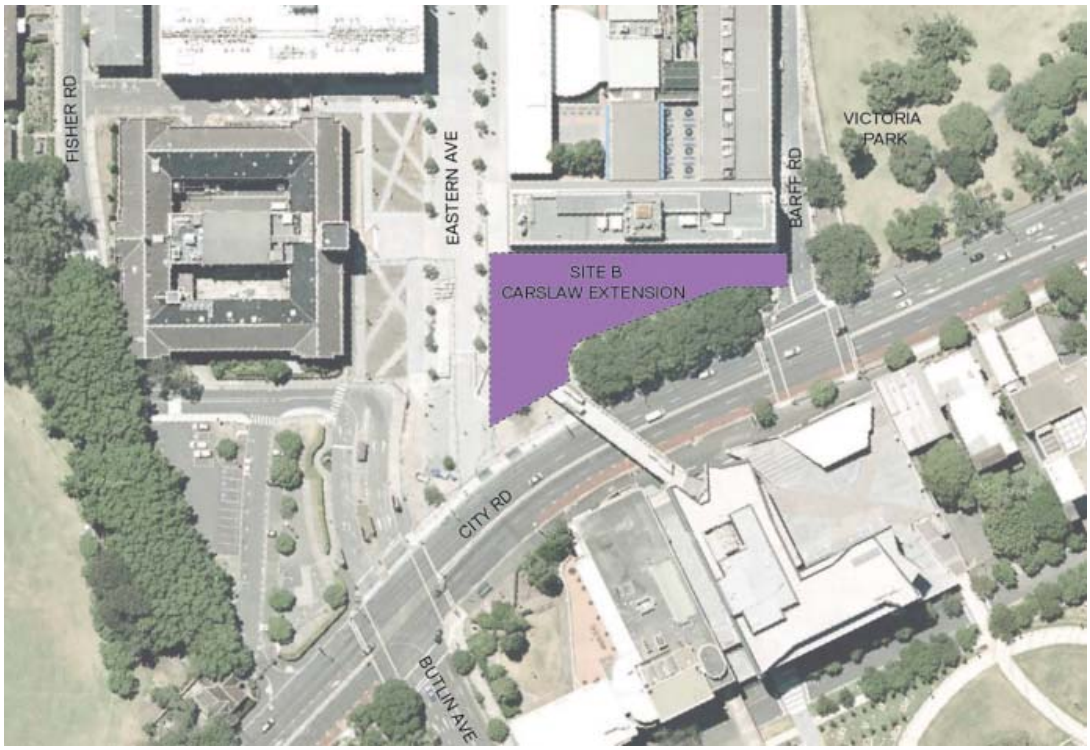
The University of Sydney
Camperdown-Darlington Campus

Extension to F07 Carslaw Building & Associated Campus Domain Works

Request for Secretary Environmental Assessment Requirements (SEARs) – State Significant Development



April 2015

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APPENDICES:

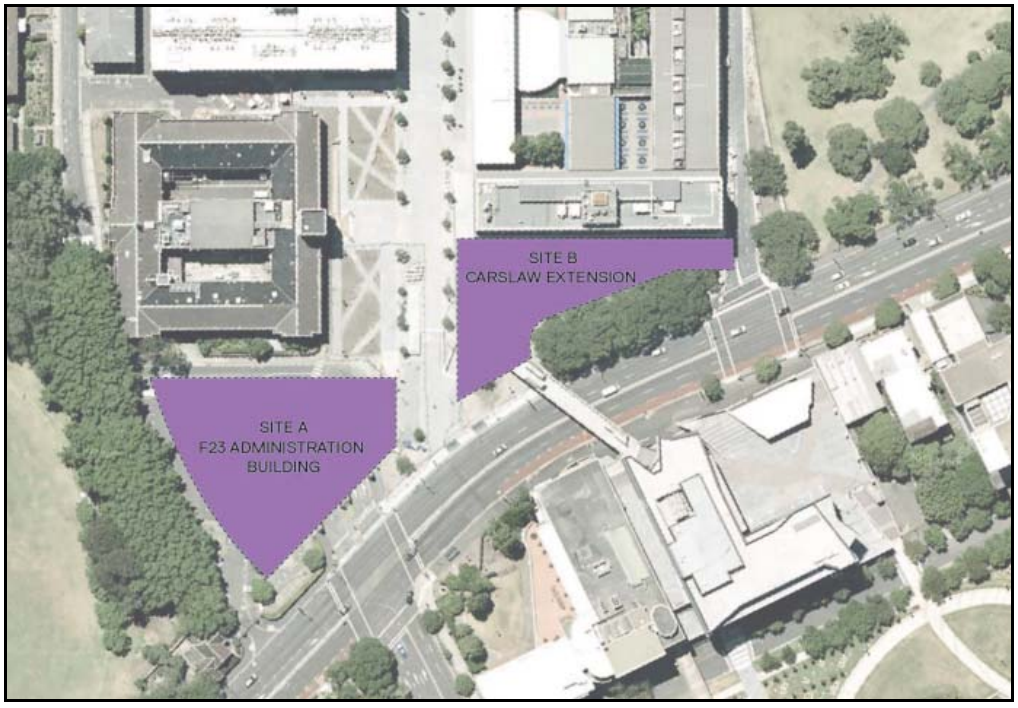
1.0 EXECUTIVE SUMMARY

In accordance with clause 3 & Schedule 2 of the *Environmental Planning & Assessment Regulations 2000 (the Regulations)*, and clause 15 & Schedule 1 of the *State Environmental Planning Policy (State & Regional Development)* 2011 (the SRD SEPP), The University of Sydney (the University) is seeking the Department of Planning (DPE) Secretary's confirmation of and response to the following matters in response to the proposed extension of the Carslaw Building on the University's Camperdown campus:

1. Confirmation that the project qualifies as State Significant Development (SSD).
2. Secretary Environmental Assessment Requirements (SEARs) for the application; and
3. Waiver of a number of standard SEAR requirements for this particular project.

The University is deemed to be Crown pursuant to section 88 of the *Environmental Planning & Assessment Act 1979* (the EPA&A Act), and pursuant to clause 226 of the *Regulations*.

The development site (**Site B Carslaw Extension** on the plan below) is located on the southern boundary of the Camperdown campus, fronting City Road north, east of the campus' pedestrianised Eastern Avenue, and west of Barff Road and Victoria Park. The site currently occupies a driveway and open space area.



This SEAR report also acknowledges a separate SEAR application for an adjoining **Site A F23 Administration Building** (see plan above), also the subject of a University SSD application to the Department and lodged concurrently with this proposal.
Site A is addressed as part of a consistent southern Gateway design approach to the Camperdown campus.

This proposal is for the physical extension of the F07 Carslaw Building on the Camperdown campus. This building extension will relocate and consolidate the School of Molecular Biology and School of Biological Sciences to the Carslaw site and within the Faculty of Science. The proposal also includes alterations to, and continuation of, the northern end of the City Road footbridge. These works are strictly limited to the University's land (campus domain) and will produce an elegant and lightweight upper level connection to the Carslaw Building extension and to Eastern Avenue for direct and continuous pedestrian access. The site is partly a Greenfield site and also occupies a service lane connecting to Barff Road.

The project site is not listed as a State or local heritage item. The Camperdown campus does lie within the City of Sydney's Camperdown Conservation Area (Sydney LEP 2012).

This Project qualifies for *educational purposes* as defined by the *SRD SEPP* Schedule 1, Clause *15 Education Establishment*, and which incurs a capital investment value (CIV) of more than $30 million. The CIV for the project is detailed at SEAR report section 12, and is valued at $66,900,000.

The University's *Campus Infrastructure and Services* department (CIS) is responsible for the built environment on all University of Sydney campuses. CIS has developed the Concept Campus Improvement Program 2014-2020 (CIP), being a development implementation program for future campus precincts with accompanying building envelopes, as addressed by SSD 13_6123. The CIP was approved by the Minister for Planning on 16 February 2015.

This current project for the Carslaw extension was not included within any CIP precinct as it constitutes an individual development site, and is not a precinct requiring broader building envelopes. The CIP consent condition A4 does not preclude additional development outside the identified CIP precincts. This process was discussed and confirmed with the Department's project assessments team. Furthermore, this SSD project will address and confirm that the proposed works will not be inconsistent with the Concept CIP approval (SSD 13_6123) and will satisfy the requirements of S83(D) '*Status of staged development applications and consents'* of the EPA&A Act.

The project will continue to foster the *educational establishment* uses and strengths of the campus, ensuring it serves as a primary economic and employment destination and provider through its role in education, research and health pedagogy. This role is consistent with the DPE's recently released *Vision for Sydney in 2031*.

Accompanying this report is documentation addressing site topography and survey, in-ground services, project brief, notional building envelopes, the University's competitive design process, QS Capital Investment Value, consultation program, and project staging.

It is anticipated that this summary will assist the Department in its preparation of Secretary Environmental Assessment Requirements (SEARs).

2.0 THE UNIVERSITY OF SYDNEY - STATE SIGNIFICANT DEVELOPMENT & CURRENT PROJECTS

The University is recognised as Sydney's oldest and principal University specialising in tertiary educational and research pedagogy. In 2014 the University attracted some 50,000 enrolments, employed over 7,500 permanent staff, and generated over 5,000 jobs in the areas of construction, facilities, maintenance and services. The University is a significant employment node and destination, as well as a future employment provider through its qualified students.

The University's Camperdown-Darlington campus is located within the Global Sydney 'city-shaper', and the Sydney Education & Health precinct of the DPE's *Vision for Sydney in 2031*. The University's past submission to the DPE (2014) on the draft Metropolitan Strategy highlighted the significant contribution that the University brings to this precinct through high volume of domestic and international student enrolments, academic/ staff/ construction workforce, and as a centre of excellence in education and research pedagogy.

The University has successfully managed and developed an impressive significant capital projects program over the last 5 years with a value exceeding $735 million. Examples include the University's four major transformational projects:

- $385 million Charles Perkins Centre for Obesity, Diabetes and Cardiovascular Disease (completed and opened 2014);
- $250 million Abercrombie Precinct Redevelopment Project: Sydney Business School (under construction); and
- $110 million Australian Institute for Nanoscience (under construction).
- $58 million Queen Mary Building: Student Accommodation (under construction).

Transformational Projects completed/under construction: The Charles Perkins Centre, Abercrombie Business School and the Australian Institute of Nanotechnology.

These four major transformational projects on or near the Camperdown-Darlington campus provide increased construction employment as well as full time academic and research and teaching and administrative employment growth in the sectors of Medicine, Nanoscience and Business. The University's investment in these projects attracts research grants resulting in specialised jobs and encourages and supports collaboration with relevant industry sectors.

This combined works program represents a current injection into the NSW economy of more than $1 billion in construction and related activities.

Details of these projects can be found on the following website
http://sydney.edu.au/about/profile/building-projects/index.shtml

3.0 RELATIONSHIP TO THE CONCEPT CAMPUS IMPROVEMENT PROGRAM SSD 13_6123

The University has also adopted the Campus Improvement Program (CIP) for the Stage 1 implementation strategy of development and infrastructure to the Camperdown-Darlington campus. The CIP is a State Significant Development that was approved by the Minister for Planning (SSD 13_6123) on 16 February 2015.

