Randwick City Council
a sense of community

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14 November 2016

Director General
NSW Department of Planning and Environment
23-33 Bridge Street
SYDNEY NSW 2000

Attention: Ms Megan Fu

Dear Megan,

STATE SIGNIFICANT DEVELOPMENT APPLICATION: UNSW SCIENCE AND ENVINGEERING BUILDING (SEB) (SSD 7518)

I refer to the above mentioned project as advised in the Department of Planning and Environment's letter dated 22 September 2016. Please find Council's comment and where relevant recommendation for conditions (attached) in relation to the project.

1. Proposal

Council notes that the State Significant Development Application includes:

- Bulk excavation;
- Demolition of Buildings D9 and D10 and removal of 12 trees; and
- Landscaping works
- Construction of new 10 storey building (with a total 18,700sqm of floor space including one basement level and one rooftop plant level) comprising:
  - Research areas;
  - Workspaces;
  - Teaching and learning space;
  - Office space;
  - New sensitive instrument laboratories for the Marc Wainwright Analytical Centre (MWAC);
  - A single storey theatre building
  - The IO Myers Studio and Studio 1 single storey (multi-function dance and performance studios for the School of Arts & Media);and
- Construction of bridge connections linking the SEB and existing Material Sciences and Engineering Buildings at Levels 1-7, and a link at basement level.

The Project qualifies as SSD as the CIV of the project being $176,560,000 is in excess of the requisite SSD threshold of $30 Million for Educational Establishment projects.

The following matters are raised by Council:

2. Section 94A Contributions plan

Exemption from payment of Section 94A contributions

The applicant is seeking an exemption from payment of Section 94A development contributions. The EIS (prepared by JBA) requests a full exemption from payment of a Section 94A contribution on the basis of the following statutory and merit based considerations:

Statutory considerations

- According to the applicants interpretation of the *Randwick City Council Section 94A (s94A) Development Contributions Plan 2015*, "the payment of any contribution on this development is discretionary, and [...] the approval authority, in this case the Minister for Planning, while empowered to impose a condition requiring the payment of a monetary contribution is not required to under wither the EP&A Act or Council's Contributions Plan" (JBA, SSD 7518, p. 12);
- Council should warrant a "merit-based exemption" if it is satisfied that development does not increase the demand for the categories of public facilities and services addressed in the S94A Plan. The applicant argues that as UNSW is a registered not-for-profit organisation, as well as an educational facility and a nominated charity, there are justifiable grounds for Council to grant a merit-based exemption;
- UNSW and the development has a public character, and will provide a number of material public benefits consistent with wider strategic planning objectives;
- Section 13.3 of Council's Contributions Plan allows an applicant to seek an exemption from a development contribution, with Council to take into account:
    - *(13.3.1) the extent to which the proposed development comprises or includes the provision, extension or augmentation of public amenities or public services that provide a public benefit, and/or*
    - *(13.3.2) whether the applicant is affected by any adverse financial circumstance which will impact on its ability to fund the payment of any level which is imposed...*

  In this instance, the applicant argues that as the University is a public institution relying on government grants, donations, and community funding, the levying of a development contribution "would divert a portion of these public funds, which have been specifically provided for an educational service, to local services without any direct nexus to the impact on those services" (JBA, SSD 7518, p. 13);
- UNSW is not a developer and is a charitable not-for-profit public institution (and registered as such by the Australian Tax Office) which relies on significant grants, donations, and external funding to provide new facilities for both the UNSW community, and the wider community at large;
- the levying of contributions on projects that are funded by external sources is simply diverting a portion of funds for an educational purpose to local services without any direct nexus to the development;
- the payment of Development Contributions and levies would consume resources which should be devoted to the University's core business of teaching and research and the strategic benefits that would result from such a development;
- UNSW, being an Australian university within the meaning of the *Higher Education Act 2001*, is recognised as the Crown by virtue of clause 226 of the EP&A Regulation. Council is therefore unable to impose a condition of consent (in this case, a development contribution) without the approval of the University or the Minister;

