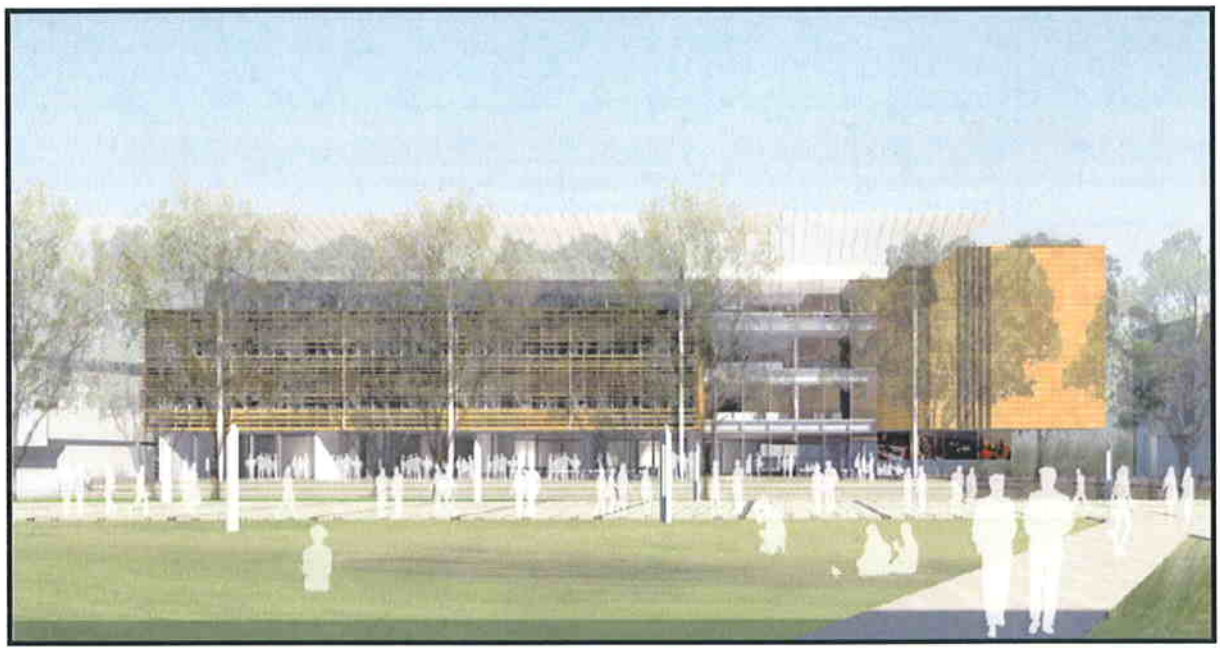
NSW GOVERNMENT | Planning

MAJOR PROJECT ASSESSMENT
UNSW TYREE ENERGY TECHNOLOGIES BUILDING
Proposed by UNSW
MP 09_0163

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

July 2010



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EXECUTIVE SUMMARY

This is a report on a project application seeking approval to construct a new research and teaching building to be known as the "Tyree Energy Technologies Building", on the Anzac Parade frontage of the University of New South Wales's (UNSW) Kensington Campus. The UNSW campus is located approximately 6km south-east of the Sydney CBD, and is bound by: High Street to the north; Botany Street and Willis Street to the east; Oval Lane and Barker Street to the south; and Anzac Parade to the west. The proponent is the UNSW.

The project application seeks approval for the construction of a new 6 level research and educational building, inclusive of a semi-basement level, servicing, tri-generation system, landscaping and public domain works (13,100m^2 of GFA).

The Capital Investment Value (CIV) of the proposal is **$91,032,252** and the proposal would create **300** full time equivalent construction jobs and **100** full time equivalent operational jobs.

On 25 August 2009, the Deputy Director General, as delegate of the Minister, formed an opinion that the project is a major project under clause 20 of Schedule 1 to the MD SEPP, as it is for a teaching and research facility with a capital investment value of more than $30 million. The Minister is the approval authority.

The site is zoned 5 Special Uses under Randwick Local Environmental Plan 1998 (Consolidation) and educational establishments are permissible in the zone.

The proposal was exhibited from 16 December 2009 to 1 February 2010. The Department received four submissions from public authorities, one from Randwick City Council and no public submissions. Key issues raised in the submissions included: built form and public domain; impacts on views; interface with adjoining residential use and Village Green; section 94A contributions; loss of open space and formal recreation facilities; sustainability; potential groundwater impacts; stormwater drainage; transport; Anzac Parade footpath works; services infrastructure; and construction work zones.

On 29 March 2010, the proponent submitted a Response to Submissions to address issues raised by the Department and other Government authorities.

The Department has assessed the merits of the project, and has found the key issues associated with the project include built form and urban design; environmental and residential amenity; air traffic impacts; transport and traffic impacts; noise impacts; developer contributions; ecologically sustainable development; stormwater and drainage; and the public interest. The Department is satisfied that the impacts of the proposed development have been addressed via the Environmental Assessment, Response to Submissions and statement of commitments, and can be adequately managed through the recommended conditions of approval.

The Department is also satisfied that the site is suitable for the proposed use. The proposal in consistent with strategic planning objectives, including the State Plan, as it would provide greater investment in knowledge, innovation, research and development within universities into clean energy. The proposal would also support the growth of the Randwick Education and Health Precinct recognised in the Sydney Metropolitan Strategy and the draft East Subregional Strategy as providing a vital economic and employment role.

Accordingly, the Department considers the project is in the public interest and recommends that the project be approved, subject to conditions.

CONTENTS

1 BACKGROUND

1.1 THE SITE

1.1.1 Site Context and Location

The development site is part of a larger land parcel known as Lot 3 in DP 1104617, which forms part of the University's main campus. The main campus is bound by High Street to the north; Botany Street and Willis Street to the east; Oval Lane and Barker Street to the south; and Anzac Parade to the west (refer to Figure 1). The site is located in the Randwick LGA.

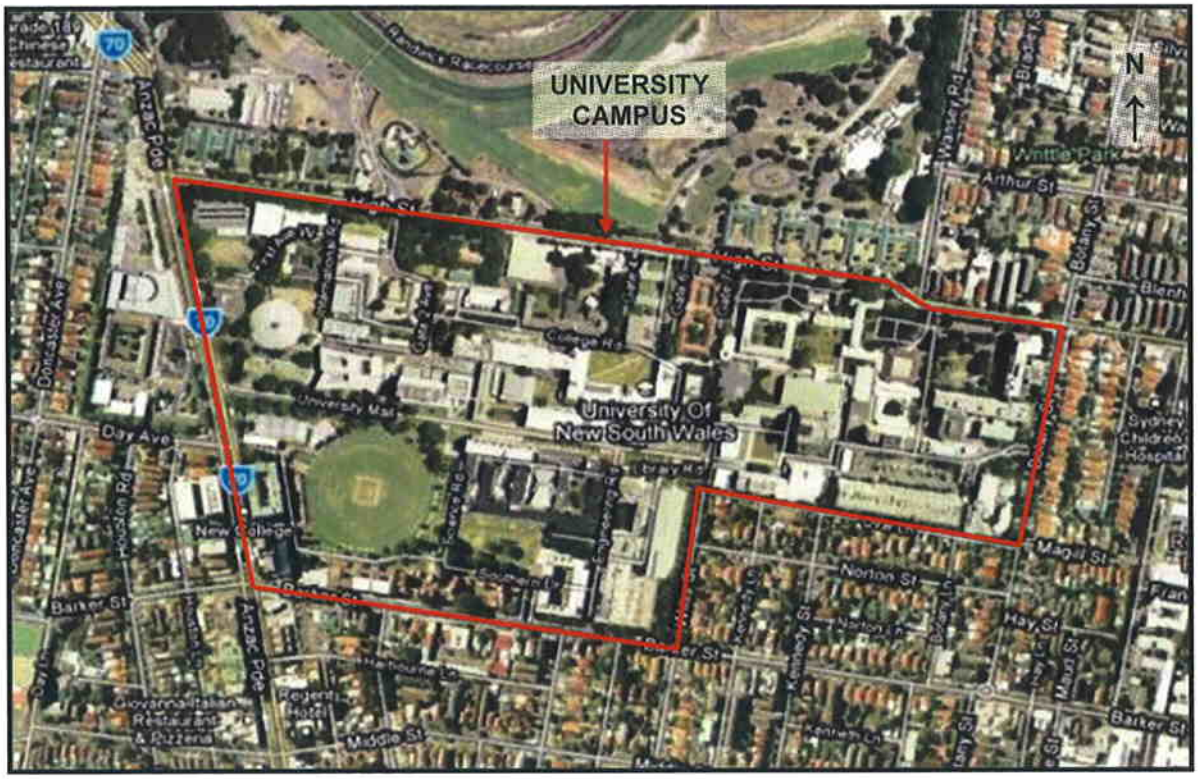

Figure 1 - Locality Plan

The main campus has an area of approximately 38 Hectares and is under the ownership of the UNSW. The site contains a variety of medium and high rise University related buildings.

The development site (refer to Figure 2) is located on the eastern edge of the main campus adjacent to Anzac Parade and University Mall which traverses down the centre of the main campus. The development site was previously occupied by tennis courts, cricket nets, a maintenance building, a shed, a bus shelter and a brick wall. These have subsequently been removed partially as exempt development under the State Environmental Planning Policy (Infrastructure) 2007 and partially through development consent for demolition works obtained from Randwick City Council. The development site was inspected by Department officers on 24 February 2010.

Anzac Parade is the primary pedestrian access point into the University, with vehicular access available via High, Barker and Botany Streets. Internal roads and a pedestrian network traverse the site and provide links to the various university buildings.

Anzac Parade forms a key transport corridor that connects eastern Sydney to other major centres. As well as major bus stops on Anzac Parade, the site is also supported by a number of other bus stops and is serviced well by bus services.