The CIP provides a total of six campus precincts with appropriate building envelopes, generic University land uses, transport and access arrangements, landscape concepts, heritage and design principles for the University's campus. Budgetary forecasts for the CIP project an additional estimated $1.4 billion in construction spend over a ten-year period.

However, the proposed Carslaw Extension project did not form part of the CIP Stage 1 SSD proposal, as it comprises an individual development site not requiring a "Precinct" building envelope approach. The decision to treat and lodge this proposed site development as an individual SSD proposal was endorsed in discussion with Department of Planning staff.

The Minister's approval of the CIP SSD13_6123, includes the following condition:

> *"A4. This approval does not preclude additional development sites outside the identified Campus Improvement Program precincts, subject to future approval (where required) and the demonstration of satisfactory environmental impacts."*

The Environmental Impact Statement (EIS) report that will accompany the SDD proposal and documentation will also address the requirements of S83D (2) of the EPA&A Act:

> ***83D Status of staged development applications and consents***
>
> *(2) While any consent granted on the determination of a staged development application for a site remains in force, the determination of any further development application in respect of that site cannot be inconsistent with that consent.*

This assessment will address relevant conditions that apply to the broader campus that are contained in the Minister's SSD 13_6123 consent.

4.0 THE UNIVERSITY OF SYDNEY PROFILE



Located in the heart of Sydney, and on various satellite campuses throughout NSW. The University of Sydney (the University) is unique among Australia's leading universities in the breadth of disciplines it offers the following:

Student mix: The University targets a mix of between 60 and 70 per cent undergraduate student load, up to 15 per cent postgraduate research student load, and between 20 and 30 per cent postgraduate coursework student load. Our international students, from more than 130 countries, make up almost a quarter of the student body.

Student enrolments: The University currently has 50,206 enrolments and 39,124 EFTSL. Domestic student load is targeted between 65 and 70 per cent, and international student load is targeted between 25 and 30 per cent. **The University does not envisage a significant increase in student enrolments.** The campus is close to capacity, and the University is consequently targeting an increase in the quality of teaching, learning, research facilities and infrastructure.

Employment profile: In 2014, the University employed approximately 7,500 full time staff, comprising 2,100 administrative staff and 5,400 faculty staff. At August 2014, the University's student: staff ratio was 17.6:1.

Construction and capital works activity: The University is committed to a variety of construction and capital work programs that include major transformational projects (the Abercrombie Business School, the Australian Institute for Nanoscience, and the Queen Mary Building student accommodation), existing building upgrade works, and regular building facilities and maintenance works. The University currently generates more than 2,000 construction jobs on the two major transformational projects as well as over 200 capital works building projects. The University also employs more than 3,000 inducted contractors for facilities maintenance and related services.

World-Class Research: The University consistently ranks among the top 100 universities in the world. The federal government's 2012 Excellence in Research Australia initiative rated 100 per cent of our fields of research at world standard or above in all 22 broad discipline areas in which we were rated. In 2013, the University was the second highest recipient of funding from granting bodies listed on the federal government's Australian Competitive Grants.

The University's current strategic plan is also investing initiatives to support the current and future research talent towards the NSW workforce through technical disciplinary training, more general training in research leadership and management, skills in commercialisation and communication, and in developing cross-disciplinary research capabilities. For example the Charles Perkins Centre delivers sustainable solutions for obesity, diabetes and cardiovascular disease, while our China Studies Centre aims to improve Australia's cooperation and relations with China and better understand its impact on the world. Work such as this makes a real difference by informing decisions in government, industry and the wider community. We collaborate closely with external partners and regularly take part in government, parliamentary inquiries and policy reviews.

Degrees of Inspiration: The University's student experience has been repeatedly recognised as the best in the country by the National Union of Students.
We encourage our students to get involved in life outside the classroom, participate in our 200+ social clubs and share their views in University decision-making.

We also contribute to Sydney more widely through our championship-winning sports teams, ground breaking art and music, and fascinating museums, one of which houses the largest collection of antiquities in the southern hemisphere. The University's museums and art gallery attracted more than 95,000 visitors in 2012, while our Sydney Ideas public lecture series welcomed almost 13,000 people to hear globally prominent speakers discuss the key issues facing the world, from human rights to climate change.

Social Inclusion Strategies: The University has adopted, and implements, the following social inclusion strategies:

- The *Wingara-Mura Buna Barrabugu* strategy informs how the University works as a community to empower Aboriginal and Torres Strait Islander cultures and perspectives as part of its identity; expands Aboriginal education, research and engagement to become a core activity of the University.

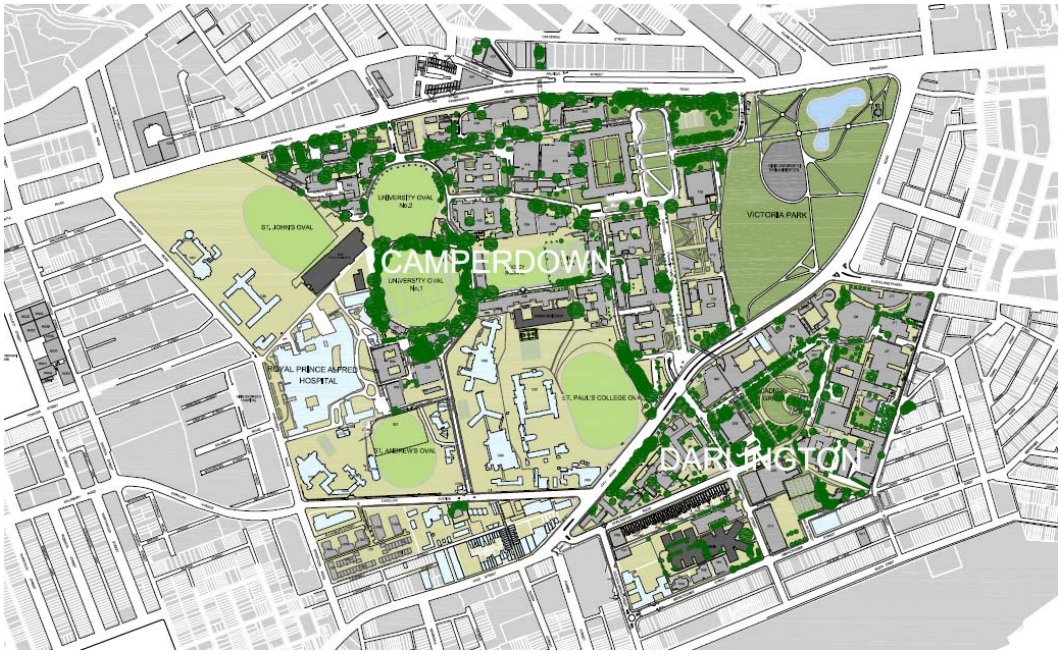
- The University's *Student Well-being* strategy. The student accommodation program incorporates a providing informed resources, services and support to students from both within the University and from the wider community. This requirement will result in increased community capacity, linked up services (government, non-government and university) and assist in the University fostering social inclusion for all students.

5.0 THE CAMPERDOWN-DARLINGTON CAMPUS

The University's Camperdown-Darlington Campus is located in the heart of Sydney, is well connected to principal railway stations and bus services close to the CBD, and enjoys the following metrics:

- **Campus Size**: 49 hectares (Camperdown 33; Darlington 16);
- **Student enrolments**: 50,206 enrolments; 70% domestic; 30% international
- **Construction Jobs**: 5,100 construction; contractors facilities maintenance
- **Built environment**: 237 buildings (186 habitable);
- **Employment**: 7,554 full-time staff: 2,109 administrative; 5,400 faculty

The campus site the subject of this application is highlighted in the plan below.



6.0 THE PROPOSED SSD PROJECT

This request for SEAR's for the Carslaw Building extension seeks the following:

1. Confirmation that the project qualifies as a State Significant Development Application;
2. Confirmation of the Secretary Requirements for matters to be incorporated into the SSD *Environment Investigation Statement* and associated documentation; and
3. The waiving of certain standard SEARs. Our review of various SEARs previously issued by the DPE for a range of education projects has identified that a 'standard set' of SEARs seems to be issued to applicant's notwithstanding some of the individual detail, context and circumstances associated with individual projects. The original intention of the 'Request for SEARs' document is to allow information to be presented to the DPE to allow a tailored set of SEARs to be issued for projects that required the applicant to address only the relevant issues allow proper consideration at the development approval phase, rather than preparing multiple reports that were either irrelevant, had already been previously addressed through other means, or that could appropriately be dealt with at Construction Certificate stage.

   This section of the Request for SEARs provides information and justification seeking the DPE to waive certain requirements that have previously been requested in many SEARs requirements that are not relevant to this particular project. They include:

   - A **Design Competition** as required by the *Sydney LEP 2012* – refer to this report section 11 for justification.
   - **European and Aboriginal Archaeological studies**: The University has prepared the following past European and Archaeological studies for the Camperdown campus which conclude there to be no potential archaeological remnants for this site:
     - Grounds Conservation Management Plan 2014 (accompanying the CIP SSD 13_6123 documentation) does not identify either Sites A or B as sites with potential European or Aboriginal Archaeological (refer CIP drawing *A-DIA-29-Rev B* at Attachment G); and
     - Archaeological Survey for an Aboriginal Heritage Assessment, Jo McDonald Cultural Heritage Management Pty Ltd, June 2004

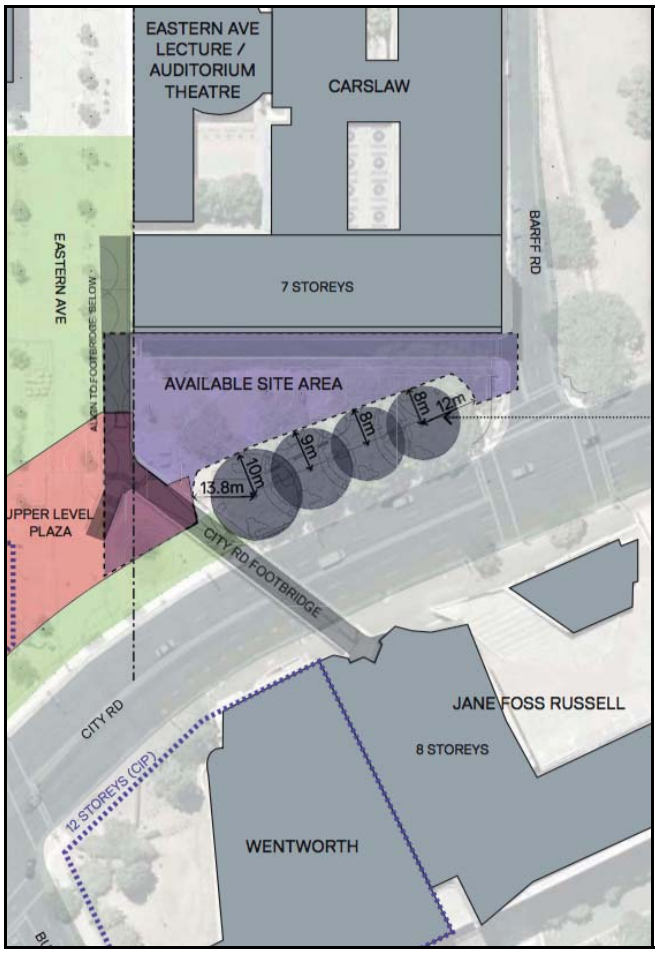
     Relevant extracts of these studies are included at **Attachment G** of this report.
   - **Flooding Study:** The CIP (SSD 13_6123) included a Flood Risk Management Study for the whole campus prepared by WMA Water. The study concluded the Carslaw extension site not to be affected by a 1:100 year flood event (map at **Attachment H**).
   - **Geotechnical Study:** The University has already prepared a desktop Geotechnical Study by Golder Associates for both this site and the adjoining F23 Administrative Building site. The summary of this report (titled *Discussion*) is found at **Attachment I** of this report and is sufficient to inform the SDD design of the project. The University will prepare a full Geotechnical Study as part of the Construction Certificate stage of this project.

