a number of building name signs in the locality<br>• Do not reduce the quality of any vistas, and has no impact on the viewing rights of other advertisers. | Yes |
| **4 Streetscape, setting or landscape**<br>• Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?<br>• Does the proposal contribute to the visual interest of the streetscape, setting or landscape?<br>• Does the proposal reduce clutter by rationalising and simplifying existing advertising?<br>• Does the proposal screen unsightliness?<br>• Does the proposal protrude above buildings, | The proposed signs:<br>• Are of a scale that is appropriate to the highly urban CBD setting<br>• Contribute to the visual interest of the streetscape with a high quality contemporary design<br>• Does not add to clutter and has no impact on existing signage<br>• Does not screen unsightliness<br>• Does not project above the building on which it is situated<br>• Does not require ongoing vegetation | Yes |

| *Table 11. SEPP 64 Assessment* | | |
|---|---|---|
| structures or tree canopies in the area or locality?<br>• Does the proposal require ongoing vegetation management? | management. | |
| **5 Site and building**<br>• Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?<br>• Does the proposal respect important features of the site or building, or both?<br>• Does the proposal show innovation and imagination in its relationship to the site or building, or both? | The proposed signs are highly compatible with the characteristics of the building in which it is located and is designed to fit within the existing building proportions and articulation. | Yes |
| **6 Associated devices and logos with advertisements and advertising structures**<br>• Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed? | The proposed signs incorporate the UTS font and identity as an integral part of the signs. | Yes |
| **7 Illumination**<br>• Would illumination result in unacceptable glare?<br>• Would illumination affect safety for pedestrians, vehicles or aircraft?<br>• Would illumination detract from the amenity of any residence or other form of accommodation?<br>• Can the intensity of the illumination be adjusted, if necessary?<br>• Is the illumination subject to a curfew? | The building identification signs are a light box illuminated with concealed lighting and individual letters with aluminium sides and a white/opal acrylic front. The signs:<br>• are not a glare source<br>• will have no impact on safety for pedestrians, vehicles or aircraft<br>• have been designed to avoid the need to reduce the intensity of illumination (although this facility could be included)<br>• are not in close proximity to any residential accommodation and so are not and are not proposed to be subject to a curfew or likely to impact residential amenity | Yes |
| **8 Safety**<br>• Would the proposal reduce the safety for any public road?<br>• Would the proposal reduce the safety for pedestrians or bicyclists?<br>• Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas? | The proposed signs are set back from street frontages and would be extremely unlikely to have any impact on safety for any road users | Yes |

The Proposal has been found to be consistent with and raise no issues with regard to the requirements of the SEPP.

### 7.1.5 Sydney Local Environmental Plan 2005

The Proposal has been assessed against, and is considered to be consistent with the plan. Compliance with the land use and development standards of the plan, as well as key relevant provisions, is summarised in the table below.

| *Table 12. Sydney LEP 2012 Assessment of Key Relevant Provisions* | | |
|---|---|---|
| **Relevant Objectives and Standards (summarised)** | **Proposal** | **Complies** |
| Part 1 | Not relevant/no issues | Yes |
| Part 2<br>Clause 2.3 Zone Objectives and Land Use Table | The proposed use of educational establishment is permissible with consent. The use is already approved by Concept Development Approval SSD6746. | Yes |
| Part 3 | Not relevant/no issues | Yes |
| Part 4 Principal development standards<br>4.3 Height of buildings | The Proposal is higher than the height of buildings development standard however is compliant with the envelope approved by Concept Development Approval SSD6746. A Request to vary the standard under Clause 4.6 is in the attachments to this EIS. | Yes |
| 4.4 Floor space ratio | The Proposal is higher than the FSR development standard however is compliant with the gross floor area approved by Concept Development Approval SSD6746. A Request to vary the standard under Clause 4.6 is in the attachments to this EIS. | Yes |
| Part 5<br>5.10 Heritage Conservation | The site and its buildings are shown on the Sydney LEP heritage map as a heritage item number I170 – 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). The site and its buildings are not listed on the State Heritage Register.<br>Under Clause 5.10.(4) of the LEP the consent authority must consider the effect of the proposed development on the heritage significance of the item or area concerned.<br>A heritage impact statement is provided in the attachments to this EIS. It has concluded that "the proposal is considered to be an innovative approach to development of a new educational building on the site while respecting and enhancing the setting of the heritage significant buildings on the site" and "the proposed new Industry Hub building has been carefully designed and sited to respect the heritage buildings on the site and the heritage conservation area setting and has complied with the policies of the 2016 CMP prepared for the site, as well as all relevant LEP and DCP heritage objectives and controls".<br>Clause 5.10(7) contains provisions for Archaeological sites. An archaeological assessment of the Proposal is provided in the attachments to this EIS.<br>Clause 5.10(8) contains provisions relating to Aboriginal archaeology. An Aboriginal archaeological assessment is provided in the attachments to this EIS and has concluded "the potential for Aboriginal archaeology to survive at the site is minimal". | Yes |
| Part 6<br>6.21 Design excellence<br>(1)-(4) development must exhibit exhibits design excellence | Under this clause, the consent authority must not grant consent to a new building unless it has formed an opinion that the building exhibits design excellence. Subclause (4) sets out the matters to which the consent authority must have regard in forming its opinion. A brief assessment of | Yes |