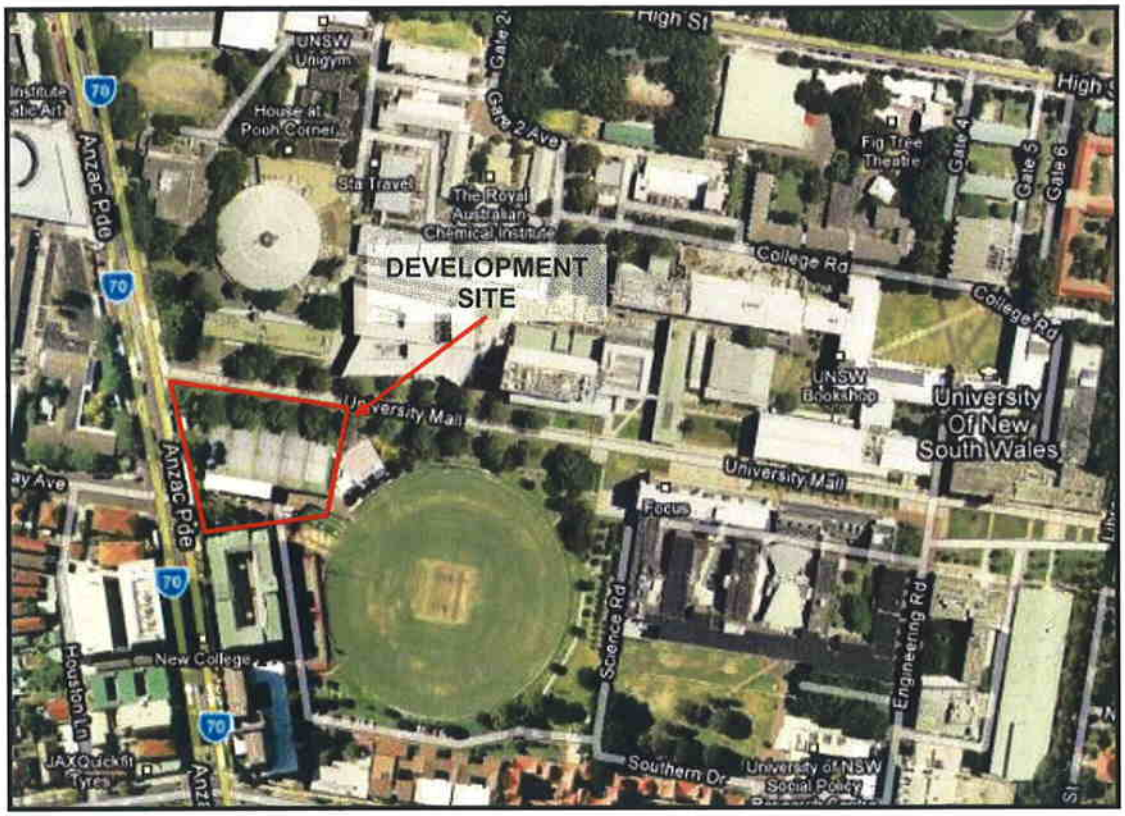

Figure 2 – Project Location / Development Site

1.2 SURROUNDING DEVELOPMENT

Located to the north of the main campus is the Royal Randwick Racecourse, to the north-east is the Randwick town centre, to the east low scale residential development, while further east is the Prince of Wales Hospital Precinct. To the west of the main campus is the University's Western Campus, including the National Institute of Dramatic Art, to the south are primarily residential areas, and to the south-west is the Kingsford retail centre.

Figure 3 – Contextual Location

Directly adjoining the development site to the north is Spooner's Wall and University Mall (refer to Figure 4), to the east is a two storey brick sports pavilion (refer to Figure 5), to the south-east is a Village Green (refer to Figure 6), to the south is a five-storey student accommodation building (refer to Figure 7), to the west is a new part 3 and part 7 storey student accommodation building (refer to Figure 8).

Figure 4 – Spooner's Wall

Figure 5 – Sport Pavilion

Figure 6 – Village Green

Figure 7 - Five-storey brick student accommodation building to the south

Figure 8 – Part 3 and part 7 storey student accommodation building, to the west, on the opposing side of Anzac Parade

1.3 STRATEGIC CONTEXT

1.3.1 NSW State Plan

The provision of additional learning and teaching spaces, laboratories and workshops is consistent with the relevant objectives of the State Plan to invest in knowledge, innovation, research and development within universities to stimulate growth in the clean energy industry and promote new clean energy solutions.

1.3.2 Sydney Metropolitan Strategy "City of Cities"

The Sydney Metropolitan Strategy, developed to support the continuing economic growth of Sydney and enhance its standing as a global city, places the Randwick City Council area in the East Subregion. The strategy sets housing and employment targets for the region at 20,000 dwellings in existing areas and 17,500 new jobs by the year 2031, which are further refined in the draft East Subregional Strategy. The Randwick Education and Health Precinct (which includes the UNSW) is also nominated as a specialised centre that performs a vital economic and employment role within Sydney. The proposal is consistent with the objectives of the Strategy and would provide additional employment opportunities and support the development of the specialised centre.

1.3.3 Draft East Subregional Strategy

The UNSW is nominated as one of Australia's foremost academic and research institutions, as well as one of the largest in terms of student numbers. Consolidating and strengthening the Randwick Education and Health Specialised Centre is also one of the key directions of the draft East Subregional Strategy.

The Subregional Strategy also targets the provision of an additional 5,900 jobs for the Randwick LGA, with approximately 2,300 additional workers contained within the Randwick Education and Health specialised centre. The proposal would contribute to providing these additional jobs.

2 PROPOSED DEVELOPMENT

2.1 THE PROPOSED DEVELOPMENT

The proposal seeks approval for a new 6 level Tyree Energy Technologies Building (refer to Figures 9 and10) inclusive of:

- a lower ground/semi-basement level;
- 13,100m^2 of Gross Floor Area (GFA);
- learning and teaching spaces, laboratories and workshops;
- administration, meeting rooms and offices;
- lobby, exhibition spaces, amenities and cyclist facilities;
- a café with associated kitchen and storeroom;
- tri-generation system; and
- associated servicing, landscape and public domain works.

The CIV of the proposal is **$91,032,252** and the proposal would create **300** full time equivalent construction jobs and **100** full time equivalent operational jobs.

Figure 9 – Photomontage of north-western elevation

Figure 10 – Photomontage of south-eastern elevation

The proposal will support advanced research into sustainable and clean energy technologies that would contribute towards mitigation of climate change. The facility would attract and retain leading researchers and lecturers in leading edge energy technological research. The technologies that will be explored with the facility including: photovoltaic, carbon capture and storage, oil and gas reservoir characterisation, carbon trading, nanomaterials and policy and market analysis.

The proposal would allow the consolidation and accommodation of the Faculty of Engineering in a dedicated location. It would have the capacity to accommodate approximately 1,111 staff, of which approximately 1,011 are existing staff already accommodated on the campus and approximately 100 would be new staff members. The proponent has also advised that there would be no change to student population as a result of this proposal and students accommodated in the building would be those relocated from other buildings on campus.

The proposal provides the teaching and learning spaces on the lower ground and ground floors, including three lecture theatres, two computer laboratories, classrooms of various sizes and study areas (refer to Figures 11 and 12).