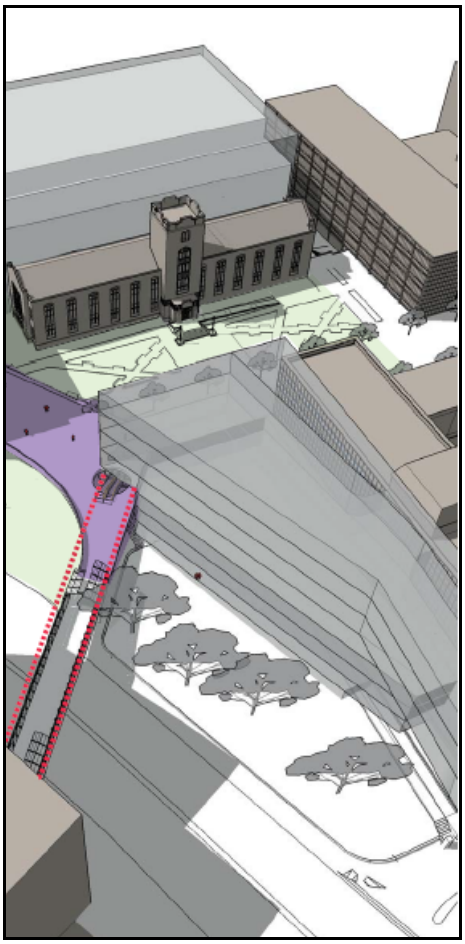
- **Construction Traffic Management**: The preparation of a CTM can be addressed through consent conditions once a final design (amended where necessary) and SSD approval is issued. The CTM will be developed in full knowledge of all relevant SSD consent conditions and through the consequential construction management plan.

To assist the Department in coordinating the SEAR's, the University confirms that the future SSD application will provide details on:

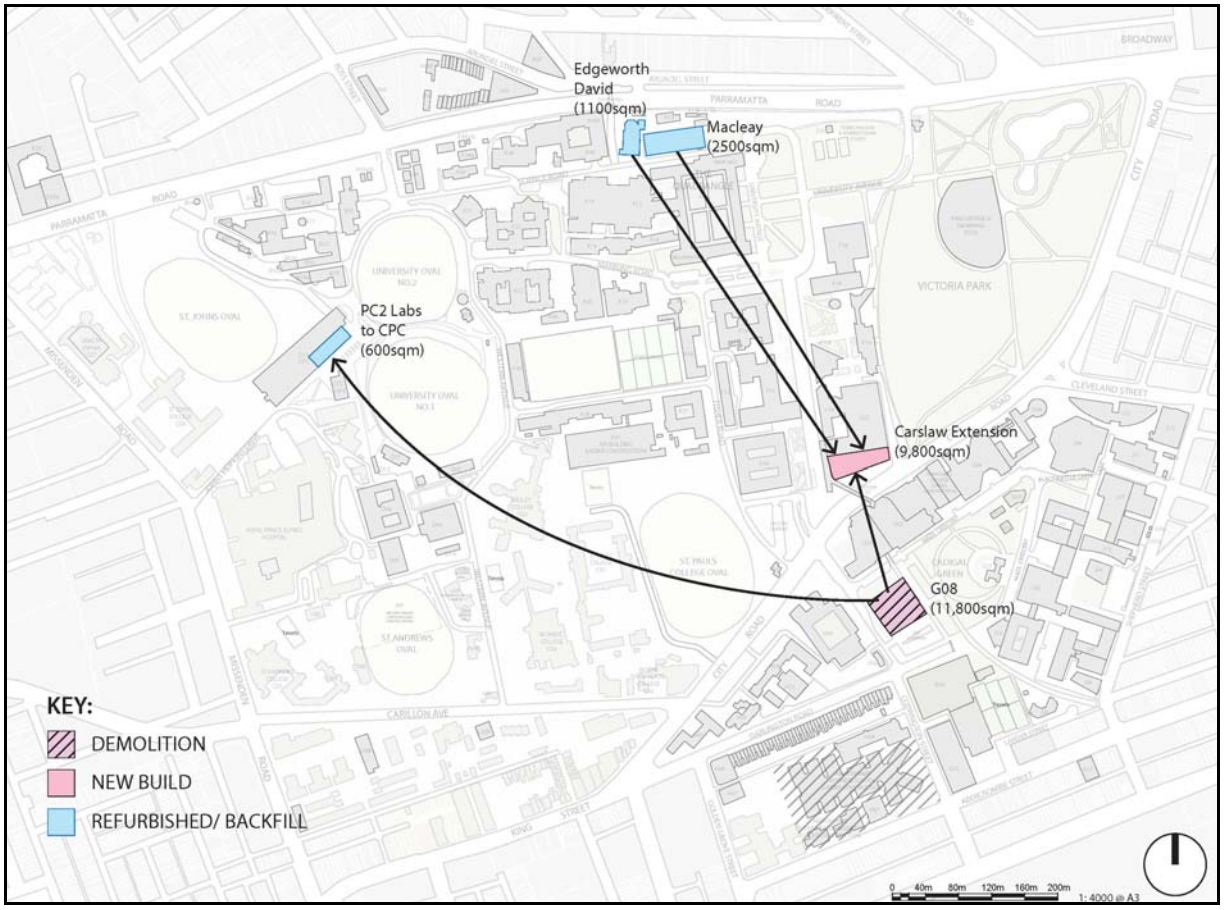
- The use of the proposed building is consistent with the definition of educational establishment and the campus SP2 Infrastructure land use zone defined under the City of Sydney LEP 2012;
- Building and design solution for site B;
- Vehicle/services/pedestrian/cycle solutions for site B and connections to surrounding locality; and
- Associated landscaping, heritage and infrastructure considerations and solutions

The **Project proposal** is for an extension to the southern side existing F07 Carslaw building, including works to the surrounding Campus Domain including an upper level connection form the City Road footbridge (over University land only) as indicated in the site plans below:





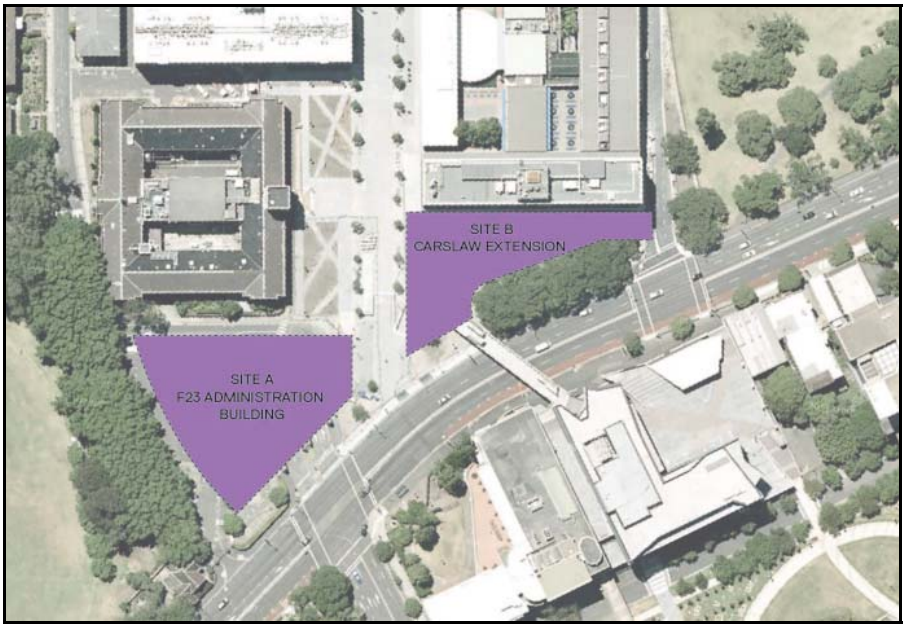
The **Project vision** for the building and surrounding area is to re-locate the School of Molecular Biosciences and the School of Biological Sciences within the Faculty of Science as building extension to southern (existing) F07 Carslaw building. Currently, these Faculty schools are significantly fragmented around several campuses, located in numerous buildings.



The architecture of the Carslaw Building extension and campus domain connection will complement the surrounding architecture (i.e. the new F23 Building) whilst expressing its individual identity in response to the functional use and site context.

The proposed Site B Carslaw Extension (this proposal) and the adjoining Site A F23 Building development sites will become as an important gateway to Eastern Avenue and the University's Camperdown Campus at the University's intersection of Butlin Road, Eastern Avenue and City Road.

The urban and landscape design of both Sites A & B interface with City Road, and the CIP approved (SSD 13_6123) building envelopes for *Merewether Precinct* and the *City Road* Precinct opposite, will be fully considered as part of the design submission.



It is imperative that the Carslaw Building Extension is seamlessly connected to Eastern Avenue, giving priority to pedestrians and creating a sense of arrival to the Campus. There is an opportunity to review the landscaping, covered spaces and general amenity along the southern end of Eastern Avenue, and to recreate the public realm as a gateway site. It is also proposed to extend the City Road footbridge, where it alights on the Camperdown campus, with upper level connection to the new F23 and Carslaw extension buildings.

At the heart of the project is the University vision to:

- Upgrade the quality of Campus facilities.
- Support World research excellence and promote collaborative research facilities.
- Created shared learning and teaching pedagogy between Faculties.
- Recognise and celebrate Aboriginal significance.
- Develop a healthy and sustainable Campus environment.
- Ensure equitable access to and through Campus.
- Respect the heritage “Sandstone University” significance.

7. PROJECT FUNCTIONAL REQUIREMENTS

SITE B: EXTENSION TO THE CARSLAW BUILIDNG

The extension is required to expand existing functions within the Carslaw building and to re-locate teaching, research and Faculty accommodation from other locations, as part of the rationalisation and collaboration of the Faculty of Science. In particular, the co-location of the School of Molecular Biosciences and the School of Biological Sciences with other Faculty Science schools within the Carslaw building.

LOWER GROUND FLOOR

This area has direct service access from Barff Road to the east. Core research equipment, plant and services will be located at this lower level, with direct adjacency to the lower ground floor of the existing Carslaw building.

GROUND FLOOR

The ground floor will be accessed directly from Eastern Avenue, providing an alternate entry to the building. The ground floor use may be an extension to the existing learning hub, or a mix of general teaching space and computer labs. This level will be highly activated, and will add to the improvement of the amenity of the area below and underneath the existing footbridge.

FIRST FLOOR

This level enables the existing teaching labs and associated facilities to be extended. Consideration will be given to servicing and core location, together with circulation and milling spaces.

This level has the opportunity for a connection to the existing footbridge, enabling an additional entry point to the teaching levels.

TYPICAL UPPER LEVELS

These levels will be a mix of teaching and research labs, with the upper levels being offices, workstations and general flexible Faculty spaces.