| *Table 12. Sydney LEP 2012 Assessment of Key Relevant Provisions* | | |
|---|---|---|
| **Relevant Objectives and Standards (summarised)** | **Proposal** | **Complies** |
| (5) Requires a design competitive process for certain development including…<br>(c) development for which a development control plan is required under clause 7.20,<br>(d) development for which the applicant has chosen such a process.<br>(7) A building demonstrating design excellence—<br>(a) may have a building height that exceeds the maximum height development standard of up to 10% of the amount shown on the map, r<br>(b) may have additional floor space of up to 10% of the floor space ratio development standard | these matters is provided in the following list:<br>a. it is considered that the building achieves a high standard of architectural design, materials and detailing appropriate to the building type and location. The design has been robustly tested by the rigours of a competition process emerging as the winning scheme. The materials and detailing have been carefully designed to harmonise with the adjacent heritage buildings as set out in the Design Report. The overall composition and materiality is considered to exhibit design excellence.<br>b. the form and external appearance of the Proposal will improve the quality and amenity of the public domain. On Buckland Street the masonry form, rendered in 'Gertrudis Brown' Bowral bricks, takes its cue from handsome brick bay window structure of the adjacent heritage item. The colour of the new brickwork forms a natural tonal foil to the existing brick neighbour. By bringing a similarly-scaled mass forward to the street alignment, the new building reinforces the presence of the Blackfriars buildings and clearly defines an articulated streetscape. Facing the open space created in the centre of the site, the upper façade of the building incline to the north, creating a compositional relationship between the two generations of buildings by mirroring key proportions and geometries of the historic buildings. In addition to ordering and balancing the new public space, this approach also supports solar access into the public space and the childcare playgrounds beyond. Altogether these are considered indicative of a design excellence approach.<br>c. No significant view corridors have been identified by the visual impact assessment at Section 6.1.8 above, which also confirms there are no adverse or detrimental visual impacts arising from the building design. The building is in keeping with and enhances its setting framing new views into the Blackfriars Campus from Buckland and Graton Streets. The building does not dominate or otherwise overpower other arguably significant views, such as views of the St Benedicts Church, the spire of which (still the tallest and most prominent structure in the block) will still be seen against the sky in views from the public domain at the Abercrombie, Wattle Street and Broadway intersection (Although whether the inner city or wider community would consider this a an appropriate level of prominence for an organisation with the current moral standing of the Catholic Church is very unclear).The understated nature of the building in views from the public domain and within the site are consistent with design excellence<br>(d)(i) The land is considered suitable for the development, a matter established by approval of the proposed use and density by Concept Development Approval SSD6746. | |