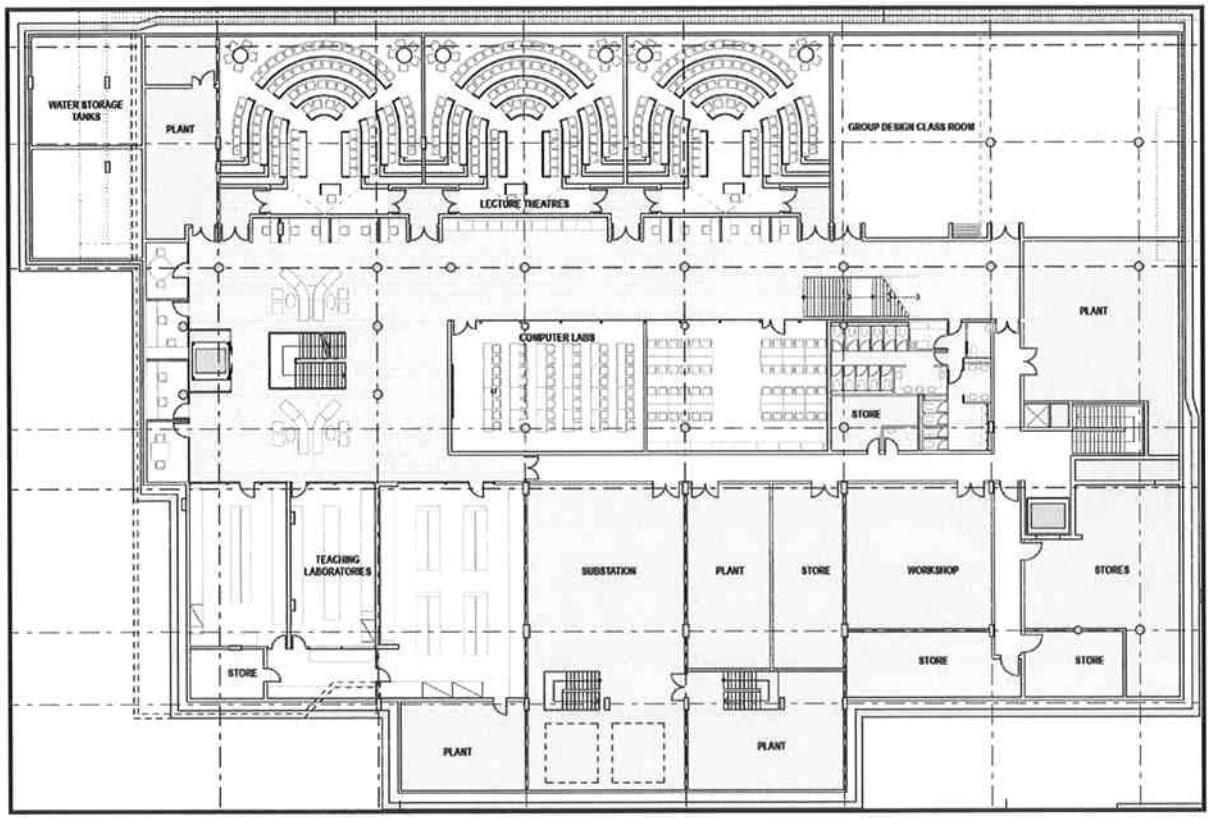

Figure 11 – Lower Ground Floor - Teaching and Learning Spaces

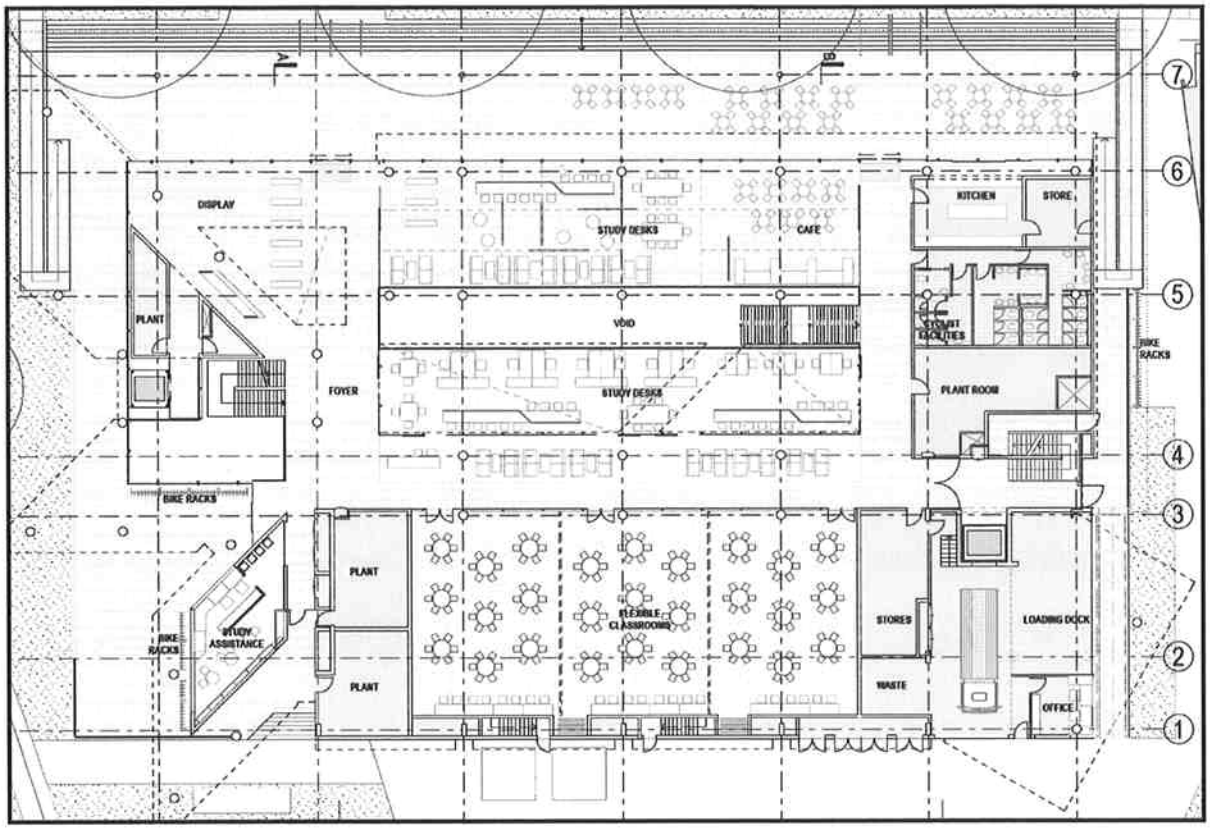

Figure 12 – Ground Floor - Teaching and Learning Spaces

The remaining 4 floors are dedicated as office and laboratory space for staff and researchers. These floors have a similar floor plan as illustrated in Figure 13. An outdoor experimentation area is also provided on level four (refer to Figure 14). Whilst the proposal does not provide any parking for staff or students, five car spaces are provided in the services courtyard for electronic cars that would be utilised in the research.

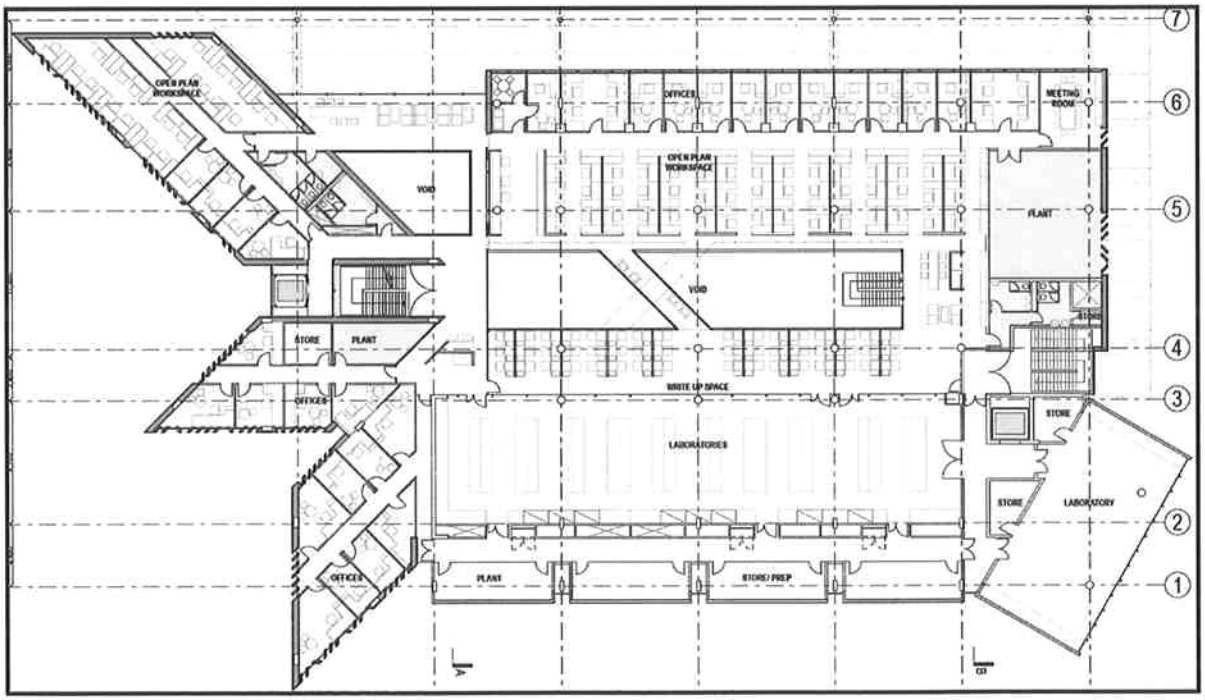

Figure 13 – Level 1 Floor Plan

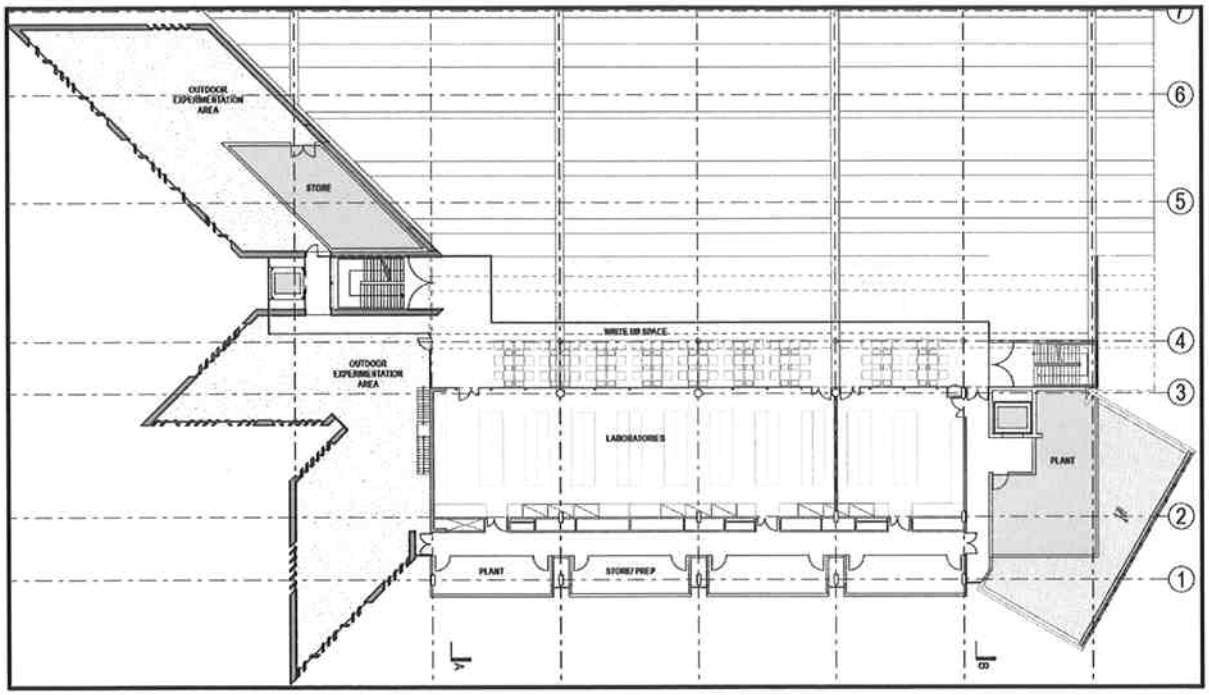

Figure 14 – Level 4 Floor Plan

Proposed landscaping and public domain works comprise:

- retention of the existing dual avenue of trees (Cottonwoods and Figs) along the setback from University Mall;
- provision of flexible open space areas that can be used for passive recreation activities including a lawn area at the north-western side of the development site and quiet seating areas;
- creating a transition between the ground plane and the entry to the building including long steps to the north and further setback of the entry into the building;
- a variety of formal and informal seating opportunities (including the long steps on the northern side of the building and the seating plinths) and lawn area at the north- western side of the development site;
- additional tree planting to compliment the retained trees, including Tallowwoods and Brush Box's;

A copy of the Environmental Assessment is included at **'Appendix B'**.