8. EPI, DESIGN, & POLICY REQUIREMENTS

8.1 State Policy

The EIS report accompanying the SSD project will address the relevant provisions of:

- *State Environmental Planning Policy (State & Regional Development) 2011* (the SRD SEPP) - clause 15 & Schedule 1.
- *State Environmental Planning Policy No 33 (Hazardous and Offensive Development) 2011*
- *State Environmental Planning Policy No 55 (Remediation of Land)*
- *State Environmental Planning Policy (Infrastructure) 2007*

8.2 City of Sydney

The EIS report accompanying the SSD project will address the relevant controls and guidelines of the:

- *City of Sydney LEP 2012*; and
- *City of Sydney Development Control Plan 2012.*

8.3 SSD 13_6123

The EIS report accompanying the SSD project will address the

- relevant conditions of the Minister's consent for the Concept Campus Improvement program SSD 13_6123; and
- *S83D(2) Status of staged development applications and consents* of the *Environmental Planning Assessment Act 1979*

8.4 University of Sydney Design Standards

The purpose of the University's Design Standards is to inform architects and other consultants when preparing planning and project documents for the University.

The University's *Architectural Standard* provides:

- Details of the University's minimum requirements for Planning and Architectural Design
- A reference document to enable consistency with the design and engineering objectives.
- Support of the University's Vision for the built environment and world's best practice.

The standard addresses key objectives:

- Quality architectural design which responds, enhances and complements the environment
- Appreciation of the heritage context and cultural history of the campuses

- Value for money in all aspects of the project
- The design of low maintenance buildings and environments
- Longevity in life of construction and a whole of life approach to design
- Standardisation of space, to minimise individual specialisation of spaces
- Flexible space design, to future proof building usage for expansion or adaption to new uses
- Safety in design.

Other design considerations subject to concept design development may include but are not limited to:

- Privacy and noise from City Road
- General vehicles, service vehicles, cycle and pedestrian access arrangements
- Car parking (including visitors and accessibility requirements)
- Bicycle storage or parking including end of journey facilities
- Heritage and Conservation considerations
- Landscape design and Arborist considerations
- Waste management – handling requirements, collection points
- Passive and active Security systems
- Lighting – Internal & external
- Building and public domain signage including statutory & way finding
- DDA and Accessibility to all areas
- Adequate, accessible & serviceable plant space and services reticulation
- Safety in Design consideration for construction, operation & maintenance
- Environmental design in relation to security & crime prevention

8.5 Materials

External facades and building design at the University will address include the following:

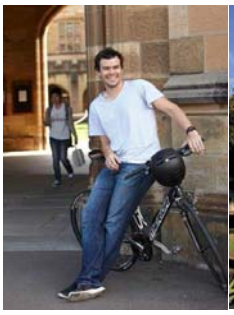
- Robust low maintenance finishes (no external painting or render)
- Locally sourced products
- Sustainable product use and design
- Solar control that works
- Use of proprietary systems
- Consideration of the whole life cycle costs of the building
- Demonstrated green initiatives that may be relevant to this project

8.6 ESD Initiatives

The University encourages design that makes commercial and sustainable sense. In particular:

- Apply ESD initiatives to all design, equipment selection and operating efficiency
- Low VOC specification materials
- Recycling and recovery principles

The project architect will be required to conform to the University of Sydney Sustainability.



9.0 CONSULTATION

9.1 External Consultation

Adjoining landowners to the projects sites are The City of Sydney (footpaths/roads and Victoria Park), Roads & Maritime Services (City Road as an arterial road) and St Michael's College opposite on City Road. There are no other landowners or any private residential properties within the immediate and visual vicinity of this project site.

The University understands the SEARs will be forwarded to the City of Sydney, RMS and Transport for NSW for their respective views on the Project and EIS documentation. The University will undertake a program of consultation as directed by the SEARs.

9.2 Internal Consultation

The University has conducted presentations and workshops across the relevant University faculties and schools that are primarily affected by the proposed projects including:

- Faculty of Sciences and asscíated Schools
- Various University Administrative Service groups.

Feedback from these parties has been developed into the project brief, and all relevant parties will form part of the University's project control group to refine the design and spatial development with the selected architect.

10.0 SUPPORTING INFORMATION AND INPUTS

The University recognises the level of documentation required to inform the project applications. It has therefore engaged a number of specialist consultants to assist in preparing design documentation on specific matters such as architecture, town planning, urban design, heritage, access, landscaping, traffic, structural engineering, quantity surveyor cost estimates, BCA compliance, landscaping and open space. All consultants have been sourced from the University's pre-qualified panel of consultants, and with each discipline undergoing a University competitive tender process in response to specific project briefs. The University has or will:

- Engage an Architect to develop concept and detailed design solutions
- Engage a Town Planning/Urban Design company to assist in establishing the strategic, statutory planning matters for consideration in preparing an EIS report.
- Engage Heritage consultant to address the impact of the project in consideration of the Camperdown Conservation Area.
- Engage a Transport and Traffic company to prepare an 'Access Strategy' to respond to the existing and proposed traffic, servicing, parking and pedestrian arrangements for the site, and in consideration of surrounding access arrangements.
- Project the capacity of utilities supply to service both sites and to identify where upgrade of utility services is required.

- Project response to the established University Flooding study of the campus (City of Sydney's Johnston's Creek and Blackwattle Bay Catchment Studies).
- Prepare a draft 'Communications and Community Consultation Strategy' that will be developed into the Project application.

In addition to these specific study updates the following policies and procedures are addressed in the project brief and design process:

1. The University's **Disability Action Plan 2013-18**, designed to promote accessibility to and through the campuses as well as to and through campus buildings.
2. The University's **Wingra Murra - Bunga Barrabuga Strategy** promotes Aboriginal and Torres Strait Islander participation, engagement, education and research, which is one of the University's, core objectives.
3. The University of Sydney **Sustainability Framework**, which aims to ensure all new buildings, are designed to be resource and cost efficient. Key themes within the Sustainability Framework include:
    - Place making, amenity and sustainable transport;
    - Communication, engagement and community benefit;
    - Healthy environment;
    - Efficient resource use;
    - Climate change and impact; and
    - Land use, landscape and biodiversity.

The University adopts the following specific Sustainability Framework design features in order to reduce utility consumption for all projects:

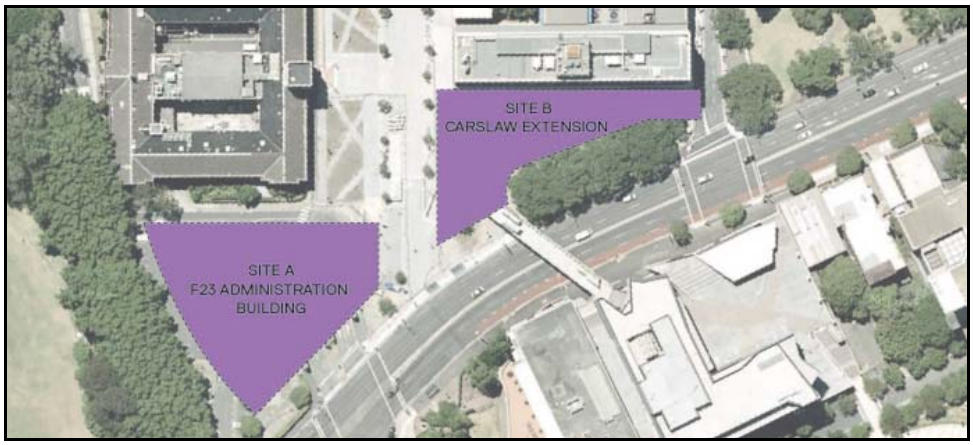
- solar passive building design (facades and glazing elements) to reduce reliance on heating ventilation and air conditioning plant to maintain thermal comfort;
- energy monitoring devices to keep track of utility costs;
- renewable solar energy technologies (solar rooftop PV, solar hot water system);
- rainwater harvesting for beneficial reuse;
- energy efficient appliances;
- water efficient sanitary ware;
- energy efficient lighting and controls; and
- transport infrastructure such as secure bicycle storage facilities, bike stations and cycles ways to facilitate cost-effective active transport and mobility.

4. The University's **green travel plan** promotes sustainable, healthier and more cost-effective and active travel modes: walking and cycling. It also supports linkages and access to public transport, which will make mobility and transport more affordable and reduce dependence on private motor vehicle use.

11.0 CONCEPT DESIGN COMPETITION

Due to the complexity of speciality teaching, learning and research spaces and connections unique to the University's requirements, the University has conducted and completed a Concept Design Competition for the Carslaw Extension project (Site B below). This competition also included the proposed adjoining new F23 Administrative Building s (Site A below), also lodged as a separate SSD application.

The University has realised the importance of both these sites achieving a Gateway presentation design solution to the Camperdown campus from City Road, and consequently requiring an architectural solution that complements both sites. Similarly, both sites require a complementary solution with respect to design/architecture, landscaping, access and transport, and infrastructure provision.



The Carslaw Extension project presents a complex site configuration. The design brief requires a sophisticated design solution, integrating new specialist laboratory facilities with existing University assets. As such the internal spatial solutions and overall architecture are intrinsic to development options that will incorporate due diligence and preliminary concept design stages. With this approach, the successful architect becomes part of the design formulation team along with the University's Project Control Group incorporating the Faculty of Science. The internal spatial configuration of the building requires careful design resolution before the external building design and appearance is addressed.

The engagement of a pre-qualified architect for both sites will ensure the architecture of the Carslaw Extension project will be complimentary to the new proposed F23 Administrative building, while expressing its own individual identity in response to the functional use and context of the building. The urban and landscape design of the City Road interface is to be fully considered as part of the concept design solution.

Under the *Sydney LEP 2012* (Division 4 Design excellence), a design competition process is required for the proposed Carslaw Building extension as the proposal exceeds a height of 25 metres above ground level. The construction value of this project is less than $100 million.

The University's Campus Infrastructure and Services (CIS) department has established robust and competitive panels for the provision of Consultancy and Contractor Services (CCS), based on the University's Procurement Strategy PS/2013/022, and the University's Procurement Policy. The University's process is equal to, and complements, the City of Sydney's process for design competitions.

The CIS Architectural Panel is one of the key and most fundamental University panels established and is now in operation. The panel process was created to provide the University with a selection of architects in achieving demonstrated design excellence, superior project delivery, and client management for all University projects. The intent is that these select groups of consultants are given opportunities with the University to be involved on numerous projects, and to build a relationship with the University to understand process and specific University requirements.

Four architects were invited from the University's pre-qualified Architecture Panel for 'Buildings over $10M', with demonstrated additional experience in laboratories, large complex buildings, civic and University buildings, to take part in a master plan tender:

- PTW Architects
- Cox Richardson
- Warren & Mahoney
- FJMT

A Project Brief, endorsed by the University evaluation Committee (see committee details below), was provided to all invited pre-qualified architects tendering for the project.
The invited architects were required to acknowledge and respond to the existing conservation area status of the Camperdown Campus. As the building heights are not yet definitive, the architect was required to make an analysis and judgement as the appropriate height, bulk, scale and footprint of the respective buildings. The University offered $15,000 (incl. GST) to each firm so that the firm will be able to dedicate appropriate resources and produce exciting concepts that are worthy of a significant university gateway project.