Merit-based considerations

- As a result of the development, the EIS notes that there will be no increase in student numbers, and only 33 additional permanent staff on Campus;
- In recent determinations of UNSW applications the Department has considered that the principle of reasonableness be applied to the University, as it is a not-for-profit organisation. In this regard, the applicant argues that any contribution be based only on the demand generated by the 33 additional staff on the Campus and no additional students;
- UNSW provides a wide range of social, cultural, and recreational public benefits and contributions to Randwick LGA and its resident and worker population; and
- UNSW has paid nearly $4 million in development contributions since 2007, but "there is little or no evidence of any public domain improvements around the University Campus or the hospital precinct".

Response

In response these justifications put forward by the applicant, Council strongly objects to this request for exemption on the following grounds:

- The underlying purpose of Council's Section 94A Plan is to obtain funding from development activities that increase the demand for Council-provided public facilities or services, and applies across a wide range of development types, including residential, commercial, accommodation, educational and retail development. As per Section 94A(4) of the EP&A Act, Council's Contributions Plan is not required to demonstrate a connection between the development subject to the development consent and the expenditure of specific levies raised for public works and infrastructure that have been identified in the Plan. As Council's Section 94A Plan is not nexus-based, there is no requirement for Council to provide additional or improved public facilities within, or in the proximity of the Randwick Education and Specialised Health Centre, despite imposing a condition on the subject development for a S94A contribution;
- Council's Section 94A Plan applies a flat percentage-based contribution to all development over a nominated value (0.5% for developments with a capital investment value (CIV) of between $100,001 - $200,000, and 1% for all developments over $200,000), with limited exceptions (for example, charities and seniors housing). As the contribution relates to CIV and not to calculations based on additional floor space provided, or demand generation rates based on increased use, Council does not accept the applicant's position that the levy should relate only to the 33 additional permanent staff on Campus, as this would result in an inconsistent and inequitable outcome when compared to the requirement under the Plan for families to contribute s94A funds for home alterations;
- As noted above, there are limited exemptions whereby an applicant can request that Council consider waiving a levy under the Plan. Section 13.2 of the Plan outlines the relevant threshold criteria whereby Council will consider an exemption: the works proposed are "to be taken for charitable purposes", and "the development is of small scale". While the University may rely on government grants, donations, and community funds to provide new facilities for the University community, the University also operates as a business, providing education on a fee for service basis that Council does not consider meets the threshold of being a "charitable purpose", despite its classification with the ATO;
- The development of a 10-storey building providing more than 18,700m^2 of new education and research gross floor area is not considered to be "of a small scale", and as such it is reasonable to expect that with such a large increase of GFA there will be an associated increase in demand for public works and infrastructure provided by Council. As a result Council does not consider that the proposed development meets the criteria to be considered for an exemption under the S94A Plan; and

- Council has consistently considered that development by the University falls under the provisions of Council's Section 94A Contributions Plan. While noting that the University holds a prominent role in Randwick City, and that the large number of staff and students provide flow-on economic benefits to surrounding businesses and town centres, the University also places heavy demands on and also benefits from the public services and facilities provided by the Council. This issue has previously been raised with the Department of Planning and Environment on several occasions.

Based on the points raised above, the Council therefore requests that any consent issued for the development should include a requirement consistent with the S94A Plan for a developer contribution of 1% of the Capital Investment Value (CIV) project cost of $176,560,000, equating to $1,765,600.

3. Randwick Comprehensive Development Control Plan (RDCP) 2013 – Part E2 Section 4 UNSW Kensington

While the requirements of the RDCP 2013 UNSW may not hold strict applicability to State Significant Development given the provisions of the SEPP (State and Regional Development), the Secretary's Environmental Assessment Requirements in this case specifically move to adopt the provisions of the RDCP within the 'Policies" requirements.