3 STATUTORY CONTEXT

3.1 MAJOR PROJECT DECLARATION

On 25 August 2009, the Deputy Director General, as delegate of the Minister for Planning, formed the opinion that the proposal is a major project under clause 20 of Schedule 1 of the MD SEPP, as it is for teaching and research with a capital investment value of more than $30 million. The Minister is the approval authority.

3.2 PERMISSIBILITY

The development site and adjoining land is zoned 5 Special Uses under the Randwick Local Environmental Plan 1998 (Consolidation). The proposal is consistent with the objectives of the zone which includes accommodating development for educational purposes. Educational establishments are permissible in the zone. An extract of the zoning map is provided below in Figure 15.

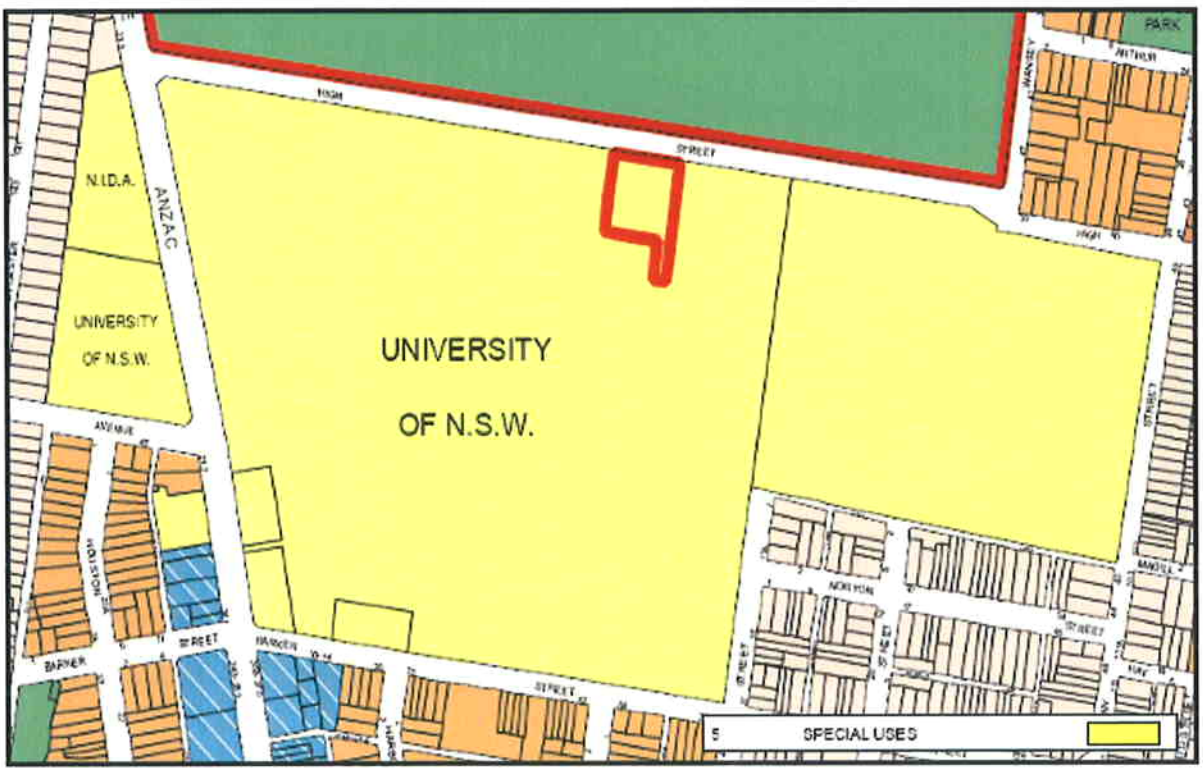

Figure 15 – Zoning Map

3.3 DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (DGR'S)

On 3 November 2009, the Executive Director, Major Projects Assessments, as delegate of the Director General, issued DGRs pursuant to section 75F of the EP&A Act. The DGRs require the following key issues to be addressed:

- built form / urban design;
- environmental amenity;
- transport and accessibility impacts;
- ecologically sustainable development;
- utilities;
- drainage, stormwater and groundwater management;
- construction impacts
- contributions; and
- consultation.

The EA was lodged by the proponent on 11 December 2010 and was subsequently deemed by the Department to be adequate for exhibition. The DGR's are contained in **Appendix A.**

3.4 OBJECTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EP&A ACT)

The Minister's consideration and determination of a project application under Part 3A must be consistent with the relevant provisions of the EP&A Act, including the objects set out in section 5 of the EP&A Act. The objects of the EP&A Act in section 5 are as follows:

(a) To encourage:

- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- *(iii) the protection, provision and co-ordination of communication and utility services,*
- *(iv) the provision of land for public purposes,*
- *(v) the provision and co-ordination of community services and facilities,*
- *(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats,*
- *(vii) ecologically sustainable development,*
- *(viii) the provision and maintenance of affordable housing,*

(b) To promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) To provide increased opportunity for public involvement and participation in environmental planning and assessment.

The Department has considered the objects of the EP&A Act and considers that the application is consistent with the relevant objects. The assessment of the application in relation to these relevant objects is provided in Section 5.

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the Protection of the Environment Administration Act 1991. Section 6(2) of that Act states that ESD "requires the effective integration of economic and environmental considerations in decision-making processes" and that ESD "can be achieved through" the implementation of the principles and programs including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms. In applying the precautionary principle, public decisions should be guided by careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment and an assessment of the risk-weighted consequences of various options.

The Department has fully considered the objects of the EP&A Act, including the encouragement of ESD, in its assessment of the application. A detailed assessment of ESD issues is contained at Section 5.6 of this report. On the basis of this assessment, the Department is satisfied that the proposal encourages ESD, in accordance with the objects of the EP&A Act.

3.5 SECTION 75I (2) OF THE ACT

Section 75I(2) of the EP&A Act and clause 8B of the Environmental Planning and Assessment Regulation 2000 provides that the Director General is to address a number of requirements in the Director General's Report. These matters and the Department's response are set out in the following table.

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Table 1 – Section 75I (2) requirements for Director Generals Report

Section 75I(2) criteria	***Response***
Copy of the proponent's environmental assessment and any preferred project report	The proponent's EA is located at Appendix B on the assessment file (attached).
Any advice provided by public authorities on the project	All advice provided by public authorities on the project for the Minister's consideration is set out in Section 4 of this report.
Copy of any report of the Planning Assessment Commission in respect of the project	The project was not referred to the Planning Assessment Commission.
Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project	Each relevant SEPP that substantially governs the carrying out of the project is identified in Section 3.6.
Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division	An assessment of the development relative to the prevailing environmental planning instrument is provided in Section 3.6 of this report.
Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate	The environmental assessment of the project application is this report in its entirety.
A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project	The Department is satisfied that the environmental assessment requirements have been complied with.
Clause 8B criteria	***Response***
An assessment of the environmental impact of the project	An assessment of the environmental impact of the proposal is discussed in Section 5 of this report.
Any aspect of the public interest that the Director General considers relevant to the project	The public interest is discussed in Section 5 of this report.
The suitability of the site for the project	The proposed uses are permitted in the zone and based on the Department's assessment of key issues, it is considered the site is suitable for the project.
Copies of submissions received by the Director General in connection with public consultation under section 75H or a summary of the issues raised in those submissions	A summary of the issues raised in the submissions is provided in Section 4 of this report.

3.6 ENVIRONMENTAL PLANNING INSTRUMENTS (EPI'S)

3.6.1 Application of EPI's to Part 3A projects

To satisfy the requirements of section 75I(2)(d) and (e) of the EP&A Act, this report includes references to the provisions of the EPIs that govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project application. The primary instruments guiding the assessment of the proposal are:

- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 55 - Remediation of Land; and
- Randwick Local Environmental Plan 1998 (Consolidation).

Other planning controls to be considered in the assessment of the proposal are:

- Campus 2020, UNSW Kensington Campus Development Control Plan (UNSW DCP).

The provisions, including development standards of local environmental plans, and development control plans are not required to be strictly applied in the assessment and determination of major projects under section 75R(3) Part 3A of the EP&A Act. Notwithstanding, these standards and provisions are relevant considerations for this application as the DGR's and section 75I (2) (e) of the EP&A Act require the proponent to address such standards and provisions and the Department to duly consider them.

The Department has considered the proposed project application against the objectives and aims of these instruments, and is satisfied that the proposed project is consistent with the provisions of all of these instruments. Assessment of each of these is discussed in Sections 3.6.2 to 3.6.5 of this report.

3.6.2 State Environmental Planning Policy (Major Development) 2005

On 25 August 2009, the Deputy Director General, as delegate of the Minister, formed an opinion that the project is a major project under clause 20 of Schedule 1 to the MD SEPP, as it is for a teaching and research facility with a capital investment value of more than $30 million. The Minister is the approval authority.

3.6.3 State Environmental Planning Policy (Infrastructure) 2007

The aim of this policy is to assist in the effective delivery of public infrastructure throughout the State. Schedule 3 of the SEPP requires traffic generating development to be referred to the RTA. The proposal was referred to the RTA, who raised no objections to the project proceeding. Refer to Section 4.2.2 for further discussion on comments received from the RTA.

3.6.4 State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 requires a consent authority to consider whether the land is contaminated, and if so, whether the land will be remediated before the land is used for the intended purpose.

Urban Environmental Consultants has undertaken a Stage 1 Contamination assessment of the area that would accommodate the proposed building and concluded that the site does not have a history of potential contaminating activities and is suitable for educational redevelopment. It is therefore considered that the land is suitable for the proposal and its continued use for University purposes.

3.6.5 Randwick Local Environmental Plan 1998 (Consolidation) (RLEP 1998)

An assessment against the key provisions of the RLEP 1998 relevant to the development is provided below:

Zoning

The site is zoned 5 Special Uses under RLEP 1998 and educational establishments are permissible in the zone. The objective of the zone is to accommodate development for educational purposes and enable associated ancillary development.

The proposal is permissible in the zone as it is to accommodate the expansion of the University through the provision of an additional learning and teaching spaces, laboratories and workshops. There are no height or FSR controls that apply to the site.

Development in Special Uses zone (Clause 37A)

The proposal is compatible with the character of the locality and would not adversely affect the amenity of nearby and adjoining development, as required by clause 37A of RLEP 1998.