| *Table 12. Sydney LEP 2012 Assessment of Key Relevant Provisions* | | |
|---|---|---|
| Relevant Objectives and Standards (summarised) | Proposal | Complies |
| | Notwithstanding, the building form successfully manages the site's constraints including flooding, heritage, setbacks and overshadowing achieving a positive relationship with the site's heritage items, and delivering a high level of amenity for adjacent users indicative of design excellence.<br>(d)(ii) the existing and proposed uses and use mix is permissible under the LEP and the Education SEPP, approved by Concept Development Approval SSD6746 and will maintain a more than 130 year long continuity of education and innovation associated with this land consistent with a design excellence approach.<br>(d)(iii) heritage issues and streetscape constraints have been expertly managed. The Heritage Impact Statement states "the proposal is considered to be an innovative approach to development of a new educational building on the site while respecting and enhancing the setting of the heritage significant buildings on the site" and the design competition Jury Final Comments state "the Jury gave considerable thought to the Buckland Street frontage of the design including the issues of setbacks, tree removal, solar access, urban design and heritage response. The Jury requested that the TZG design be amended, so that the stepped brick frontage of the building on Buckland Street would be closer to the street, matching the setback of the western veranda of the adjacent former Girls' School heritage building, subject to limiting any impact from overshadowing. While the Jury recognised this change would result in the loss of up to three mature trees, the Jury considered that it was imperative to resolve the heritage and urban design response of the architectural form."<br>(d)(iv) the proposal at five storeys plus a setback plantroom is not considered to contain a "tower "as such, however the concentration of the site's development potential to the northern side of the site has been endorsed by the approval of Concept Development Approval SSD6746 as providing a superior result to shorter broader buildings on the site and achieves improved separation, setbacks, amenity and urban form for the overall site in a winning design of the highest quality.<br>(d)(v) the building bulk, and massing has been carefully modulated to create a built form that is highly responsive to its surrounds, and in particular the heritage buildings of the Precinct, including the building's transparent glass and timber façade, which exhibits its interior as a contemporary expression of UTS focus on the future, and the use of brickwork elevations that mirror key proportions, geometries and materials of the site's heritage building, and approach that is considered consistent with high quality design. | |

| *Table 12. Sydney LEP 2012 Assessment of Key Relevant Provisions* | | |
|---|---|---|
| Relevant Objectives and Standards (summarised) | Proposal | Complies |
| | (d)(vi) street frontage heights have been carefully composed through the competition process as noted above and refined to ensure that the building maximises solar access to adjacent dwellings in accordance with State wide Policy<br>(d)(vii) the design has responded to environmental impacts, with a high quality sustainable design that will achieve "Australian Excellence" with a 5 star Green Star rating, minimises overshadowing and maximises solar access to adjacent uses through the careful increase in key setbacks in accordance with State wide policy and reflected in the conditions of Concept Development Approval SSD67406 as modified, not given rise to any significant adverse visual and acoustic privacy or noise issues, the latter confirmed by the acoustic report in the attachments to the EIS, and managed and minimised potential wind and reflectivity impacts, confirmed by the Wind Report and Reflectivity Report in the attachments to this EIS<br>(d)(viii) will contribute to the achievement of the principles of ESD as identified in the ESD Report in the attachments to this EIS<br>(d)(ix) supports active travel with increased permeability and accessibility of the site for pedestrians, and the provision of significant cycle parking and end of trip facilities, but minimises vehicular and service access and circulation requirements, including not providing any carparking, all of which are considered to be indicative of design excellence,<br>(d)(x) has a significant positive impact on the public domain, with conservation of the perimeter palisade face, the likely inclusion of new street trees, and the provision of a new landscaped open space courtyard that can be used by the public<br>(d)(xi) has been found by the Heritage report to have a generally positive impact on the site's heritage items, enhancing their setting and contributing to the Chippendale Conservation Area<br>(d)(xii) achieving a high quality interfaces at ground level between the building and the public domain, skilfully managing the required flood level of the ground floor with access and heritage requirements<br>(d)(xiii) provided a high quality landscape design that brings an holistic approach to the precinct and will maintain the landscaped setting of the site's significant heritage buildings | |
| (5) Requires a design competitive process for certain development<br><br>(7) A building demonstrating design excellence<br>(a) may have a building height that | Subclause (5) sets out which development must undergo a design competitive process which includes the subject site captured by 6.21(5)(c) and (d). The Proposal has been the subject of a competitive design process, i.e. an architectural design competition carried out in accordance with the with the Department's endorsed competition process (generally | Yes |