The most relevant guideline available in informing development suitability on the UNSW site remains Part E2 of the RDCP 2013. In relation to parking and traffic, Council is of the view that the aims and objectives outlined within the RDCP hold strong relevance to informing appropriate development on the site and minimising consequent environmental impacts such as parking demand.

Built form and urban design

The proposal incorporates a building parapet height of approximately 40.64m (RL68.90 – RL28.26), top of flue height to 45.54m (RL73.80 – RL28.26) and above the 24m height limited established in figure 5.8 of the RLEP 2012.

The overall height of the Science and Engineering Building (SEB) is consistent with the size of the Material Sciences and Engineering Building (MSEB); the proposal adopts a similar vertical louvres design providing a consistent theme across both the SEB and MSEB. The combined length of the MSEB and SEB is significant and is relieved by projecting the SEB built form northward further than the MSEB over College Road. This encroachment over College Road is inconsistent with the building alignment control shown in Figure 5.7 in Part E2 of the RDCP 2013. Whilst the encroachment provides some relief to the combined length of both buildings, this is however only necessitated only by the significant bulk and scale of the development and connecting bridge over 7 levels. It is considered that relief of the considerable length of the combined buildings could be achieved by alternative methods of design and articulation and a reduction of building depth of the SEB is required. A reduction in building depth of SEB encroaching over College Road would permit a simpler transition of built form down to the smaller buildings further west of the site such as the Roundhouse. A reduction in depth would also maintain openness along College Road assisting its legibility as a pedestrian link and improving crime prevention. Such a reduction would also mean less overshadowing to the buildings located west of the site.

Environmental Sustainable Development

Sustainability is noted as a key element in the planning, design and development requirements of all new buildings on campus. However, the EIS notes that the application of a Green Star tool or similar tool and target rating is not appropriate for the

proposed building, and instead proposes a "project specific" sustainability framework. The Ecologically Sustainable Development (ESD) Statement, prepared by ARUP in support of the EIS, states that the proposed development "incorporates a significant number of initiatives and principles identified in the various Green Star categories" and is capable of demonstrating 'Best Practice' against the Green Star 'Design & As Built' category. It is noted that 'Best Practice' is the lowest rating (4 stars) that can be attained under the Green Star Accreditation system for the 'Design & As Built' category.

Given that UNSW has described itself as being "renowned for its quality of its graduates and its commitment to new and creative approaches to education and research" (JBA, SSD 7518, p. 5), demonstrating leadership in the local community through innovation and excellence in built form and sustainable design should be a priority.

Wind impacts

It is noted that one of the key amenity issues arising from the design of the new building is the exacerbation of an existing wind tunnel in the main public access ways around Physical Sciences Precinct. Specifically, **Appendix H** notes:

"The addition of the new [Science and Engineering Building] might adversely affect the wind conditions in any outdoor retail areas... [and] wind conditions above the criterion for walking comfort would be expected in the vicinity under the bridge link between the SEB and MSEB" (Mel Consulting, Environment Wind Assessment).

While Council acknowledges that mitigation measures can be incorporated into the building form factors to ameliorate some of the issues raised in the Wind Assessment (such as sealed entrances as proposed by Mel Consulting), there could be other opportunities for the built form to better respond to specific environmental challenges of the lower campus while also demonstrating the use of innovative technologies that have been developed by researchers on Campus. For example, there may be potential for experimental forms of wind turbines to be integrated into the building form in areas where wind flow modelling has indicated the likelihood of increased air movement.

Similar approaches have been taken by other Australian universities, including ACU's 6-Star Daniel Mannix Building, and the University of Melbourne's Solar Power Project which included the retrofit of six buildings on campus with solar photovoltaic (PV) panel installations and a subsequent reduction on campus of 850 tonnes of carbon emissions per year. As a leader in sustainability research and education both in Australia and abroad, Council requests the application of a Green Star or similar tool and target rating to ensure excellence in sustainability is achieved on campus.