Site Specific Development Control Plans (Clause 40A)
Pursuant to clause 40A, a site specific development control plan is required for sites with an area greater than 10,000m^2 and the UNSW DCP satisfies the provisions of this clause, as discussed in Section 3.7.

3.7 CAMPUS 2020, UNSW KENSINGTON CAMPUS DEVELOPMENT CONTROL PLAN (UNSW DCP)

The UNSW DCP outlines a number of key objectives/controls to consider with regards to any new development. Key objectives/controls include the following:

- target a 5 star rating under Green Star rating scheme;
- establish an iconic building at the UNSW gateway at University Mall (the development site);
- maintain and enhance views into the campus;
- desirable location for a public room such as theatre, auditorium, hall, galleries or exhibition spaces;
- trees along University Mall are significant and have been identified for high retention priority;
- gathering and connective spaces are the preferred uses surrounding the development site;
- wall height up to 24 metres;
- 8 metre setback from Spooner's Wall subject to detailed studies;
- upper level housing desirable;
- minimum 3 hours of sunlight to any adjoining residential properties;
- preferred location of transport stop on eastern side of Anzac Parade is north of University Mall; and
- provision of awning or colonnade to University Walk.

The proposal is generally consistent with the controls and objectives identified in UNSW DCP, as discussed in Section 5 of this report.

4 CONSULTATION

4.1 PUBLIC EXHIBITION DETAILS

Under section 75H(3) of the EP&A Act, the Director General is required to make the Environmental Assessment (EA) of a project publicly available for at least 30 days.

After accepting the EA, the Department:

- made it publicly available from 16 December 2009 to 1 February 2010:
  - on the Department's website; and
  - at the Department's Information Centre, Randwick City Council offices, and Bowen Library.
- notified landowners in the vicinity of the site about the exhibition period by letter;
- notified Randwick City Council and relevant State agencies; and
- advertised the exhibition in the Daily Telegraph and the Sydney Morning Herald.

This satisfies the requirements of section 75H (3) of the EP&A Act.

4.2 SUBMISSIONS RECEIVED ON ENVIRONMENTAL ASSESSMENT

In response to public exhibition and notification of the application, the Department received four submissions from public authorities, one submission from Randwick City Council and no public submissions. The issues raised are summarised below, and a full copy of the submissions is attached at **Appendix D**.

4.2.1 Randwick City Council

Randwick City Council raised no objections to the proposal and was supportive of the proposed use, however, raised the following issues:

- built form and public domain and associated impacts on views, interface with adjoining residential use and Village Green,
- does not support proponent's request for an exemption from s94A contributions;
- loss of open space and formal recreation facilities;
- requests the proponent commit to achieving a 6 star Green Star energy efficient rating;
- potential groundwater impacts;
- stormwater drainage and consistency with previous approved UNSW stormwater strategy;
- transport measures to support no provision of car parking;
- replacement of the Anzac Parade footpath; and
- relocating the overhead wires in the vicinity of the site with underground cables.

Comment

The Department has considered the above issues in Section 5 of this report and also recommended appropriate conditions to address these issues where relevant. The Department notes that whilst the UNSW DCP identifies the site for potential student housing, Council is supportive of the proposed use and considers it to be more appropriate than housing. The loss of open space and recreational facilities will be offset through the UNSW redevelopment of David Phillips Field approximately 1.4 kms from the main campus, whilst UNSW is also currently considering options for the relocation of the tennis courts and the cricket nets within the campus. The Department considers that as no overhead wires are located adjacent to the site along Anzac Parade, the requirement to relocate any overhead wires underground is not relevant to the proposal.

4.2.2 Roads and Traffic Authority Sydney Regional Development Advisory Committee (SRDAC)

The SRDAC raised no objections to the proposal, however, provided some general comments as summarised below:

- the post development stormwater discharge from the site into the RTA drainage system should not exceed the pre-development discharge;
- detailed design plans and hydraulic calculations of any changes to the stormwater drainage system are to be submitted to the RTA for approval;
- detailed design drawings and geotechnical reports relating to the excavation of the site are to be submitted to the RTA for assessment;
- the owners of the roadway are to be given notice of any intention to excavate below the base of the footings adjoining the roadway;
- a construction traffic management plan is required prior to Construction Certificate, a construction zone will not be permitted on Anzac Parade and a road occupancy license should be obtained from the RTA;
- the swept path of the longest vehicle and manoeuvrability through the site is to be in accordance with AUSTROADS, and is to be approved by the Department;
- off-street parking is to be designed in accordance with the relevant Australian Standards, the loading bay are to be clearly signposted and line marked;
- all vehicles to enter and exit the site in a forward direction; and
- all works/ signposting to be at no cost to the RTA.

Comment
The Department's consideration of the above issues is discussed in Section 5.3 of this report. The RTA has provided revised comments that raise no objections to the proposed work zone on Anzac Parade, however, has indicated that it would require further approval from RTA's Transport Management Centre. The Department has also recommended appropriate conditions where relevant.

4.2.3 Sydney Water

Sydney Water raised no objections to the proposal, however, provided some general comments as summarised below:

- Sydney Water will further assess the impact of the development when the proponent applies for a Section 73 certificate; and
- the proponent must fund any adjustments needed to Sydney Water infrastructure as a result of the development.

Comment
The requirement for a section 73 certificate has been included as a recommended condition in the Instrument of Approval.

4.2.4 NSW Transport and Infrastructure (NSWTI)

The NSWTI raised no objections to the proposal, however, provided some general comments as summarised below:

- supports the objective of increasing the share of trips to and from the subject site by public transport as part of the broader goal of the University to promote sustainable transport;
- recommends preparation of a construction management plan to mitigate potential impacts on public transport, pedestrians and cyclists on Anzac Parade during the construction stage; and
- a work place travel plan and travel access guide (TAG) is to be prepared to encourage the use of non-car transport modes by students, employees and visitors to the site.

Comment
The Department has recommended a condition of approval that requires the proponent to prepare a construction traffic management plan that would require the proponent to address any potential impacts on vehicular, cyclist and pedestrian movement. A condition requiring a work place travel plan and a TAG for the site has also been included in the recommended conditions.

4.3 SYDNEY AIRPORT CORPORATION LIMITED (SACL)

Following exhibition, the application was also referred to SACL, as the proposed height of the building would potentially result in permanent penetrations into controlled airspace which requires approval under the Airports (Protection of Airspace) Regulations 1996. SACL has advised that with a maximum height of RL 59.7, the proposal would penetrate the Obstacle Limitation Surface (OLS) Inner Horizontal Surface which is situated at 51m AHD for the site. The proposal also exceeds OLS Conical Surface which slopes up from 51m - 60m AHD across the site and the PARM Radar Surface Navigational Aid which is at approximately 56m - 58m AHD across the site. Subsequently, the proponent would require approval from the Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government (DITRDLG) as the proposal seeks to construct a permanent penetration within controlled air space and is considered a controlled activity.

Comment

SACL's advice is assessed in Section 5.3.1.

4.4 DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE & WATER (DECCW)

Following exhibition, DECCW's comments were sought in regards to the proposed operation of a tri-generation system. DECCW has advised that there are performance requirements for emission of oxides of nitrogen for tri-generation systems and that tri-generation systems may also require an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997* for systems that operate over a certain capacity. DECCW has advised that the proposed tri-generation system may require an EPL and would meet the relevant oxides of nitrogen (NO_x) emission performance level. DECCW also advised on an appropriate condition of approval relating to the tri-generation system.

Comment

DECCW's comments are discussed in Section 5.6.

4.5 PROPONENT'S RESPONSE TO SUBMISSIONS

The proponent's Response to Submissions was lodged on 29 March 2010. A copy of the Response to Submissions is contained at **Appendix C**. The proponent has not proposed any amendments to the project, however, has provided additional information regarding construction activities and seeks to establish a construction work zone on Anzac Parade during the construction of the project. The proponent has also removed the demolition works from the project, as these have now been undertaken as exempt development and through development consent issued by Randwick Council.

The Department's consideration of the issues identified in the submissions and the proponent's responses are contained in Section 5 of this report.

5 ASSESSMENT OF ENVIRONMENTAL IMPACTS

The DGR's and following key issues raised during the exhibition period were considered in the Department's assessment of the application:

- built form and urban design;
- environmental and residential amenity;
- air traffic impacts;
- transport and traffic impacts;
- noise impacts;
- developer contributions;
- ecologically sustainable development;
- drainage and stormwater; and
- public interest.

5.1 BUILT FORM AND URBAN DESIGN

The new building would be located on a prominent position at the main pedestrian entrance to the University on the western side of Anzac Parade. The proposal comprises a new 6 level building containing 13,100m^2 of GFA, with a length of up to 76 metres, width of up to 52 metres and height of 29.7 metres above ground level (refer to Figures 16 and 17). The proposed building is comparable in height and scale with other buildings on campus, buildings on the western side of Anzac Parade and future development envisaged for the campus under the UNSW DCP. Whilst the maximum height of the building is 29.7 metres, the wall height is 23.7 metres, which complies with the maximum height in the UNSW DCP of 24 metres. The height and scale of the building is generally consistent with provisions in the UNSW DCP.