| *Table 12. Sydney LEP 2012 Assessment of Key Relevant Provisions* | | |
|---|---|---|
| **Relevant Objectives and Standards (summarised)** | **Proposal** | **Complies** |
| exceeds the maximum height development standard of up to 10% of the amount shown on the map, r (b) may have additional floor space of up to 10% of the floor space ratio development standard | in accordance with the City of Sydney Competitive Design Policy and the Draft Government Architect's Design Excellence Competition Guidelines). The Proposal's design is the same design ultimately endorsed by the Competition Jury as exhibiting design excellence.<br>Accordingly, it is considered that the consent authority can be satisfied that the building exhibits design excellence in accordance having regard to the matters listed in subclause (4) and as the building is the winner of a competitive design process the Proposal is a *building demonstrating design excellence* .<br>As a result the Proposal is eligible for either a height or floorspace bonus of 10%, however it is considered this is of no consequence to the Proposal's height and floorspace was approved above this amount by Concept Development Approval SSD6746 . | |
| Part 7<br>7.3 Car parking spaces not to exceed maximum set out in this Division.<br>7.9 Other land uses<br>(3) Information and education facilities - maximum number of car parking spaces | This Division sets the maximum amount of ancillary car parking associated with various uses, however it does not set a minimum amount. As the proposal provides no car parking it does not exceed the maximum amount and is compliant with the clause. | No |
| Part 7<br>7.20 Development requiring or authorising preparation of a development control plan | Although the site area of the Proposal is greater than 5,000m$^2$ at 6,043m$^2$ and would normally be captured by this clause, in accordance with Section 4.23 *Concept development applications as alternative to DCP required by environmental planning instruments* of the Act this requirement is satisfied by the Approval of Concept Development SSD6746 and a DCP is not required to be prepared (not would it be of any use as DCPs do not apply to SSD in accordance with the SRD SEPP. | Yes |
| Clause 7.14 contains provisions relating to Acid Sulfate Soils. | An Acid Sulfate Soils Management Plan is provided in the attachments to this EIS. | |
| Clause 7.15 provides requirements for development on land below the flood planning level. | The Proposal incorporates flood protection measures, primarily the setting of the building's ground floor level at RL 10.08m AHD. For further information please refer to the Civil Report in the attachments to this EIS. | |

## 7.2 The provisions of any proposed instrument the subject of public consultation of that has been notified to the consent authority – Section 4.15(1)(a)(ii)

### 7.2.1 Draft SEPP (Remediation of Land)

The Department's January 2018 publication Remediation of Land SEPP – Explanation of Intended Effect states the key operational framework of SEPP 55 will be maintained in the new SEPP, which will:

- require consent authorities to consider whether the site is, or is likely to be, contaminated
- permit a consent authority to require additional information to satisfy itself as to whether the land is contaminated
- retain two categories of remediation work, being work that requires consent and work that can be carried out without consent.

and new provisions will be added in the new SEPP to:

- require all remediation work that is to carried out without development consent, to be reviewed and certified by a certified contaminated land consultant
- categorise remediation work based on the scale, risk and complexity of the work
- require environmental management plans relating to post-remediation management of sites or ongoing operation, maintenance and management of on-site remediation measures (such as a containment cell) to be provided to council.

In light of the Proposal's compliance with the existing SEPP 55 (noted above) it is considered that Proposal similarly raises no new issues or conflicts in relation the draft policy.

### 7.2.2 Draft SEPP (Environment)

This draft policy proposes to simplify the planning rules for a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property. These environmental policies will be accessible in one location, and updated to reflect changes that have occurred since the creation of the original policies. It will incorporate revisions to current SEPPs to remove unnecessary or out-dated policy, address emerging issues and locate provisions in the most appropriate level of the planning system, and involves consolidating the following seven existing SEPPs:

- State Environmental Planning Policy No. 19 – Bushland in Urban Areas
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
- State Environmental Planning Policy No. 50 – Canal Estate Development
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment
- Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No.2-1997)
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
- Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property.

As none of the existing SEPPs listed for consolidation has been identified as being relevant to the Proposal, it is considered that the Proposal similarly raises no new issues or conflicts in relation the draft policy.

## 7.3 The provisions of any development control plan – Section 4.15(1)(a)(iii)

In accordance with State Environmental Planning Policy (State and Regional Development) 2011 Clause 11(a) *Exclusion of application of development control plans,* development control plans do not apply to State significant development.

## 7.4 The provisions of any planning agreement under Section 7.4 – Section 4.15(1)(a)(iiia)

No planning agreements that relate to the land or the Proposal have been identified.

## 7.5 The provisions of the regulations – Section 4.15(1)(a)(iv)

In accordance with the Environmental Planning and Assessment Regulation 2000 construction of the development must be in accordance with the requirements of the Building Code of Australia.

## 7.6 The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality – Section 4.15(1)(b)

### 7.6.1 Natural and built environmental impacts

*Water*

No significant impacts have been identified, and the building will assist in controlling stormwater runoff through the use of water harvesting and on site detention.

*Soils*

No significant impacts have been identified. Existing historic soil contamination on the site will be remediated as part of the development.

*Air*

No significant impacts have been identified.

*Wind*

No significant impacts have been identified. A Wind Report is included in the attachments to this EIS and has concluded all areas are expected to have an acceptable wind environment with the proposed design" and made no recommendations to amend the design.