Parking Traffic and Access

Section 5.10 in Council's DCP for the UNSW site entitled 'Campus 2020' specifies in some detail the transport and parking objectives and provisions for the UNSW campus which are relevant to the subject proposal. Of specific interest to Council is the consistency of the proposal with these provisions and the accompanying Transport Strategy for the UNSW site.

Although the need to reduce car dependence and adopt a sustainable transport strategy is recognized, Council have significant concerns with the parking aspects of this proposal.

The EIS notes that there is no parking proposed as part of the new development. As a result of the Lower Campus Infrastructure Works Package, and associated Part 5 approvals under the EP&A Act, there has been an overall reduction of 43 car parking spaces in the vicinity of the site. A failure to provide staff and visitor parking for the new

building transfers additional parking demand onto High Street. While it is acknowledged that the University is seeking to encourage the uptake of public and active transport options, the loss of parking on site without providing adequate incentives and facilities for staff and other users to use alternative modes of transport does not result in an acceptable outcome.

The Traffic Impact Statement prepared in support of the EIS notes that UNSW's 2014 Travel Survey found that 36.9% of staff travel to Campus by private vehicle. Based on the 33 additional permanent staff, this will generate demand for 12 additional spaces, with an overall shortfall of 27 spaces following the completion of the project (**Appendix I**, p. 53). There are also concerns that the nominated number of additional staff represents a very small estimate when considered in the context of the significant floor area proposed as part of this application.

In this respect, Council is concerned about the cumulative impact of significant developments on campus in recent years that have provided no parking and that over time the total number of car parking spaces on campus has reduced while the numbers of staff and students continues to increase in association with floor area. This is placing continued ongoing pressure on the surrounding local streets to accommodate parking for staff and students, which is adversely impacting on local access and amenity.

Investment in public infrastructure works via Council's developer contributions funds can assist and promote sustainable transport use, such as through public transport, walking and cycling improvements, public domain upgrades and alternative approaches to parking.

Council requests that any DA on campus is accompanied by an up to date audit of total parking spaces across campus, relative to the numbers of students and staff in order to assess parking demand and demonstrate suitable provision and/or suitable alternative specific measures to reduce car dependency.

For example, while Council notes the inclusion of 7 showers in the lower level basement of the new development to promote the use of sustainable modes of transport, we are concerned that the lack of storage facilities and additional bicycle parking does not result in an adequate end-of-trip facility that will sufficiently incentivise staff and students to commute to the building by way of bicycle or walking. Council requests that storage facilities (i.e. lockers or a secure storage room) and additional bicycle parking be included in the development.

Note: Staff numbers: While stated in the documentation that the proposal will result in 33 additional staff, there is no indication of the total number of existing staff within the existing buildings sought to be demolished or the total number of staff that will be operating within the SEB. Clarification on the operational details of the proposed SEB building should be provided.

4. Environmental Health Comments

Soils, Geotechnical and Groundwater –

Land Contamination

Preliminary site contamination and detailed site investigations have been provided as part of the major project application.

The report identifies Areas of Environmental Concern in 6.1 and potential contaminants of concern in Part 6.2 of Detailed Site Investigation (DSI) by Coffeys, with draft Remediation Action Plan (RAP) provided by Coffeys. Further investigations have been

identified as being required post demolition of buildings and removal of hard surfaces. The DSI has confirmed the site can be made suitable for the intended use.

As a result of the information submitted appropriate conditions have been included in this report.

Asbestos

Appropriate should be included from Building Compliance from Council's standard asbestos conditions.

Operational Noise Impacts Acoustics

An acoustic report titled UNSW Science & Engineering Building Secretary's Environmental Assessment Requirements are provided in Appendix G of the report has been prepared by SLR Consulting dated 21 July 2016 ref: 610.16372-R1 & 610.16372-R2

The potential noise issues associated with this development are considered to be:

Noise from plant and equipment

- Impact of operational noise
- Other internal residential receivers
- Construction

The report confirms compliance with required noise criteria in daytime and night time. It should be noted the acoustic consultant advised the building and plant has not been selected and required attenuation has not been established but general guidance recommendations are provided on noise levels with further assessment to confirm preliminary noise criteria and design attenuation requirements.