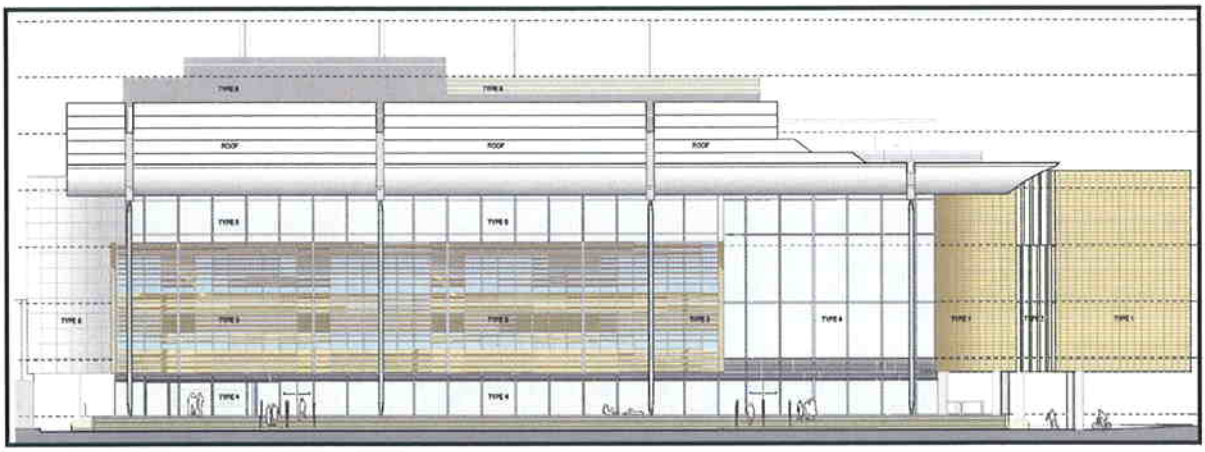

Figure 16 – Northern Elevation

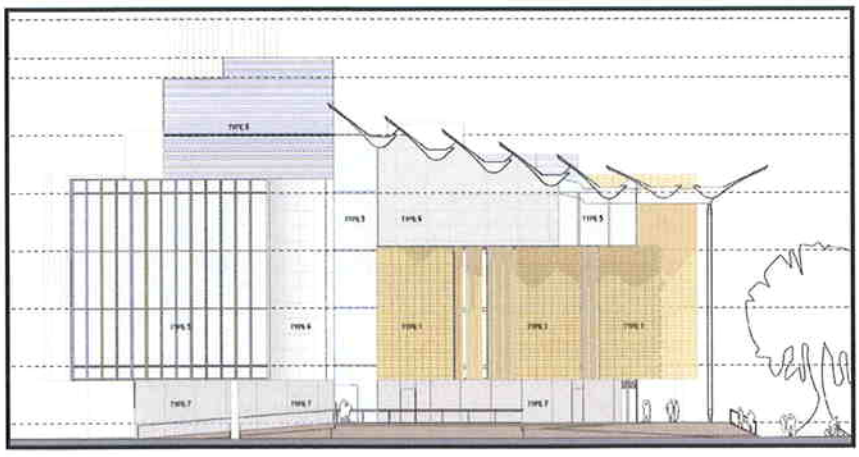

Figure 17 – Eastern Elevation

The scale of the proposal would ensure an appropriate sized building is featured on a visually prominent site and would also provide a strong edge to the iconic University Mall as well as providing a well articulated, modulated and interesting design to Anzac Parade (refer to Figure 18). The modulation of the façade ensures that the bulk and scale of the building is not excessive and provides a transition along Anzac Parade from the tree lined treatment to the north and the solid building frontages to the south. The proposal reinforces the landscaped setback from the University Mall and is setback approximately 10 metres from University Mall to protect the two rows of existing significant tree planting. A minor intrusion into the setback is the projecting photovoltaic roof element, which performs as an awning. This roof element would not have any adverse impact to the view corridor or adversely impact the trees. This generally complies with the minimum setback of 8 metres to University Mall prescribed in the UNSW DCP. The setback of the building protects and recognises the significance of University Mall and its associated landscaping.

Figure 18 – Western Elevation (view from Day Avenue)

Council raised an issue regarding the building and service court area extending beyond the Day Avenue alignment specified in the UNSW DCP and subsequent obstruction of the view corridor to the Village Green and upper campus from Day Avenue. Council also requested further detailed design analysis be undertaken to optimise design quality of buildings through alignments, heights and scale which contributes to the overall campus built form and public domain pattern. The proponent acknowledges that the building intrudes on the Day Avenue view corridor by approximately 2.6 metres, however, notes that partial views would be retained. As an 18 metre separation between the new building and the nearest building to the south would be achieved, views from Day Avenue into the University would only be partially impacted by the building's 2.6 metre encroachment into the view corridor. Furthermore, the main view corridor into the campus along University Mall would be maintained. The Department considers the minor encroachment into the view corridor to the Village Green and Upper Campus from Day Avenue is acceptable as greater setbacks have been provided to University Mall and partial views to the Village Green from Day Avenue would be maintained.

The proponent has also indicated that amendments to landscaping and fencing would be provided in detailed construction stage plans to improve views of the building from the public domain. The Department has recommended a condition be imposed requiring the proponent to provide a revised Landscape Plan prior to occupation of the building.

The Department considers that the proposal provides an active use at the entrance to the University that appropriately addresses University Mall where previously limited activation was provided due to the screening of the tennis courts provided by Spooner's Wall. The proponent has also incorporated an interesting and sustainable design feature through the use of photovoltaic cells for the roof. The use of photovoltaic cells and other sustainable materials demonstrates the functionality of the building as well as providing an iconic building.

The proposal is generally consistent with the built form and character envisaged for the site and the Campus under the UNSW DCP. Accordingly, the Department considers the built form and design is appropriate for the site.

5.2 ENVIRONMENTAL AND RESIDENTIAL AMENITY

5.2.1 Building Separation

The proposed building is separated from the closest residential building (student accommodation) to the south by approximately 18 metres.

The proposed separation distance has been assessed with consideration of best practice building separation requirements in the Residential Flat Design Code (RFDC). Whilst the proposed building is an education and research building, the building separation objectives aim to protect residential amenity and promote appropriate form and massing. Accordingly, it is considered to be an appropriate guide and the student accommodation to the south has similar characteristics to residential development. The Department considers the RFDC separation distance that is the most relevant is 18 metres (between habitable rooms and non-habitable rooms) for development over 25 metres in height.

The building separations proposed generally achieve the minimum separation distances specified in the best practice guidelines and are considered satisfactory.

5.2.2 Overshadowing

Residential development potentially affected by overshadowing from the proposal would be the student accommodation located within the UNSW campus to the south and two residential flat buildings on the south-western corner of Day Avenue and Anzac Parade intersection (refer to Figures 19 – 21).

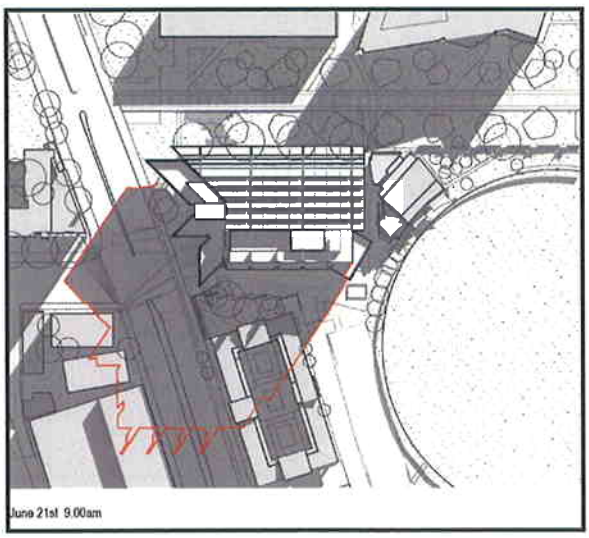

Figure 19 – Winter Solstice 9.00am

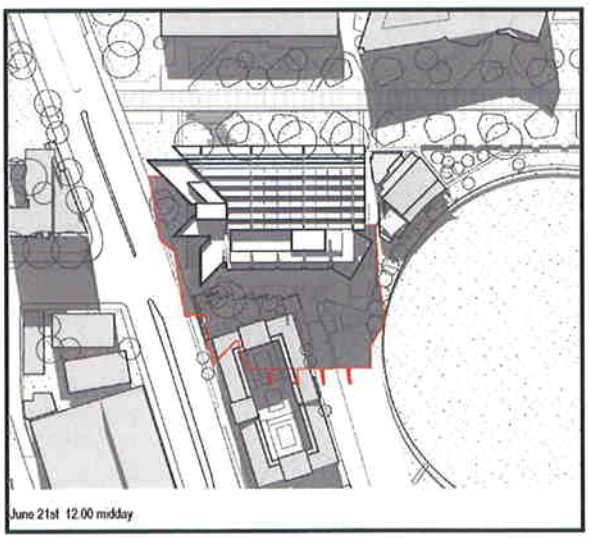

Figure 20 – Winter Solstice midday

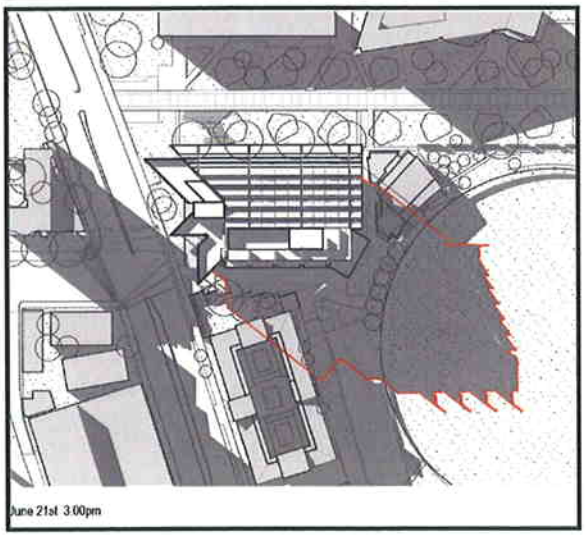

Figure 21 – Winter Solstice 3.00pm

The residential flat buildings would retain a minimum of 3 hours of sunlight during the winter solstice, which is considered acceptable by the Department.

The proposal would have no additional solar access impacts on the internal courtyard of the student accommodation. The majority of students not already impacted by overshadowing would retain a minimum 3 hours of sunlight except the northern residents during the winter solstice. However, the Department notes that the northern rooms of the student accommodation are already considerably affected by shading from the large mature trees to the north of the student accommodation that reaches predominantly a height of 16-17 metres.

Given that the University has identified the development site for a landmark and iconic building, and that the majority of residents not already impacted by overshadowing would retain a minimum 3 hours of sunlight, the Department considers the minimal degree to which solar access is affected is acceptable.