*Reflectivity*

No significant impacts have been identified. A reflectivity report is included in the attachments to this EIS and has concluded the "design as presented represents an acceptable level of reflectivity" and "the design will perform without an adverse disposition to its environs in consideration of solar reflection and glare".

*Noise*

The Acoustic Report in the attachments to this EIS has examined the likelihood of the Proposal to generate noise.

In relation to construction noise it has found that there will be noise impacts in surrounding uses and made detailed recommendations for the control of construction noise for the periods when an excess of the relevant NMLs is predicted. These are included among the mitigation measures in section 8.2 of this EIS.

In relation to operational noise it considered noise from rooftop plant, patron noise from events to take place at the terrace on Level 3 and waste and recycling removal activities. Noise modelling predictions have shown with standard acoustic treatment, noise from rooftop plant complies with established criteria. Crowd noise from the use of the outdoor terrace is not predicted to create disturbances to surrounding receivers, and potential mitigation measures have been provided. Management of waste and recycling removal activities is recommended to minimise impacts at surrounding receivers, including consultation with receivers when developing a removal schedule. It also found that no sleep disturbance impacts are predicted due to the operation of the Research. Similarly the mitigation measures noted above are reported in Section 8.2 of this EIS.

*Flora & Fauna*
No significant impacts have been identified.

*Waste*
No significant impacts have been identified. The Waste Management Plan details the waste impacts of the Proposal. No significant issues or impacts have been identified.

*Natural Hazards*
No significant impacts have been identified, with flooding managed by the setting of the ground floor level height.

*Site Design and Internal Design*
The proposal which exhibits design excellence and is the winner of a design competition is considered to be an innovative approach to development of a new educational building on the site while respecting and enhancing the setting of the site's heritage significant buildings. The internal design offers high internal quality with access to natural light, floorplate flexibility and excellent outlook.

*Context & Setting*
No significant impacts have been identified. Issues relating to the context and setting are partly established by Concept Development Approval SSD6746. This Stage 2 application provides a building exhibiting design excellence that has been through a design competition process and is highly compatible with the context and setting. The heritage assessment has found that "the building has been carefully designed and sited to respect the heritage buildings on the site and the heritage conservation area setting".

### 7.6.2 Social and economic impacts in the locality:

*Visual Impacts*
No significant impacts have been identified. The building, which is in accordance with Concept Development Approval SSD6746, is composed of materials finishes and design articulation that exhibit design excellence and which establish a highly compatible and appropriate element in existing views in and around the site designed and sited to respect the heritage buildings on the site and the heritage conservation area setting. A visual analysis has found the proposed building to be in keeping with its context, and likely to improve view quality compared to the existing development on the site.

*Privacy and Amenity Impacts*
No significant impacts have been identified.

Issues relating to the privacy and amenity are partly established by Concept Development Approval SSD6746, which established the approved envelope and as a result the acceptable level of overshadowing of adjacent land. This Stage 2 application provides shadow diagrams that demonstrate strict compliance with the approved envelope and its approved level of overshadowing.

In relation to privacy impacts, the east facing glazing and the use of the roof on the eastern edge of Level 3 as a deck has the potential for increased overlooking of the St Benedicts Church and Notre Dame courtyard. The Notre Dame courtyard functions as a public space ancillary to an educational establishment and the church – these uses do not give rise to privacy issues in the way that, for example, residential uses might. The Notre Dame courtyard and the church are typically open to the public throughout the year and effectively public (i.e. privately owned but publicly used) spaces rather than private. Accordingly as public space, the courtyard is not adversely impacted by overlooking. To the contrary, in fact, it is generally considered highly advantageous to have good and

increased levels of passive surveillance of public (and quasi-public) open spaces. The current western boundary of the St Benedicts Church and Notre Dame Courtyard is a blank masonry wall of 5m height offering no opportunities for passive surveillance. The Proposal's Level 3 rooftop deck would improve passive surveillance of this area and act to improve the security and safety of the Notre Dame courtyard space. Accordingly, it is assessed that use of the deck would result in positive impacts in relation to public safety.

No other amenity impacts have been identified.

*Economic*

The proposed development will contribute to the NSW economy by providing educational and research and development uses. With a multiplier effect as high as 4, the proposal's creation of up to almost 500 research and development jobs can be expected to lead to as many as 2,000 new jobs in the local economy.

*Social*

No significant impacts have been identified.

The Proposal respects and is compatible with the heritage significance of the site, and will include a full excavation of the site's archaeology resulting in improved interpretation of the site's significant history and heritage.