A validation acoustic assessment has been recommended as part of this proposal.

It should be noted cumulative noise impacts of the operation of the university has not been established to ensure background creep is taken into consideration.

Legionella Control

Cooling Towers may be proposed. Suitable conditions to be imposed to address this issue.

Storage & Handling of Dangerous Goods

A report prepared by Core Engineering letter ref:200079 has listed the threshold limits of quantities used and stored at the site and as such SEPP 33 is not considered to apply to the proposed development.

Waste Management

Operation of the facility will generate a variety of solid and liquid wastes. Disposal of hazardous wastes is managed through the Universities Disposal of Hazardous Waste Procedures and must comply with EPA requirements (Protection of the Environment Operations Act (POEO ACT), Protection of the Environment Operations Regulation) for the removal of hazardous substances, dangerous goods and biological hazardous waste to ensure compliance with regulatory requirements.

UNSW have provided Preliminary Operational Waste Management Plan dated 26 November 2014 to address in house waste management, separation, storage and removal of wastes.

5. Drainage Comments

On site stormwater detention is not required for this development as the building is to drain to the Village Green detention basin in accordance with the Stormwater strategy for the site.

Overland flow and site stormwater discharge will be collected by a 1050mm pipe that runs beneath the law building and discharges to the Village Green Detention Basin.

9. Conclusion

While the proposed development stands to provide UNSW and greater Randwick locality with economic and social benefits, the distinct environmental impacts of the development have relevance and should be addressed.

The above issues are pertinent to maintaining environmental amenity and providing a high quality design outcome to the prominent site, in the interest of both Council and the wider community.

If you have any queries or wish to further discuss any of the matters above, please contact Elias Coorey in Council's City Planning Department, on 90396524.

Yours faithfully

.....

Roger Quinton
ACTING MANAGER – DEVELOPMENT ASSESSMENT

*Conditions attached below

Attachment:

CONDITIONS

Section 94A Development Contributions

1. In accordance with Council's Section 94A Development Contributions Plan effective from 21 April 2015, based on the development cost of $176,560,000 the following applicable monetary levy must be paid to Council: $1,765,560.00

   The levy must be paid in **cash, bank cheque** or by **credit card** prior to works being carried out for the proposed development. The development is subject to an index to reflect quarterly variations in the Consumer Price Index (CPI) from the date of Council's determination to the date of payment. Please contact Council on telephone 9399 0999 or 1300 722 542 for the indexed contribution amount prior to payment.

   To calculate the indexed levy, the following formula must be used:

   IDC = ODC x CP2/CP1

   Where:
   IDC = the indexed development cost
   ODC = the original development cost determined by the Council
   CP2 = the Consumer Price Index, All Groups, Sydney, as published by the ABS in respect of the quarter ending immediately prior to the date of payment
   CP1 = the Consumer Price Index, All Groups, Sydney as published by the ABS in respect of the quarter ending immediately prior to the date of imposition of the condition requiring payment of the levy.

   Council's Section 94A Development Contribution Plans may be inspected at the Customer Service Centre, Administrative Centre, 30 Frances Street, Randwick or at www.randwick.nsw.gov.au.

ENVIRONMENTAL HEALTH CONDITIONS:

2. The land must be remediated to meet the relevant criteria in the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 and the following requirements must be complied with:

   a) A NSW Environment Protection Authority (EPA) Accredited Site Auditor, accredited under the *Contaminated Land Management Act 1997*, must be appointed to assess the suitability of the site for its intended development and use. A Site Audit Statement and Summary Site Audit Report is to be submitted to Council which verifies that the land has been remediated and the site is suitable for the intended development and satisfies the relevant criteria in the NEPM 1999.