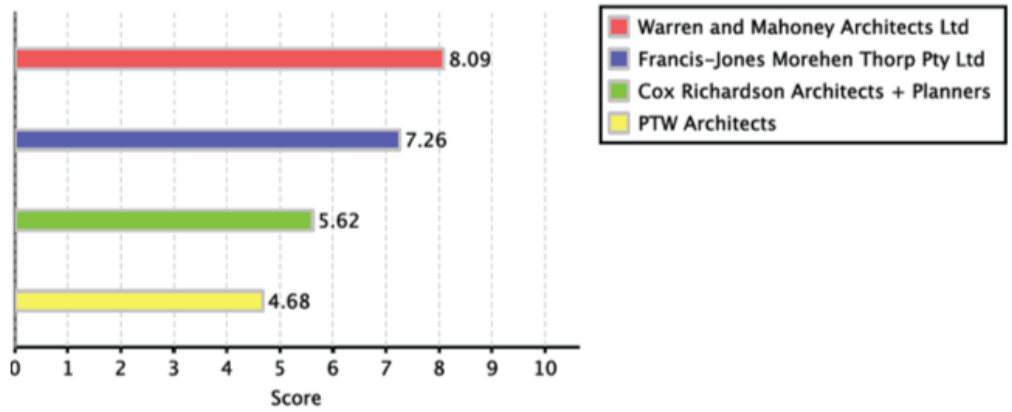
An evaluation Committee was established to review, assess and make recommendations on the architect tender schemes comprising:

- Paul Berkemeier — Independent Chair, National President of the Australia Institute of Architects.
- Michael Tawa — Professor at the Faculty of Architecture
- Alan Crowe — CIS Design Manager, Architect
- Victoria Bolton — CIS, Architect
- Sharon Roes — CIS, Precinct manager
- Jasmine Chambers — Representative from the Faculty of Science
- David Pacey — Secretary to Senate

Advisors (non-voting members)

- Juliette Churchill CIS Campus Planning Manager
- Matt James CIS Senior Project Manager

The University's Evaluation Committee conducted independent scoring of all schemes through the University's eValua on-line tool (evaluated on non-Price and Price criteria). The combined scoring of the Committee is illustrated below.



The Evaluation Committee therefore concluded and selected Warren & Mahoney Architects for the concept and detailed design of the extension to the Carslaw Building and the new F23 Administrative Building site.

Details of the Concept Design evaluation can be forwarded to the Department as/if required.

This SEAR report therefore concludes that the:

- University has pursued a design competition process to ensure competitive design with each tender evaluated against a set of prescribed criteria;
- University's process is equal to, and complements, the City of Sydney's process for design competitions;
- objective of Sydney LEP 2012 Schedule 4 clause 6.21, which is to deliver the highest standard of architectural, urban and landscape design for this site, is therefore achieved and satisfied; and
- SEAR therefore should not require any further design competition process.

12.0 CAPITAL INVESTMENT VALUE

The University has carried out an independent Quantity Surveyor *capital investment value* estimate for the project by David Langdon Australia P/L in realising the projects qualification as a State Significant Development.

The Environmental Planning & Assessment Regulations 2000 (clause 3) provides the following definition for CIV

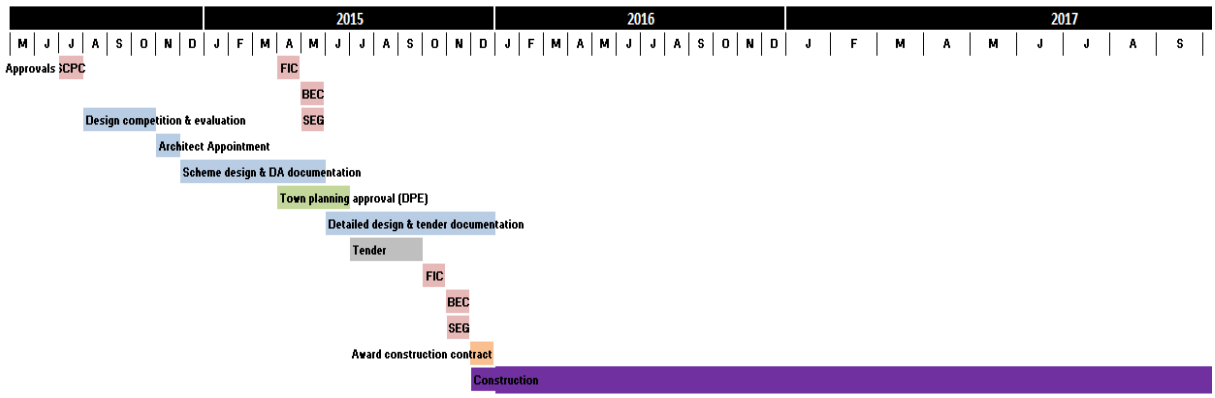
> ***Capital investment value*** of a development or project includes all costs necessary to establish and operate the project, including the design and construction of buildings, structures, associated infrastructure and fixed or mobile plant and equipment, other than the following costs:
>
> (a) amounts payable, or the cost of land dedicated or any other benefit provided, under a condition imposed under Division 6 or 6A of Part 4 of the *Environmental Planning and Assessment Act* or a planning agreement under that Division
>
> (b) costs relating to any part of the development or project that is the subject of a separate development consent or project approval
>
> (c) land costs (including any costs of marketing and selling land)
>
> (d) GST (as defined by *A New Tax System (Goods and Services Tax) Act 1999* of the Commonwealth).

The QS report are included at **Appendix F**, and conclude the following CIV for the project:

- Carslaw Building Extension - $ 66,900,000

13.0 PROJECT TIMETABLE

The University has developed the following Project timeframe for 2015 in order to facilitate commencement of construction in the last quarter of 2015:



Note the following boxes in pink above represent internal university Senior Executive Groups assigned with decision-making, under the auspices of the University Senate:

SCPC	(University of Sydney) Space & Capital Prioritisation Committee
FIC	(University of Sydney) Finance & Investment Committee
BEC	(University of Sydney) Building Estates Committee

14.0 CONCLUSION

This submission supports a request for the Department of Planning's Secretary Environmental Assessment Requirements (SEAR) to accept the Carslaw Building Extension as State Significant Development, and to provide The University of Sydney with a list of requirements to be addressed in the State Significant Development application and Environmental Impact Assessment report.

This University's submission and request for SEARs are considered to be justified for the following reasons: -

- The application is made by a Crown authority, being The University of Sydney.
- This Major Project qualifies as a State Significant Development under *SEPP (State and Regional Development) 2011* and will attract a capital investment value well in excess of $30 million.
- In 2013, the University alone employed a total 7,554 full time staff, comprising 2,109 administrative staff and 5,400 faculty staff. It also generates over 5,000 construction/facilities/maintenance/services jobs. The proposed Major Projects will continue to create new construction and administrative employment opportunities through the proposed development and infrastructure.
- This Major Project will further promote the University as a principal health, education, and visitor destination.
- This Major Project will have a flow on effect to the local business centres and residential communities including Newtown, Glebe, Redfern, and Broadway.
- The University is a key employment contributor to the NSW economy, not only as a major employment centre, but also as an employment provider through its annual 18,000 graduates. A great proportion of these graduates will directly contribute to the Sydney and NSW economies.
- This current University capital works program, combined with the Minister for Planning's approved Concept Campus Improvement Program (SSD 13_6123), represents an existing injection of more than $1.4 billion in construction and related activities into the NSW economy.