*Cumulative Impacts*

No cumulative impacts associated with the Proposal have been identified.

## 7.7 Suitability of the site for the development – Section 4.15(1)(c)

Having regard to the characteristics of the site and its location both within its immediate context and within Chippendale, the Proposal is considered suitable for the site as it:

- Is located within the Sydney City sub-region which is nominated as a 'Global Centre'
- Is in a locality specifically identified for educational and health related uses
- Will take place in a highly modified urban environment and will not impact on biodiversity values
- Will contribute to the enhancement and activation of a key CBD edge location
- Will accord with the principles of Ecologically Sustainable Development by contributing to the proper management, development and conservation of the artificial resources of the site
- Is within walking distance of other services and amenities, including public transport, retail and employment opportunities offered by the CBD.

## 7.8 Any submissions made in accordance with the Act or the Regulations – Section 4.15(1)(d)

Public consultation has occurred in relation to the preparation of this EIS and further consultation in accordance with the Regulations will form part of the assessment of the application.

## 7.9 The Public Interest – Section 4.15(1)(e)

The Proposal is consistent with the relevant planning controls affecting the site and is considered to be able to operate without risk to life, asset and property. It is noted that the Proposal supports an existing public university education facility providing research and training and research that will benefit the community. The Proposal will create 128 FTE construction jobs and 498 FTE operational jobs. No significant impacts have been

identified and the Proposal is considered to comply with all the requirement of the Stage 1 Concept Development Approval. Where the proposal does not comply with development standards for the land, an appropriate request under Clause 4.6 of the LEP to vary the standard has been made, notwithstanding that the Proposal complies with the approved envelope of Concept Development Approval SSD6746.

Accordingly it is considered that the Proposal in in the public interest.

# 8 Environmental Risk Assessment and Mitigation

## 8.1 Environmental Risk Assessment

The Department requires 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 13. 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 |

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

| Consequence | Likelihood A | B | C | D | E |
|---|---|---|---|---|---|
| 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 5. 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 14. Environmental Risk Assessment*

| Aspect | Potential impact | Unmitigated Risk | | | Treatment | Residual Risk | | |
|---|---|---|---|---|---|---|---|---|
| | | L | C | R | | L | C | R |
| Built Form and Urban Design | Poor design quality | D | 4 | L | Implement Design Quality Strategy | D | 4 | L |
| Staging | None identified | - | - | - | No mitigation required | - | - | - |
| Environmental Amenity | Inability respond proactively to any amenity impacts | C | 3 | M | Implement Operational Plan of Management | D | 4 | L |
| Traffic & accessibility | Construction traffic impacts | C | 4 | L | Implement an update CTPMP | D | 4 | L |
| | Poor uptake of active and public transport by users | C | 4 | L | Implement the Green Travel Plan prior to occupation | D | 4 | L |
| Ecologically sustainable development | Irreversible increase in energy and water usage and waste generation | C | 3 | M | Implement project Green Star Strategy and achieve a 5 Star Green Star rating | D | 4 | L |
| Heritage | Destruction of the archaeological resource | B | 5 | VL | Full archaeological excavation under an appropriate Research Design and Methodology | E | 5 | VL |
| | Loss of the site's historic cultural relevance | C | 5 | VL | Implementation of a comprehensive Site Heritage Interpretation Plan | E | 5 | VL |
| Aboriginal Heritage | Destruction of significant Aboriginal cultural relics | D | 4 | L | Implement a watching brief and stop work protocol if artefacts are uncovered | E | 5 | VL |
| Noise and Vibration | Noise impacts on building occupants or the public | D | 4 | L | Implement the findings of the Acoustic Report and implement the Operation Plan of Management | E | 5 | VL |
| Contamination | Health impacts on building occupants or the public | D | 4 | L | Implement the RAP and validation reporting | D | 4 | L |
| Utilities | None identified | - | - | - | No mitigation required | - | - | - |
| Contributions | Inappropriate diversion of public monies | A | 3 | M | Do not impose a contribution in accordance with the Act s7.11 | E | 5 | VL |
| Drainage | Downstream impacts from excessive stormwater | C | 2 | M | Implement Sydney Water requirements for OSD | D | 4 | L |
| Flooding | Damage to public infrastructure and risk to human life | C | 2 | M | Construct the ground level at the 1% AEP plus 0.5 freeboard i.e. AHD 10.08m | D | 4 | L |
| Biodiversity | None identified | - | - | - | No mitigation required | - | - | - |
| Waste | Increased resource consumption and diversion to landfill | C | 2 | M | Implement Waste Management Plan | D | 4 | L |
| Waste | Increased resource consumption and diversion to landfill | C | 2 | M | Implement Waste Management Plan | D | 4 | L |
| Construction Hours | Health impacts from unabated noise and construction activity | C | 3 | M | Condition the hours of construction as per the City's construction hours policy | D | 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 15. Compilation of Mitigating Measures*