      Any requirements contained within an Environmental Management Plan (EMP) which forms part of the Site Audit Statement and Site Audit Report, form part of this consent and must be implemented accordingly. Council is required to be consulted with prior to the development of the EMP and any comments made by Council are required to be taken into consideration prior to finalising the EMP.

   b) The site remediation must be carried out to the satisfaction of the Accredited Site Auditor and a Site Audit Statement and Summary Site Audit Report must be submitted to Council **prior to**:

i) **A Crown *construction certificate* being issued for any building work** (other than shoring work, piling work and retaining structures or other work which is necessary to carry out the remediation works).

iii) Remediation works shall be carried out in accordance with the requirements of the *Contaminated Land Management Act 1997*, environmental planning instruments applying to the site, guidelines made by the NSW Environment Protection Authority (EPA) and NSW Planning & Infrastructure, Randwick City Council's Contaminated Land Policy 1999 and the *Protection of the Environment Operations Act 1997*.

c) Should the remediation strategy including the 'capping' or 'containment' of any contaminated land, details are to be included in the Site Audit Statement (SAS) and Environmental Management Plan (EMP) to the satisfaction of the Site Auditor.

Details of the SAS and EMP (including capping and containment of contaminated land) are also required to be included on the Certificate of Title for the subject land under the provisions of section 88 of the *Conveyancing Act 1919*.

d) Fill material that is imported to the site must satisfy the requirements of the NSW *Protection of the Environment Operations (Waste) Regulation 2005* and the NSW Environment Protection Authority (EPA) Waste Classification Guidelines (2008). Fill material must meet the relevant requirements for Virgin Excavated Natural Material (VENM) or be the subject of a (general or specific) Resource Recovery Exemption from the EPA.

Details of the importation of fill and compliance with these requirements must be provided to the satisfaction of the Environmental Consultant and Site Auditor.

e) A Site Remediation Management Plan must be prepared prior to the commencement of remediation works by a suitably qualified environmental consultant and be implemented throughout remediation works. The Site Remediation Management Plan shall include measures to address the following matters:

- general site management, site security, barriers, traffic management and signage
- hazard identification and control
- worker health & safety, work zones and decontamination procedures
- prevention of cross contamination
- site drainage and dewatering
- air and water quality monitoring
- disposable of hazardous wastes
- contingency plans and incident reporting
- details of provisions for monitoring implementation of remediation works and persons/consultants responsible.

A copy of the Site Remediation Management Plan is to be forwarded to Council prior to commencing remediation works.

f) The works must not cause any environmental pollution, public nuisance or, result in an offence under the *Protection of the Environment Operations Act 1997* or *NSW Work Health & Safety Act 2011* and Regulations.

g) Any new information which is identified during remediation, demolition or construction works that has the potential to alter previous conclusions about site contamination or the remediation strategy shall be notified to the Site Auditor and Council immediately in writing.

The written concurrence of Council must be obtained prior to implementing any changes to the remediation action plan or strategies.

The works shall not give rise to environmental pollution or public nuisance or, result in an offence under the Protection of the Environment Operations Act 1997 or Work Health and Safety Act 2011 & Regulations (2011).

3. The applicant is to engage the services of a suitably qualified environmental consultant to respond to enquiries and complaints made by the community or Council in relation to contamination, remediation and construction site management matters.

4. A specific contact number is to be made available for such enquiries and complaints (including an after-hours emergency contract number) and a complaints register is to be maintained to record all such enquiries, complaints and actions taken in response to same, which is to be made available to Council officers upon request.

5. Hazardous or intractable wastes arising from the demolition process being removed and disposed of in accordance with the requirements of WorkCover NSW and the Environment Protection Authority, and with the provisions of:

- *Work Health and Safety Act 2011;*
- *Work Health and Safety Regulation 2011;*
- *Protection Of the Environment Operations Act 1997 (NSW) and*
- *Environment Protection Authority's Environmental Guidelines; Assessment, Classification and Management of Liquid and Non Liquid Wastes (1999).*
- Other relevant EPA and WorkCover Guidelines

6. The works shall not give rise to environmental pollution or public nuisance or, result in an offence under the Protection of the Environment Operations Act 1997 or Work Health and Safety Act 2011.