APPENDICES

APPENDIX A – SITE PHOTOGRAPHS

APPENDIX B - SITE SERVICES

APPENDIX C – IN GROUND SERVICES

APPENDIX D – INDICATIVE BUILDING ENVELOPES

APPENDIX E – QUANTITY SURVEYOR: CAPITAL INVESTMENT VALUE CALCULATION

APPENDIX F – EXISTING UNIVERSITY ARCHAEOLOGICAL STUDIES – EXTRACTS

APPENDIX G – EXISTING CAMPUS FLOOD STUDY – WMA WATER MAP EXTRACT

APPENDIX H – CAMPUS GEOTECHNICAL STUDY – GOLDER ASSOCIATES

APPENDIX A – SITE PHOTOGRAPHS – SITE B

Image: Site B Existing landscaping

Image: Site B Carslaw building connection with City Road footbridge

Image: View from Site B of City Road footbridge

Image: Site B – Zone beneath City Road footbridge towards Eastern Ave

Image: Site B Existing landscaping

Image: Existing path and weed tree on Site B

Image: Service Road adjacent Carslaw Building

Image: Site B at intersection of Barff Road and Carslaw Building service road

APPENDIX B – Site Survey

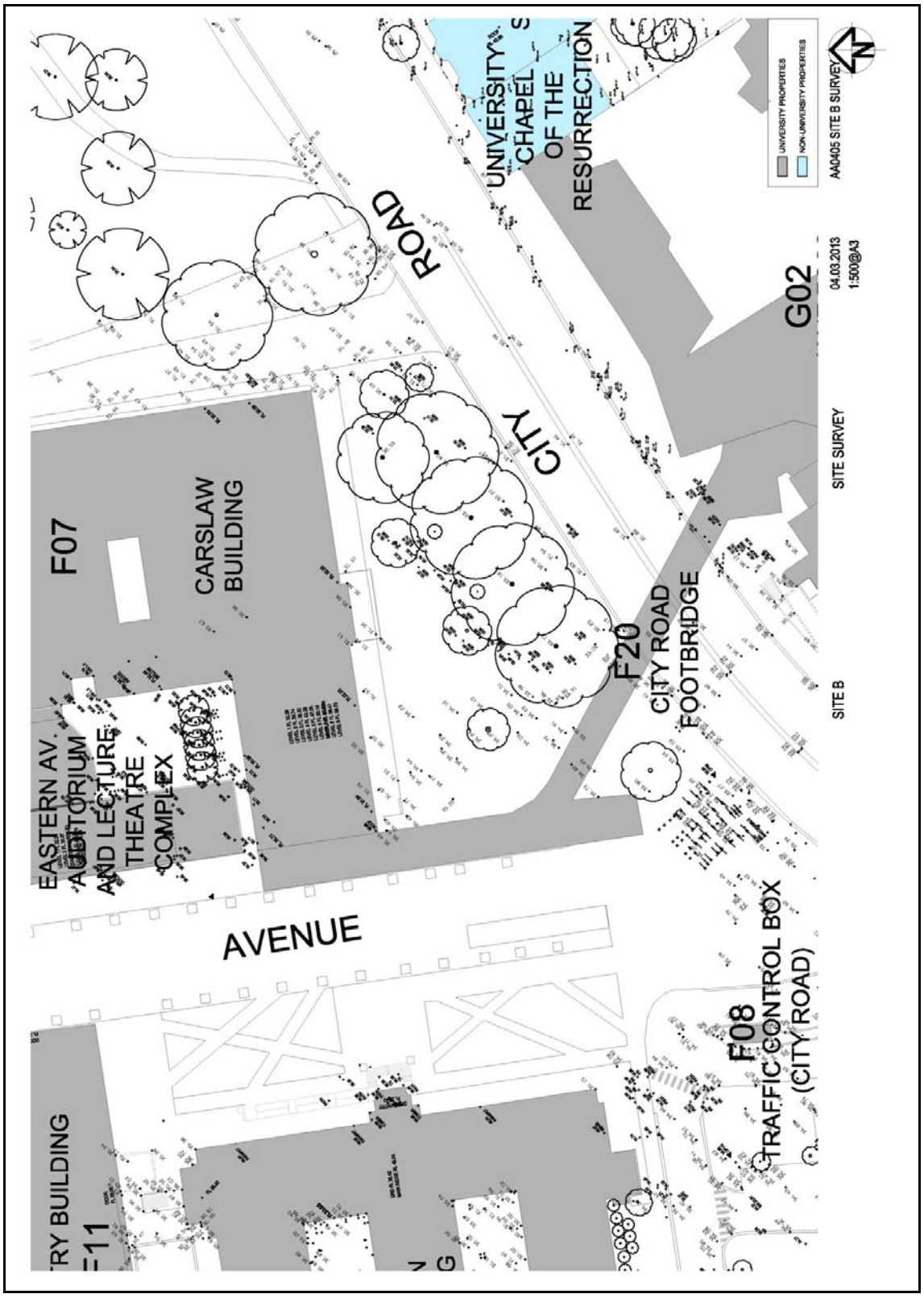


Image: Site B Survey

APPENDIX C – IN GROUND SERVICES PLAN

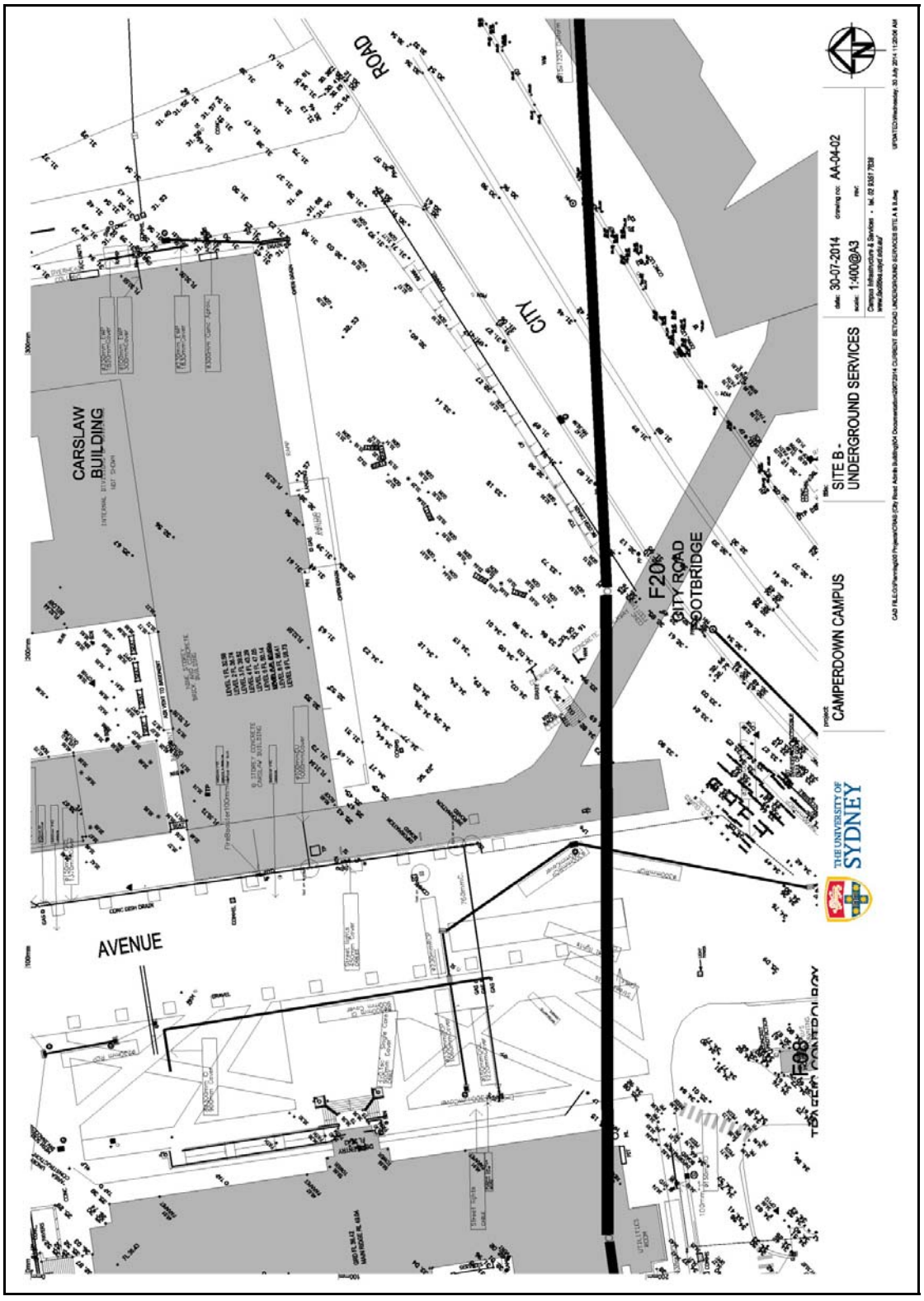


Image: Site B – in ground services

APPENDIX D – INDICATIVE BUILDING ENVELOPES

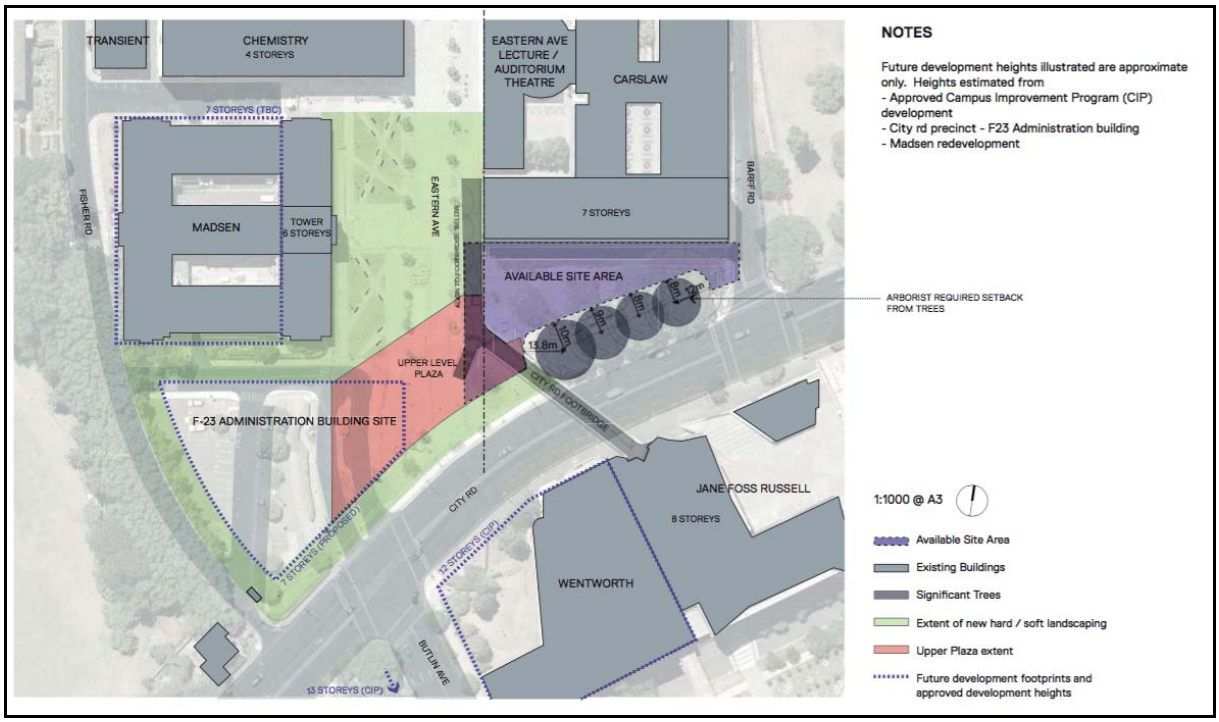


Image: Site Footprint

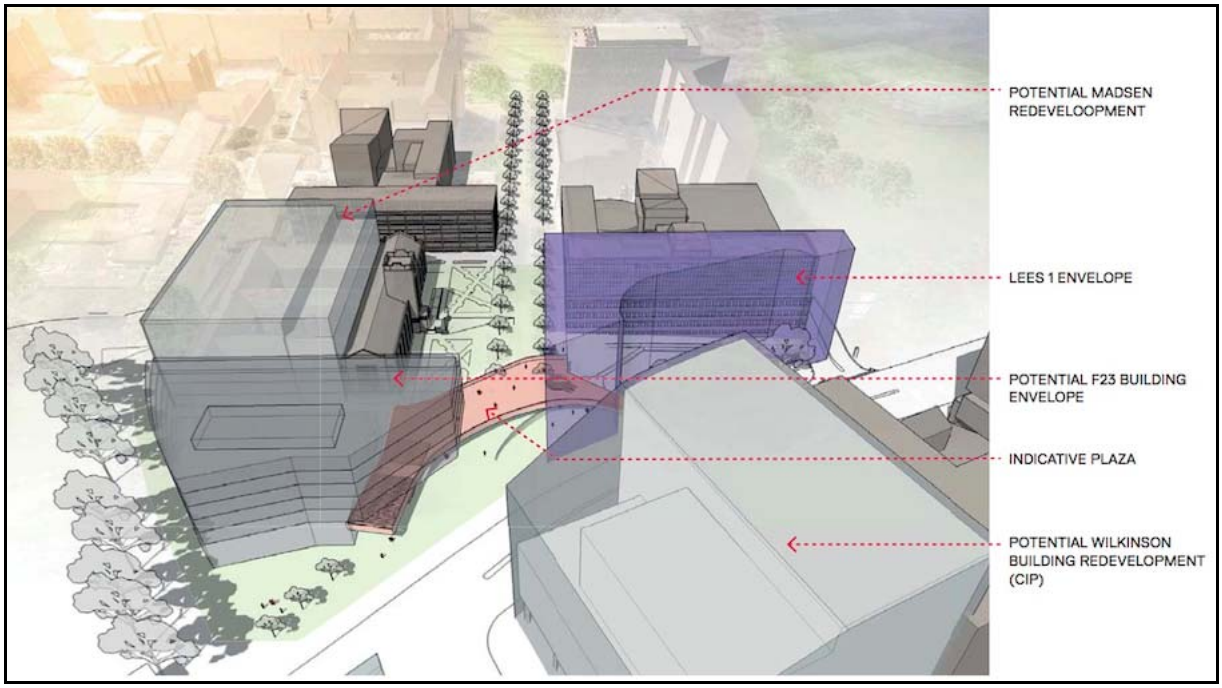


Image: Aerial View looking north

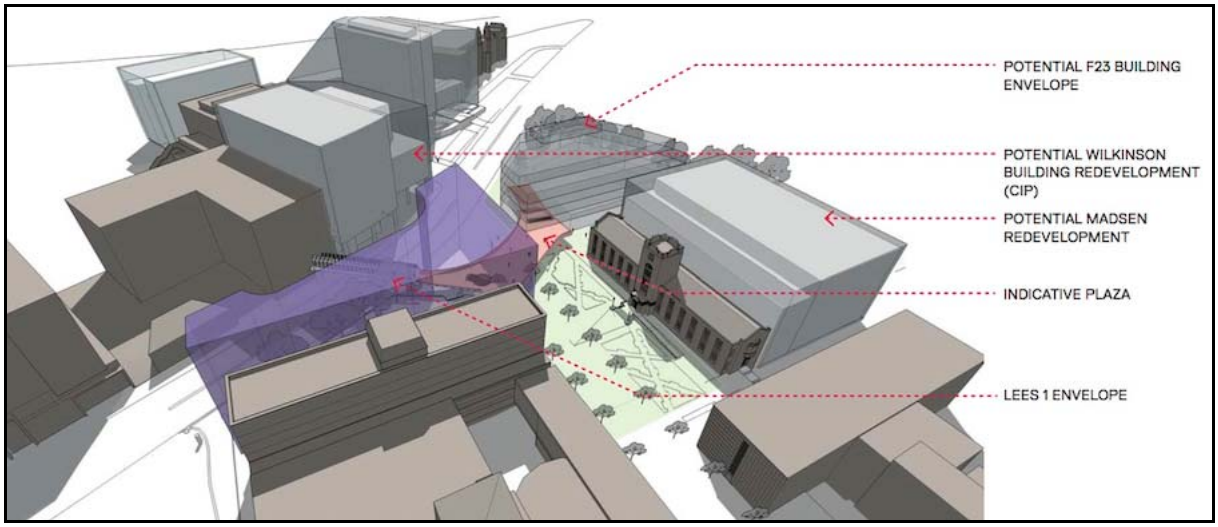


Image: Aerial View looking south

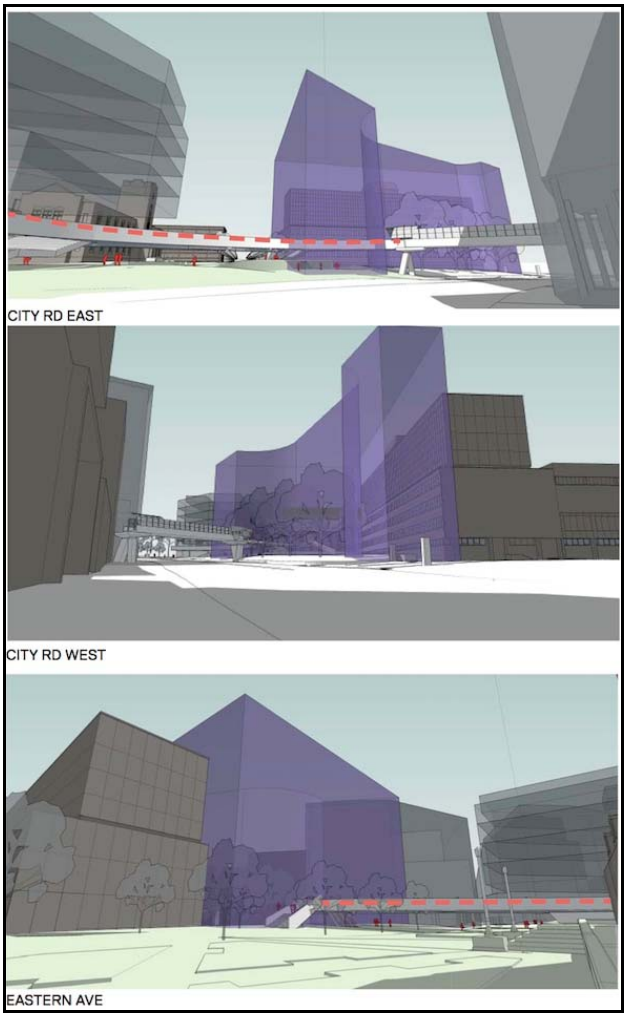


Image: Perspective views

APPENDIX E – QUANTITY SURVEYOR CAPITAL INVESTMENT VALUE CALCULATION

Davis Langdon
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20 March 2015

Greg Robinson
Director, Campus Infrastructure & Services

The University of Sydney
Services Building G12,
22 Codrington Street, NSW 2006

Dear Greg,

The University of Sydney, Extension of Carslaw Building Camperdown Campus

In accordance with the Environmental Planning & Assessment Regulations, The University of Sydney (the University) is seeking Secretary Environmental Assessment Requirements (SEARs) for the proposed extension of the Carslaw Building on the University's Camperdown campus as a State Significant Development Application (SSD).

For the purposes of this application, we wish to confirm the Capital Investment Value of the proposed Development is in the sum of **$66,900,000.00** excluding GST.

Please refer to the attached Cost Estimate Summary for further breakdown of the Capital Investment Value.