| |
|---|
| ***Mitigation Measures – Built Form and Urban Design*** |
| • Implement the architectural and landscape design |
| ***Mitigation Measures – Staging*** |
| • None required |
| ***Mitigation Measures – Environmental Amenity*** |
| • Implement the Operational Plan of Management |
| ***Mitigation Measures – Transport and Accessibility*** |
| • Update and implement the Preliminary Construction Traffic and Pedestrian Management Plan prior to the commencement of works |
| • Prepare and implement a green travel plan for the Proposal prior to the occupation of the building |
| ***Mitigation Measures – Ecologically Sustainable Development (ESD)*** |
| • Implement the Green Star strategy and achieve a 5 Star Green Star rating |
| ***Mitigation Measures – Heritage*** |
| • Full salvage excavation of the former Brisbane Distillery remains should be undertaken by suitably qualified archaeologists, under an appropriate Research Design and Methodology, and with the appropriate permissions from the NSW Heritage Council and completed prior to the commencement of any building work other than demolition of existing structures and removal of trees to ground level and any other site preparation works not involving ground disturbance. NSW Heritage Council staff are to be advised of the preliminary outcomes of the excavation prior to its completion.<br>• A comprehensive Site Heritage Interpretation Plan incorporating the outcomes of the archaeological excavation (and potentially incorporating both information and relics it discovers) is to be prepared and implemented prior to the occupation of the building |
| ***Mitigation Measures – Aboriginal Heritage*** |
| • Should any Aboriginal objects be discovered during future ground disturbance works at the site, activities within the vicinity of the find location are to stop and the Office of Environment and Heritage is to be informed of the discovery in accordance with Section 91 of the National Parks and Wildlife Act. |
| ***Mitigation Measures – Noise and Vibration*** |
| • Construction noise – implement the findings of the Acoustic Report, including preparing a noise and vibration management plan following the appointment of the contractor, which will specify the actual plant to be used and will include updated estimates of the likely levels of noise and the scheduling of activities, to provide effective mitigation |
| • Operational noise – Level 3 Terrace – potential mitigation (if required) – implement the plan of management, which includes the recommendations of the acoustic report mitigation should noise from the terrace causes unreasonable impacts<br>• Operational noise – Rooftop Plant – building services equipment to be used in the rooftop plant is to be provided with noise and vibration attenuation measures as required to ensure plant noise achieves compliant levels, including but not limited to one or more of the following:<br>– Specifying maximum sound power levels for plant and equipment<br>– Erecting barriers to shield nearby receivers<br>– Specifying maximum sound power levels for plant and equipment<br>– Acoustic louvres to control noise from plantroom ventilation openings |

| *Table 15. Compilation of Mitigating Measures* |
|---|
| – Vibration isolators to reduce vibration input to the building structure<br>– Acoustic screens around external plant<br>– Sound absorptive treatments in plantroom spaces |
| ***Mitigation Measures – Contamination*** |
| • Implement the RAP and validation reporting |
| ***Mitigation Measures – Utilities*** |
| • None required |
| ***Mitigation Measures – Contributions*** |
| • In the absence of a demonstrated causal nexus between the proposal and the services for which the contribution is collected, no contribution should be imposed. |
| ***Mitigation Measures – Drainage*** |
| • Provide on-site stormwater detention with a minimum site storage requirement volume of 44m$^3$ and a maximum permissible site discharge of 70L/s as per Sydney Water requirements |
| ***Mitigation Measures – Flooding*** |
| • The ground floor slab, and any other ingress points to the basement such as ventilation ducts, windows, light wells, lift shaft openings, risers and stairwells are to be set at RL10.08 to protect inundation for all flood events up to and including the 1% AEP level + 0.5m. |
| ***Mitigation Measures – Biodiversity Assessment*** |
| • None required |
| ***Mitigation Measures – Sediment Erosion and Dust Controls*** |
| • Prior to any demolition or earthworks commencing on site, erosion and sediment control measures are to be implemented generally in accordance with the design drawings. These measures should be considered as a minimum, and the contractor must to modify the measures as required to suit the construction program, sequencing and techniques. These measures will include but are not limited to:<br>– Temporary Construction Access;<br>– Dust Control Hessian;<br>– Mesh and gravel inlet filters; and<br>– Geotextile inlet filters. |
| ***Mitigation Measures – Waste*** |
| • Waste management is to be implemented in accordance with the Waste Management Plan prepared by SMEC Australia Pty Ltd |
| ***Mitigation Measures – Construction Hours*** |
| • Construction hours in accordance with standard City of Sydney construction hours for areas outside the city centre |