7. All wastes shall be stored handled and disposed of in accordance with:

- *Protection of the Environment Operations Act 1997 (Waste Regulation)*
- *Dangerous Goods Act*
- *NSW Work Health And Safety Regulation 2011.*
- NSW EPA legislation and Guidelines
- WorkCover Legislation and Guidelines
- Sydney Water Requirements

Details of compliance shall be provided to the Crown Certifier prior to a Crown construction certificate being issued.

8. Warm water systems and/or Cooling Towers must be designed, installed and maintained in accordance with the requirement of the Public Health Act 1991 (Part 4 Microbial Control) and Regulations. The air handling system cooling tower must be designed, installed and operated in accordance with the relevant

requirements of AS/NZS 3666.1 (2002), AS/NZS 3666.2 (2002) and AS/NZS 3666.3 (2000). Details of compliance must be provided with the Crown construction certificate. Waste water from cooling tower warm water systems are to be discharged to the sewer under a Trade Waste Agreement from Sydney Water.

9. Cooling Towers, warm water systems and water cooling systems must be registered with the Council together with the payment of the approved fee, prior to Occupation Certificate being issued for the development, and the system/s are to be maintained and certified in accordance with the provisions of the Public Health Act 1991.

The following conditions have been applied to ensure that noise emissions from the development satisfy legislative requirements and maintain reasonable levels of amenity to the area:

10. The proposed use of the premises and the operation of all plant and equipment shall not give rise to an 'offensive noise' as defined in the Protection of the Environment Operations Act 1997 and Regulations.

11. In this regard, the operation of the premises and plant and equipment shall not give rise to a sound pressure level at any affected premises that exceeds the background (L_{A90}), $_{15\ min}$ noise level, measured in the absence of the noise source/s under consideration by more than 5dB(A). The source noise level shall be assessed as an $L_{Aeq,\ 15\ min}$ and adjusted in accordance with the NSW Environmental Protection Authority's Industrial Noise Policy 2000 and Environmental Noise Control Manual (sleep disturbance).

12. The use of the premises and the operation of plant and equipment shall not give rise to the transmission of a vibration nuisance or damage to other premises.

13. A report shall be prepared by a suitably qualified acoustic consultant and shall be provided to the certifying authority confirming Crown construction certificate plans incorporate and comply with required attenuation measures specified for the project prior to a Crown construction certificate being issued.

14. A report, prepared by a suitably qualified and experienced consultant in acoustics, shall be submitted to the Council prior to Crown Completion Certificate, which demonstrates and certifies that noise and vibration emissions from the development comply with the relevant provisions of the *Protection of the Environment Operations Act 1997*, NSW Environmental Protection Authority Noise Control Manual & Industrial Noise Policy and conditions of Council's approval, to the satisfaction of Council's Manager Environmental Health & Building Services.

The following conditions are applied to satisfy the relevant pollution control criteria and to maintain reasonable levels of health, safety and amenity to the locality:

15. The use and operation of the premises shall not give rise to an environmental health or public nuisance and there are to be no emissions or discharges from the premises, which will give rise to a public nuisance or result in an offence under the *Protection of the Environment Operations Act 1997* and *Regulations.*

16. Future uses of retail areas shall where required apply for development consent prior to the commencement of use.

ENGINEERING AND LANDSCAPE CONDITIONS

A. GENERAL

SECURITY DEPOSIT CONDITION
The following conditions are applied to provide adequate security against damage to Council's infrastructure:

17. The following damage / civil works security deposit requirement must be complied with, as security for making good any damage caused to the roadway, footway, verge or any public place; and as security for completing any public work; and for remedying any defect on such public works, in accordance with section 80A(6) of the *Environmental Planning and Assessment Act 1979*:

    - $3000.00 - Damage / Civil Works Security Deposit

    The damage/civil works security deposit may be provided by way of a cash, cheque or credit card payment and is refundable upon a satisfactory inspection by Council upon the completion of the civil works which confirms that there has been no damage to Council's infrastructure.