5.3 AIR TRAFFIC IMPACTS

The proposal is located under a flight path which is protected under the *Airports Act 1996* through height restrictions on development that may interfere with the safety, efficiency or regularity of existing of future air transport operations into or out of Sydney Airport. The OLS is the relevant control that sets height limitations and prescribes RL 51 for an OLS Inner Horizontal Surface which then steadily increases in height to create the OLS Conical Surface. The proposal is situated in both the OLS Inner Horizontal Surface and OLS Conical Surface which slopes up from 51m - 60m AHD on the site. Subsequently, at a maximum height of RL 59.7, the proposal would penetrate both surfaces.

The PARM Radar Surface Navigational Aid also applies to the site and is situated at approximately 56m - 58m AHD across the site. The proposal would also penetrate this surface, however, only the flues for the building are expected to penetrate this surface.

The proposal was forwarded to SACL for comment. SACL have delegated authority under Airports (Protection of Airspace) Regulations 1996 to approve or provide comment on proposals that do not penetrate the relevant air traffic controls or temporary penetrations, such as cranes. Permanent intrusions of the air traffic controls are considered controlled activities and require approval from DITRDLG. SACL informed the Department that the proposal is considered to be a controlled activity and therefore requires DITRDLG approval.

The Department has consulted DITRDLG which advised that its approval is guided by advice from SACL, Civil Aviation Safety Authority (CASA) and Air Services Australia (ASA). CASA's assessment of the proposal is that as it would be a hazardous object due to its height, location and lack of lighting, the flues should be obstruction lit with low intensity red lights in accordance with CASA guidelines. ASA found that the proposal would not affect any sector or circling altitude or any approach or departure from Sydney Airport. SACL has noted the comments of other parties and raised no objections to the proposal.

At the time of finalising this Environmental Assessment, DITRDLG were still assessing the project and approval had not been issued. However, as CASA, SACL and ASA have not raised any issues in relation to the safety, efficiency or regularity of existing or future air transport operations into or out of Sydney Airport provided appropriate lighting is installed, the Department considers that this issue does not preclude project approval, subject to recommended conditions requiring the proponent to obtain DITRDLG approval prior to construction of any above ground works. The Department has also recommended a condition requiring the proponent to obtain the necessary approvals from SACL or DITRDLG for the operation of construction cranes within regulated air space.

5.4 TRANSPORT AND TRAFFIC IMPACTS

5.4.1 Traffic Impacts

The proposal would provide accommodation for approximately 1,111 staff. However, 1,000 of those are existing staff who would be relocated from the existing Faculty of Engineering buildings.

The proponent's traffic and parking report identified that due to the proposal only generating 100 additional trips to the University and a low mode share of travel by car of 44%, which is envisaged to drop to 40% by the time the proposal would be ready for occupation, the potential daily traffic generated would be 40 vehicles in and 40 vehicles out and a small number of service vehicles. Therefore, the traffic and parking report concludes that there would be a maximum of 30 vehicle trips per peak period as not all trips would occur during a one hour period and this would result in minimal impact on operation of the road network.

Council and the RTA raised no issue regarding potential traffic impacts. Furthermore, given no additional car parking has been provided in order to encourage a modal shift, the Department considers the potential impacts associated with additional traffic generated by the development are minimal and acceptable.

5.4.2 Car parking

The traffic and parking report has identified that based on 100 additional users, 40% of people driving and 60% of employees being on-site during peak periods, the proposal is required to provide an additional 24 car spaces. However, the proponent has proposed no additional on campus car parking in accordance with the objectives of the UNSW DCP to encourage sustainable transport use. In this regard, the site has a high level of accessibility to public transport, which students and staff predominantly use to travel to the University.

The traffic and parking report, however, recommends that bicycle parking facilities be provided. The proponent has indicated that bicycle racks would be provided at various locations around the building.

The Department notes that five at-grade car parking spaces have been provided in the service courtyard to the south of the building, however, these have been provided to accommodate the electric cars that would be used in the research functions of the proposal and would not be available for general car parking by staff or students.

Council identified in its submission that the proponent has failed to demonstrate that additional measures exist to encourage alternatives to car travel. In the proponent's

Response to Submissions, a revised Traffic and Parking Report was submitted that notes recent measures adopted by UNSW have resulted in a reduction of private vehicle use from 32% to 25%. NSWTI supports the objective of increasing the share of trips to and from the subject site by public transport as part of the broader goal of the University to promote sustainable transport. The measures that are being implemented to promote increased use of public and active transport include:

- additional bus services;
- new bus service operated by Sydney Buses connecting UNSW to Bondi Junction, Alexandria and Wolli Creek and new private service connecting the University to Redfern Station;
- provision of ticket facilities at the Anzac Parade bus stop; and
- a new carpooling scheme introduced in May 2009 for staff and students.

The Department considers that the proposal includes appropriate measures that justify no provision of additional car parking and that appropriate bicycle storage facilities and amenities have been provided. The Department has also imposed a condition requiring the proponent to prepare and submit a Work Place Travel Plan and TAG.

5.4.3 Access and Servicing

The proponent has provided a loading bay in the south-western portion of the building, which would be accessed by an internal road, Southern Drive, from Gate 14 on Barker Street. The loading area is also supplemented by a service courtyard. The Department considers that while this is not an optimal location, as it adjoins the Village Green and the UNSW DCP identifies gathering and connective spaces as the preferred use surrounding the site, it is the most appropriate option. The alternative options, which would front Anzac Parade, University Mall or student accommodation, would be undesirable given they comprise a prominent street frontage, main view and pedestrian corridor into the University campus, or would result in adverse amenity impacts on the student accommodation, respectively.

The Department therefore considers that appropriate access and servicing facilities have been incorporated in the proposal.

5.4.4 Construction Impacts

The proponent has committed to preparing a traffic management plan detailing temporary barriers, line marking and signage to control construction traffic and addressing traffic in the Construction Management Plan. The proponent's traffic assessment originally identified that the construction zones would be contained wholly on-site. However, as a result of discussions with potential construction managers, it has been identified that it may not be a viable option as Southern Drive adjoins student accommodation and a child care centre. The proponent has indicated in the Response to Submissions that the preferred location for a construction work zone is Anzac Parade adjoining the site to the west. This would be facilitated by the temporary relocation of the existing bus stop on the eastern side of Anzac Parade, which is adjacent to the site, by approximately 75 metres to north to allow construction works to proceed. The Department notes that the preferred location for the bus stop in the UNSW DCP is the relocated position and the proponent has obtained the appropriate approvals from the RTA and State Transit Authority to temporarily relocate the bus stop. The proponent also stated that during off-peak periods, parking is permitted on Anzac Parade.

In the SRDAC submission, it was stated that a construction work zone would not be permitted on Anzac Parade. The Department sought further comment from the RTA regarding the proponent's preferred location for the construction zone on Anzac Parade. The RTA has reviewed the proponent's request and now raises no objections to the work zone, subject to the proponent obtaining further approval from the RTA's Transport Management Centre.

The Department has recommended conditions that require the proponent to obtain the appropriate approvals from RTA prior to establishing construction work zone on Anzac parade and to obtain STA and RTA approval for the permanent relocation of the bus stop prior to occupation of the building. The Department also recommends that the number of construction vehicle movements and routes be detailed in a Construction Management Plan.

5.5 NOISE IMPACTS

5.5.1 Operational

The proponent has prepared an Acoustic Assessment Report which acknowledges that during operation, there would be potential adverse noise impacts on the adjoining noise sensitive receiver, student accommodation to the south, from rooftop mechanical services plant. The acoustic assessment identifies several recommendations to mitigate these impacts including separate plant enclosure for the emergency generator; noise barriers, attenuators or noise control features to mitigate noise from cooling towers; isolating smoke exhaust fans in separate plant room; and/or re-selecting equipment during detailed design phases.

The proponent has committed to further investigating these mitigation measures to ensure rooftop plant and equipment complies with relevant noise criteria. The Department has therefore recommended appropriate conditions to ensure that the proponent adopts adequate mitigation measures in the detailed design prior to certification of Crown building works.

The Acoustic Assessment Report also identified potential noise impacts on occupants of the proposed building from traffic noise from Anzac Parade. However, this potential noise impact can be adequately mitigated by 10mm thick glazing or equivalent thermal double glazed construction. The proponent has committed to achieving these acoustic requirements. The Department has therefore recommended appropriate conditions to ensure adequate treatment is provided to mitigate any external noise impacts on any future occupants of the proposal.

The assessment did not indicate that any adverse noise impacts would result from use of the outdoor experimentation area and the activities including classes and testing of photovoltaic modules that are proposed for this area would primarily run during the day time and is unlikely to include noisy equipment.

5.5.2 Construction

The proponent has committed to preparing a noise and vibration management plan as part of the Environment Management Plan and Construction Management Plan. Furthermore, the proponent has committed to limiting construction work that generates significant noise or vibration to the hours of 9am to 12pm and 2pm to 5pm Monday to Friday and from 9am to 12 pm on Saturdays.

The Department agrees with these measures and has therefore recommended conditions requiring these measures to be incorporated into a Construction Management Plan.

5.6 DEVELOPER CONTRIBUTIONS

Randwick City Council's Section 94A (s94A) Development Contributions Plan (s94A plan) applies to the site. The s94A plan applies a levy of 1% of the value of construction for all development unless an exemption applies. The proposal does not fall within any of the categories that are afforded an exemption. Based on the project having a CIV of $91,032,252, the levy would be $910,322.52.

The proponent has stated that they should be exempt from the contributions due to:

- significant community benefits from the existing facilities the University provides to the community, including libraries, child care centres, open space, recreation facilities, and facilities for a number of community organisations and programs;
- its commitment to participate and provide additional resources in developing the plans and framework for the Randwick Education and Health Precinct;
- the University is a not for profit organisation, and subsequently any surplus income is better redirected into research and education; and
- the funding for the proposal is from the Commonwealth Government's economic stimulus package and has strict funding criteria and timeframes which the minor works in the s94A would not meet.

Council is of the opinion that the levy of $910,322.52 should be imposed on the subject application as the development is not exempt from the levy in accordance with Council's s94A plan and as the levy has been applied to other UNSW development. Furthermore Council is of the opinion that the proposal would generate additional demand on public services and infrastructure. Council has subsequently indicated that they would be supportive of an exemption if public domain upgrade works would be provided along the full frontage of Anzac Parade.