Please note that the Cost Estimate excludes loose furniture, fittings and equipment.

We also advise that the attached Cost Estimate Summary should not be relied on for feasibility purposes without further consultation.

We trust this meets with your approval and is in accordance with your requirements.

Yours faithfully

Andy Lappas
Technical Director

Davis Langdon
An AECOM Company

The University of Syndey - F07 Carslaw Extension

Date: 16-Mar-15
Rev. 5

BROAD ORDER OF COST ESTIMATE

Option - 9,450m2 GFA Base Budget Option (WARREN AND MAHONEY SCHEDULED AREAS)

Functional Area	Unit	Qty	Rate	Total $
Basement				
Subtotal		1,110		2,874,000
Ground Floor - Dry Teaching Floor				
Subtotal		1,170	3,150	3,685,000
Level 1 - Wet Teaching Floor				
Subtotal		1,190	4,111	4,892,000
Level 2 - Wet Teaching Floor				
Subtotal		1,190	4,111	4,892,000
Level 3 - Research Floor				
Subtotal		1,460	3,471	5,068,000
Level 4 - Research Floor				
Subtotal		1,460	3,471	5,068,000
Level 5 - Research Floor				
Subtotal		1,460	3,471	5,068,000
Roof - Plant Room Only				
Subtotal		500	1,850	925,000
Refurbishment Works in Existing Carslaw Building				excluded
Subtotal		-		0
Project Specifics				
Subtotal				3,394,140
Engineering Services Infrastructure				
Subtotal				4,730,000
Site Preparation				
Subtotal				2,983,825
NET CONSTRUCTION COST (N.C.C)	**$: 1Qtr/15**	**9,540**		**43,579,965**
Escalation - beyond March 2015				excluded
Subtotal - Escalation				-
Preliminaries				
Subtotal - Prelims & Margin				10,459,192
GROSS CONSTRUCTION COST (G.C.C)	**$: 1Qtr/15**	**9,540**	**5,664**	**54,039,156.60**
Contingencies				
Subtotal - Contingencies	% GCC	10.2%		5,520,000
Project Costs				
Subtotal - Project Costs				7,341,992
Fittings, Furniture & Equipment				excluded
Subtotal - FF+E				-
GROSS CONSTRUCTION COST (G.B.C.)	**$: 1Qtr/15**	**9,540**	**$ 7,013**	**66,901,148.88**
			say	66,900,000

NOTES & EXCLUSIONS

GST excluded
All works to the Carlaw Building have been excluded
Prolongation and time extension costs excluded
Project specifics as noted above

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APPENDIX F – ARCHAEOLOGICAL STUDIES - EXTRACTS

1. Campus Improvement Program 2014-2020 – Archaeological Sites

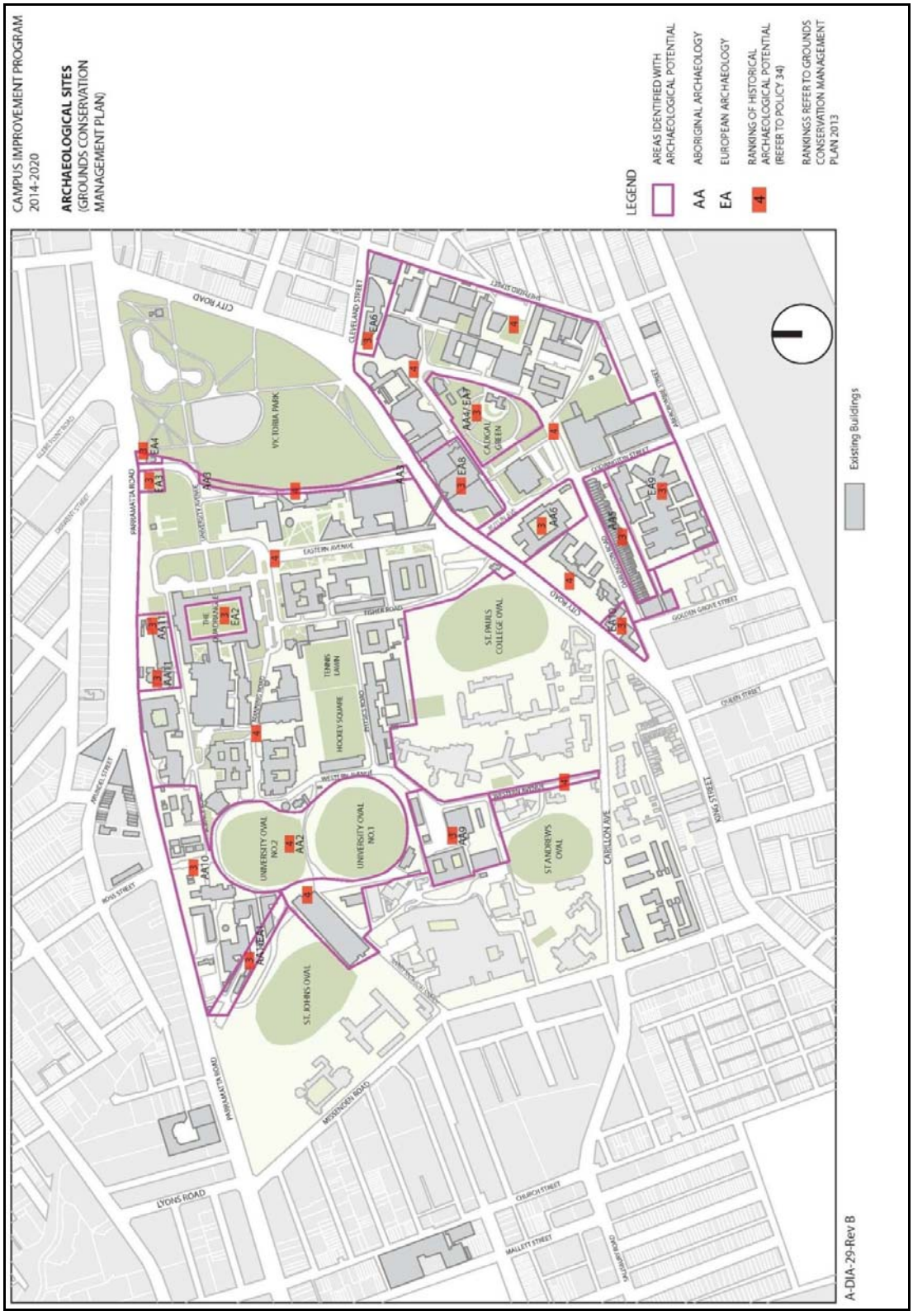
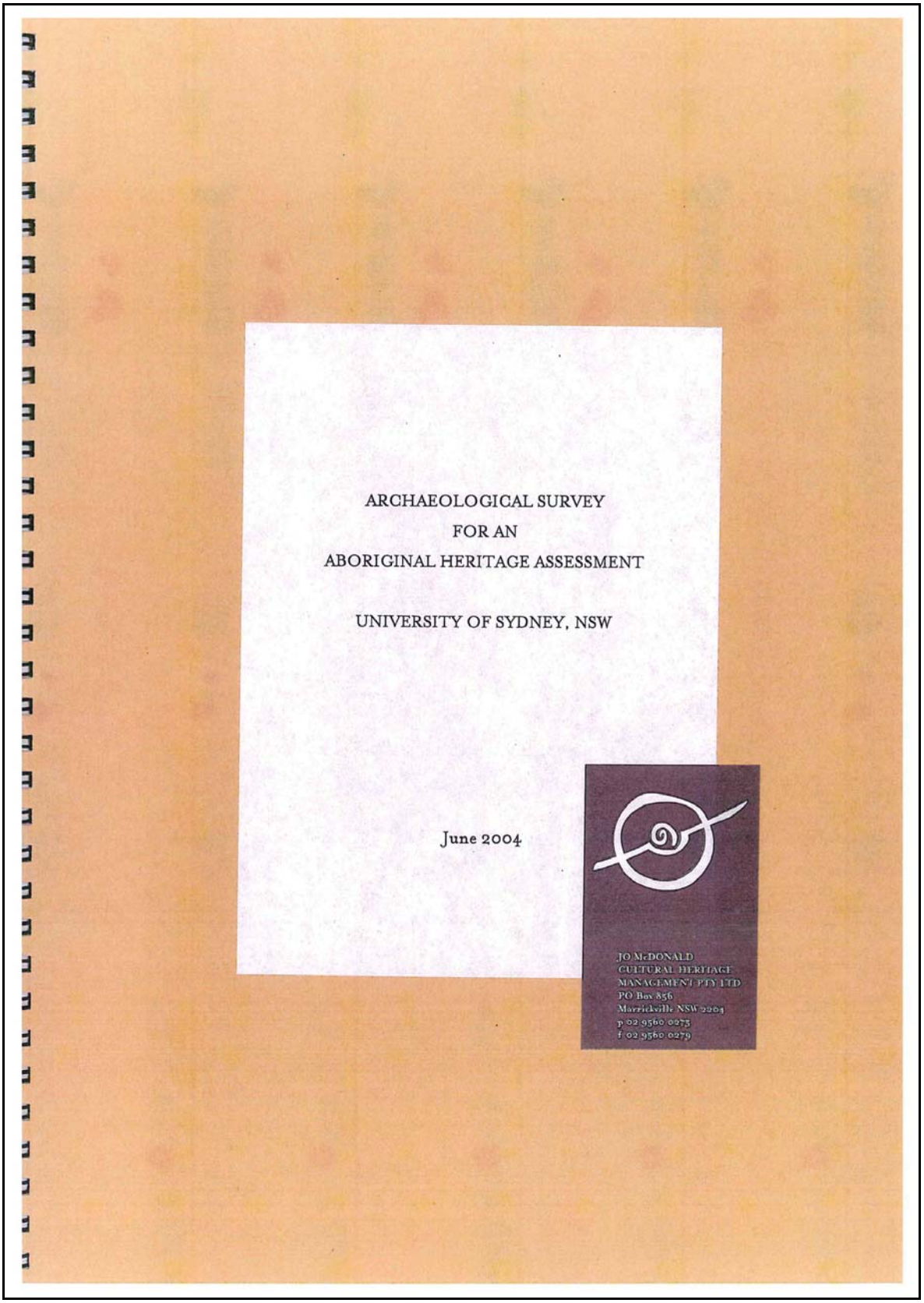