# 9 Justification of the Proposal

## 9.1 Justification and Benefits

UTS wishes 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 6,000 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.

The new building will complement an existing building 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.

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.

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 6,000 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 128 FTE construction jobs and 498 FTE new innovation research jobs when operating. 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 2,000 additional local jobs in the Central Sydney area.

It is considered that the Proposal is well justified for reasons including:

- The education establishment use on the site is compatible with nearby education, commercial, transport, hotel, residential, and other uses
- Use as an educational establishment maintains a consistent long term use of the wider area as an education precinct (stretching back 130 years)

- The Proposal integrates suitable educational development in close proximity to the major public transportation bus corridor on Broadway and the major railway interchange of Central and minimises carparking and private vehicle use
- The Proposal will contribute to the State strategic planning priorities for Broadway and Camperdown as an education and health precinct
- The Proposal supports the viability of centres by providing employment with a specific focus on education-related land uses focussed towards job creation and innovation.

## 9.2 Analysis of Alternatives

A 'do-nothing' alternative is not an option on this site, as the former childcare centre building (CB23), and demountable classroom (CB24) both of which are vacant, are considered unfit in their current state for use by the University and are appropriate for redevelopment.

UTS also requires the support of appropriately designed new spaces in order to grow while delivering on key core policy including:

- The UTS learning model, which provides a learning foundation that is practice – oriented, globally focussed and research – inspired. This requires.
- The UTS Research Strategy, which promotes collaboration with industry partners and overseas institutions and includes significant increases in research student numbers to provide a base from which UTS can be competitive in international research.

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 have separation from teaching spaces (e.g. 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.

While UTS have a number of smaller landholdings in the vicinity of the City Campus none of these have the required development potential to accommodate the Industry Hub, or are already committed to existing UTS functions. UTS has recently leased space in order to accommodate the Graduate School of Health, however considers that not only is appropriate lettable space not available in the immediate context and required timeframe, it is unlikely to deliver an appropriate feel and identity for the project.

As a result the University considers that the Blackfriars site is the only option for the creation of this facility currently available that has a scale and location that ensures an appropriate campus feel and identity for the facility, considered to be critical to the success of the project.

## 9.3 Ecologically Sustainable Development

The UTS Environmental Sustainability Policy includes the Proponent'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 following table sets out a response to the principles of ecologically sustainable development justifying the carrying out of the development

*Table 16. Principles of ecologically sustainable development*

| *Principles of ecologically sustainable development* | *Response* |
|---|---|
| ***precautionary principle***, 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:<br>(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and<br>(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 fundamental consideration | The Proposal has no significant impact on biological diversity and ecological integrity. |
| ***improved valuation, pricing and incentive mechanisms***, namely, that environmental factors should be included in the valuation of assets and services, such as:<br>(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,<br>(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,<br>(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 Proposal maintains the base building's sustainability features, and provides compatible sustainability features at the level of the fitout to ensure the overall achievement of the building's approved sustainability performance. |

# 10 Conclusion

This EIS has been prepared to consider the environmental impacts of the Stage 2 detailed building design for a new university research building at 4-12 Buckland Street, Chippendale for UTS.

This assessment has addressed the issues required in the Secretary's Environmental Assessment Requirements issued on 30 November 2018 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 demonstrates a high degree of consistency with the existing approvals for the land.
- The Proposal will result in minimal environmental impacts, all of which can be mitigated by implementing the mitigation measures identified in Part 8 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 education and wider economy, supporting the creation of new jobs in the heart of Sydney's global economic arc in accordance with key State policy
- The existing transport infrastructure supports the proposed development which minimises the use of private vehicles and encourages the use of public transport

It is considered that the Proposal has substantial merits, and it is requested that the Minister, or his delegate, approve the Proposal under Section 4.38 of the Act subject to the mitigation measures identified in this EIS.

# Index of Attachments

URBANAC

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