The Department has considered the position of both parties and considers that given the University is a not for profit organisation, the principle of reasonableness is particularly relevant to the calculation of contribution amounts for this project. That is, the levy should relate to the likely level of increased demand on those public services and infrastructure for which the s94A plan is levying contributions. Given that there is no increase in the number of students (as the proposal would provide facilities for existing students currently studying on campus) and only an increase of 100 staff, the Department considers that the increased demand on such services and infrastructure is limited to these additional 100 employees.

The 1% levy as calculated under Council's s94A in relation to the proposal is $910,322.52. As the proposal has the capacity to accommodate 1,111 staff, this equates to approximately $819.37 per staff member. The Department therefore considers as there would only be 100 new staff associated with the proposal, a contribution of $81,937 is appropriate as it equates to the increased demand on public services and infrastructure ($819.37 x 100 new staff).

The proponent has also indicated that they would be willing to replace the footpath along Anzac Parade for the Tyree development site frontage extending to the vicinity of the relocated bus shelter (see Figure 22). This is approximately 180 metres which would equate to approximately $360,000 based on a rate of $500 per m² and an average footpath width of 4 metres. The Department considers footpath works relating to the Tyree Development site frontage extending to the vicinity of the proposed bus location is appropriate given the footpath along this area will be disturbed as a result of construction of the building and relocation of the bus shelter. Therefore, the Department has recommended a condition that requires the replacement of this footpath to be undertaken prior to occupation of the building.

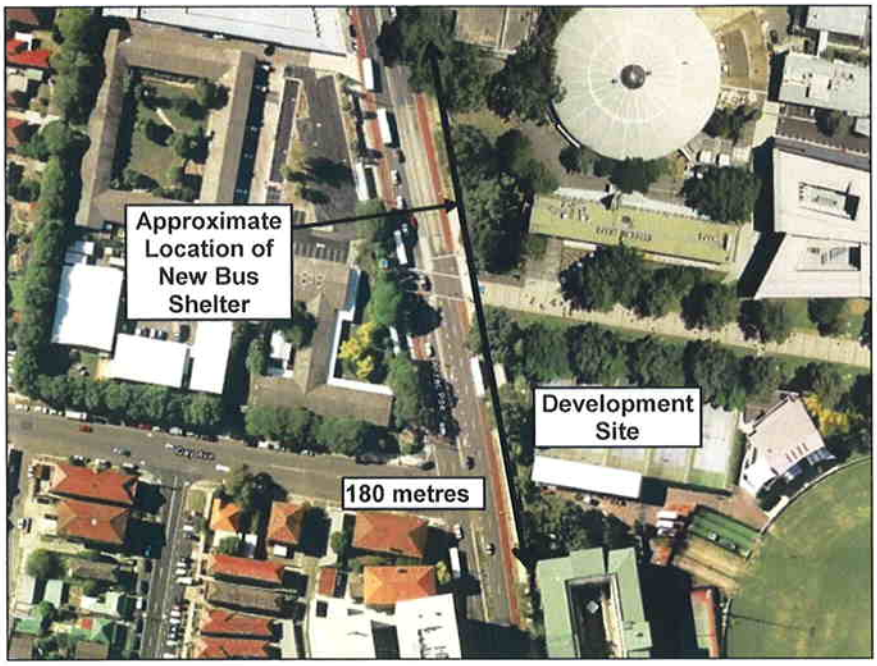

Figure 22 – Footpath upgrade works

The Department considers the payment of $81,937 and public domain improvement works required under a recommended condition, which would cost approximately $360,000 would provide appropriate contributions to Council to address the increased demand on public services and infrastructure.

In accordance with section 75R(4) and consequently section 94B(2) of the EP&A Act, the Minister may impose a different contribution after having had regard to Council's s94A plan. It is therefore recommended that a contribution fee of $81,937 be applied to the project application.

5.7 ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

The proposal is located within an urban footprint on a previously developed and disturbed site and would not result in loss of any threatened or vulnerable species, populations, communities or significant habitats. The site is not subject to any known effects of flooding and is not subject to bushfires. The site is also unlikely to be impacted by changes in sea level rising resulting from climate change.

A Green Star Strategies report prepared by AECON accompanies the EA and outlines how the proposal would incorporate ESD principles in the design, construction and on-going development of the project. Although the UNSW DCP requires a minimum 5 star Green Star rating, the proponent has indicated that it will aim to achieve a minimum 6 star rating.

The ESD measures incorporated in the proposal include:

- a large void in the building which extends from Level 3 to the lower ground floor and allows for significantly improved access to natural light;
- energy efficient utilities and services including a building management system that monitors energy and water usage for the building;
- CO_2 sensors in each return duct to facilitate continuous monitoring and adjustment of outside air ventilation rates;
- external shading;
- reduced use of potable mains through the use of water storage tanks;
- tri-generation system;
- recycling, sorting and composting facilities; and
- thermal insulation to external walls which avoids the use of ozone-depleting substances in both its manufacture and composition.

The Department has consulted DECCW regarding the operation of the tri-generation system. DECCW has advised that there are performance requirements for emission of oxides of nitrogen for tri-generation systems and the tri-generation systems may also require an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997* for systems that operate over a certain capacity. The current tri-generation system that the proponent intends to operate meets DECCW's oxides of nitrogen (NO_x) emission performance of 250 mg/m^3 and has a capacity to burn less than 7 mega joules of fuel per second and therefore would not require an EPL. However, as further detailed design of the tri-generation system is to be undertaken, the Department has recommended conditions that require the proponent to further consult DECCW to confirm that the tri-generation system will not require an EPL and to confirm that the NO_x emission performance level is the appropriate level for the selected system.

The proposal would provide a sustainable development of the site that provides both positive short-term and long-term economic and social outcomes through the improvement of the quality of educational facilities and by increasing specialised employment opportunities in Sydney. The Department is satisfied that the proposal adequately incorporates ESD principles into the design of the facility and that the proposal is a sustainable use of the site. The Department has recommended a condition requiring the proponent to achieve a minimum 5 star rating under the Green Star sustainability tool.

5.8 DRAINAGE AND STORMWATER

The proponent has submitted stormwater concept plans indicating the location of stormwater tanks, new connection points and upgrades. The proponent has also submitted a Civil Design Statement (CDS) that states that the stormwater concept plans have been designed in accordance with relevant standards, Council requirements, and UNSW DCP Stormwater Strategy. The CDS notes that the Stormwater Strategy requires a retention tank that is suitable for a 20 year ARI storm; however, as the proponent is still investigating options regarding stormwater impacts, the capacity of the retention tank has not been finalised. The Department has recommended a condition that requires the proponent to comply with UNSW DCP Stormwater Strategy requirements. The site is not subject to any known effects of flooding and Council raised no issues regarding flooding impacts.

Council indicated that flows leaving the development site into the external drainage network for the proposed drainage system are to be equivalent or better than flows that would have exited the development site in accordance with the Stormwater Strategy prepared for UNSW by ANA Technical Services Pty Ltd dated 28 November 2005. The SRDAC also indicated that the post development stormwater discharge from the site should not exceed the pre-development discharge into the RTA drainage system.

The Response to Submissions indicates the proposal complies with the Stormwater Strategy and that further details would be provided at construction certification stage. The proponent also states that the proposal would have no impact on the RTA stormwater system. The Department notes that the proponent has also committed to managing stormwater runoff in accordance with the Stormwater Strategy and to adopt water sensitive urban design measures such as use of harvested stormwater via the Botany Sands Aquifer.

The Department has recommended the following conditions of approval:

- the post development stormwater discharge into the RTA drainage system shall not exceed the pre-development discharge;
- RTA approval is required for any changes to the stormwater discharge into the RTA drainage system prior to certification of Crown building works; and
- detailed design of the stormwater system to demonstrate that the proposal would not exceed maximum stormwater discharge levels and comply with UNSW DCP Stormwater Strategy, including retention tank requirements.

5.9 PUBLIC INTEREST

The proposal is considered to be in the public interest as it would have significant benefits including:

- establishing an iconic building and landmark building at the gateway to the University;
- improved urban design on the site;
- significant capital investment in the energy technologies research field;
- providing additional employment opportunities in accordance with strategic planning objectives for the State;
- delivering new and improved research facilities to advance research into sustainable and clean energy technologies to mitigate climate change to benefit the wider community;
- supporting the recruitment and retention of researchers and lecturers in leading edge energy technological research;
- providing facilities to accommodate and consolidate the University's Faculty of Engineering; and
- providing a major investment in education and research infrastructure in the Randwick Education and Health Specialised Centre.

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6 CONCLUSION

The Department has assessed the EA and considered the submissions in response to the proposal. The key issues relating to the proposal include: built form and urban design; environmental and residential amenity; air traffic impacts; transport and traffic impacts; noise impacts; developer contributions; ecologically sustainable development; drainage and stormwater; and public interest.

The Department has determined that the proposal is well designed and is considered appropriate and compatible with the surrounding built form and character of the University. The proposal would provide an iconic and sustainable response to a key gateway site and would provide new and consolidated facilities for the University's Faculty of Engineering. The proposal provides appropriate responses to mitigate potential impacts on the surrounding environmental and residential amenity; transport and traffic conditions; acoustic environment; and stormwater systems.

The project is consistent with key objectives in the State Plan, Sydney Metropolitan Strategy and Draft East Subregional Strategy and would provide significant public benefits to the broader community through additional educational and research facilities to advance research into sustainable and clean energy technologies.

The Department is therefore satisfied that the impacts of the proposal can be suitably mitigated and/or managed to ensure a satisfactory level of environmental performance, pursuant to section 75J of the EP&A Act. Accordingly, the Department recommends the project application be approved, subject to conditions.

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7 RECOMMENDATION

It is recommended that the Minister for Planning:

a) **Consider** the findings and recommendations of this report;
b) **Approve** the project application, subject to conditions, under section 75J(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above; and
c) **Sign** the attached Instrument of Approval (**TAG A**).

Prepared by: Megan Fu, Acting Senior Planner, Government Land and Social Projects

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