Figure 1.2 2013 aerial photograph of the study area with the previous Aboriginal archaeological assessment study areas outlined. (Source: <www.nearmaps.com> with GML additions)

2. Archaeological Survey for Aboriginal Heritage Assessment, Jo McDonald, June 2014



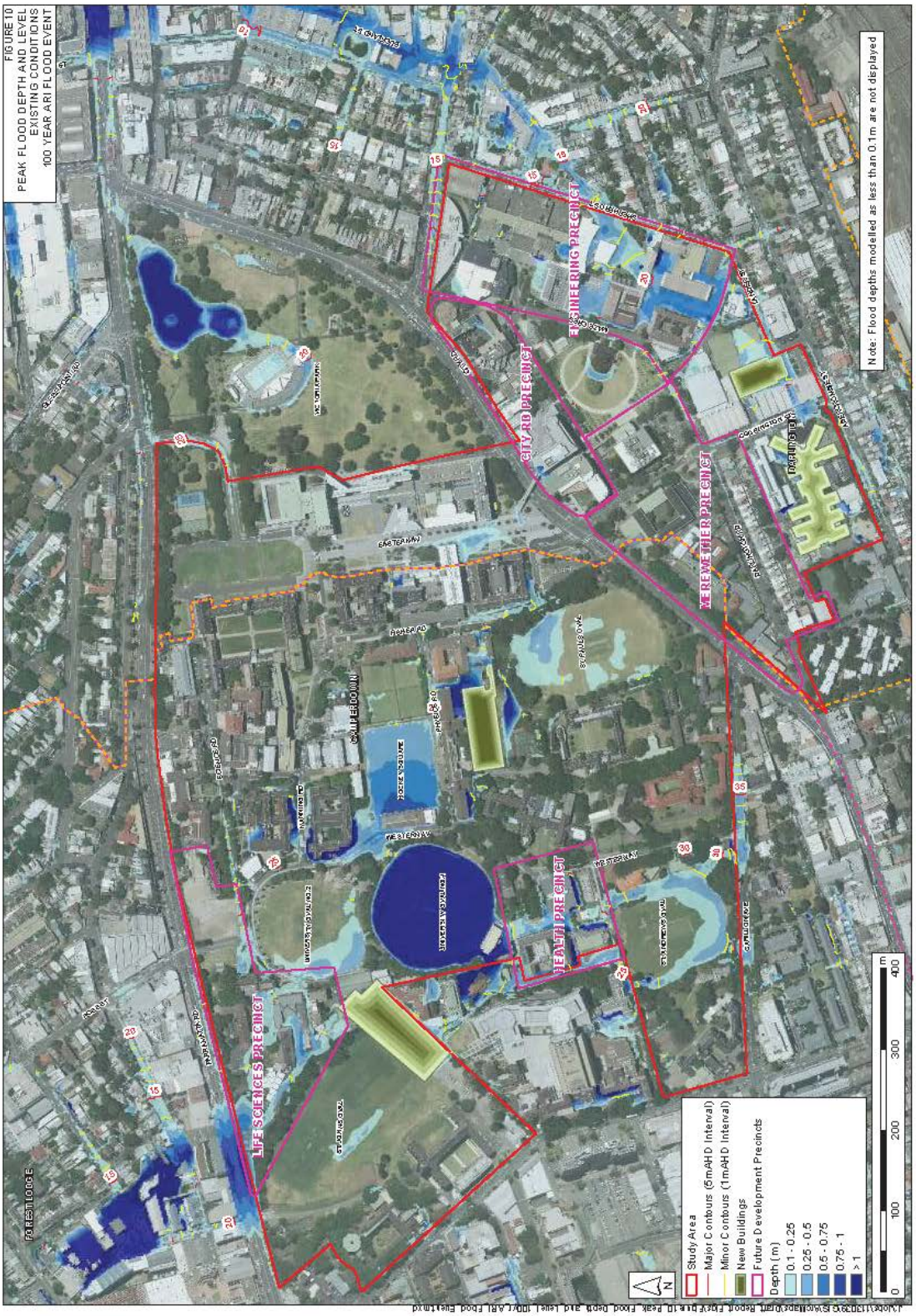
- in consultation with the MLALC identify sites and places within the study area that are culturally significant, including a site survey to identify whether any Aboriginal heritage values are applicable to, or potentially applicable to, the project areas and activities;
- undertake an assessment of the degree of land disturbance and erosion in the study area to determine the likelihood of undisturbed sub-surface sites or objects in the study area;
- undertake an assessment of the potential impacts of the development on the Aboriginal heritage values of the site: particular attention should be given to any potential impacts on cultural sites or relics;
- prepare a report on findings, including discussion of methodology; data obtained and evaluation of findings; appropriate maps, figures and photos; options for mitigation and any recommendations. The reporting should be generally in accordance with the DEC Draft Guidelines for Aboriginal Heritage Impact Assessment.

1.3 Summary of Findings and Recommendations

Due to the nature and extent of land disturbance in the study area, there are no areas assessed as having high potential for intact archaeological deposit. While none of the areas included in this assessment are hence indicated as worthy of conservation, it is proposed that a number of impacted areas be investigated prior to impact so that we can have a better understanding of the Indigenous cultural heritage of this area. The recommendations are that:

1. There are no identified Aboriginal objects and/or landscapes within the study area assessed to be of high archaeological significance or potential. There are thus no design constraints on the development proposal.

APPENDIX G – CAMPUS FLOOD STUDY, WMA WATER MAP EXTRACT - 100 YEAR ARI FLOOD EVENT



APPENDIX H – GEOTECHNICAL REPORT – GOLDER ASSOCIATES

13 March 2015

THE UNIVERSITY OF SYDNEY

Geotechnical Desktop Study for Proposed New Building and Extension (F07 and F23 Projects)

Submitted to:
Katie Pritchard
The University of Sydney
Campus Infrastructure and Services
Level 1, Service Building G12
Darlington Campus

REPORT

Report Number. 1520860_001_R_Rev0
Distribution:
The University of Sydney - 1 Copy
Golder Associates - 1 Copy

Golder Associates

4.0 DISCUSSION

Based on the available information, we present the following key geotechnical and geological issues for consideration in planning and further design development:

Excavation:

- Construction of the proposed basements may involve an excavation up to 6 to 7 m below existing ground levels. The excavation materials are likely to comprise fill, residual soil and variably weathered shale bedrock.
- Subgrade conditions may be poor, with fill materials and high plasticity clays likely to be present on the site. There may be a need for a suitable working platform to be constructed to allow construction plant to traffic the area during development.
- There is vibration sensitive equipment in the Madsen Building. The selection of excavation equipment may need to consider low vibration options. Alternatively, construction could be completed when the equipment is being maintained or is not in use.
- Excess spoil for offsite disposal will need to be classified in accordance with the *Waste Classification Guidelines Part 1: Classifying Waste* (EPA November 2014).

Groundwater Management

- Perched groundwater could potentially flow through the fill, residual or extremely weathered shale profile. This will need to be considered in design of excavations and retention systems. Dewatering may be required for both temporary and permanent excavations.
- The volume of groundwater flow depends on recent weather conditions, the nature of defects within the bedrock, topography and elevation. Groundwater level may also vary due to prevailing weather condition and rainfall, and also future development around the site.

Retention and Foundation Systems

- Temporary and permanent retention systems for excavations should be designed and constructed so that acceptable ground movements result. The retention design would need to assess impact of ground movements on nearby structures, services and roads.
- Mature trees located close to the proposed structures are to be retained. The potential impact of these trees on shallow foundations and retaining walls will need to be assessed. The potential impact of smaller trees that are removed over the footprint of the structures will also need to be assessed.
- For the F027 extension, the design of the connection between old and new structures will need to consider the potential for differential movement occurring between the structures.

Additional Geotechnical Investigation

In order to inform and optimise design development and manage geotechnical risk associated with the proposal developments construction, we recommend the following:

- The borehole information for the footbridge over City Road is found. This may well include information that will be useful in the design of the F07 extension and may reduce the cost of further geotechnical investigations.
- That additional geotechnical and environmental investigations are completed at the locations of the proposed structures. These should be used to confirm the site subsurface conditions and to enable recovery of soil and groundwater samples. Golder is available to scope and carry out a detail design intrusive geotechnical investigation, as required.