    The owner/builder is also requested to advise Council in writing and/or photographs of any signs of existing damage to the Council roadway, footway, or verge prior to the commencement of any building/demolition works.

    To obtain a refund of relevant deposits, a *Security Deposit Refund Form* is to be forwarded to Council's Director of City Services upon issuing of an occupation certificate or completion of the civil works.

Electricity Substation

18. The applicant must liaise with Ausgrid prior to commencement of any site works, to determine whether or not an electricity substation is required for the development. Any electricity substation required for the site as a consequence of this development shall be located within the site and be screened from view. The proposed location and elevation shall be shown on relevant construction plans.

19. All building, plumbing and drainage work must be carried out in accordance with the requirements of the Sydney Water Corporation.

    The approved plans must be submitted to a Sydney Water Quick Check agent, to determine whether the development will affect Sydney Water's waste water and water mains, stormwater drains and/or easements, and if any further requirements need to be met.

    If suitable, the plans will be appropriately stamped. For details please refer to the Sydney Water web site at www.sydneywater.com.au for:

    - Quick Check agents details - see *Building and Developing* then Quick Check and
    - Guidelines for Building Over/Adjacent to Sydney Water Assets – see *Building and Development* then *Building and Renovating*, or telephone 13 20 92.

    The Crown Certifier must ensure that a Sydney Water Quick Check Agent has appropriately stamped the plans.

C. PRIOR TO ANY WORK COMMENCING ON THE SITE

20. **Stormwater drainage plans have not been approved as part of this development consent** Stormwater runoff from the proposed development site is to be managed in general accordance with the **Stormwater Strategy** prepared for UNSW by ANA Technical Services Pty Ltd dated 28/11/2005. Engineering calculations and plans with levels reduced to Australian Height Datum in relation to site drainage shall be submitted to and approved by the relevant certifying body prior to commencement of site construction works. The engineering calculations and plans must demonstrate compliance with the above referenced stormwater strategy. A copy of the engineering calculations and plans are to be forwarded to Council, prior to commencement of site works. The drawings and details shall include the following information:

a) A detailed drainage design supported by a catchment area plan, at a scale of 1:100 or as considered acceptable to the Council or an accredited certifier, and drainage calculations prepared in accordance with the Institution of Engineers publication, Australian Rainfall and Run-off, 1987 edition.

b) A layout of the proposed drainage system including pipe sizes, type, grade, length, invert levels, etc., dimensions and types of all drainage pipes and the connection into Council's stormwater system.

c) The separate catchment areas within the site, draining to each collection point or surface pit are to be classified into the following categories:

i. Roof areas
ii. Paved areas
iii. Grassed areas
iv. Garden areas

e) Where buildings abut higher buildings and their roofs are "flashed in" to the higher wall, the area contributing must be taken as: the projected roof area of the lower building, plus one half of the area of the vertical wall abutting, for the purpose of determining the discharge from the lower roof.

f) Proposed finished surface levels and grades of car parks, internal driveways and access aisles which are to be related to Council's design alignment levels.

g) The details of any special features that will affect the drainage design e.g. the nature of the soil in the site and/or the presence of rock etc.

21. The site stormwater drainage system is to be provided in accordance with the following requirements;

a) Generally all internal pipelines must be capable of discharging a 1 in 20 year storm flow. However the minimum pipe size for pipes that accept stormwater from a surface inlet pit must be 150mm diameter. The site must be graded to direct any surplus run-off (i.e. above the 1 in 20 year storm) to the proposed drainage (detention/infiltration) system.

b) Any required infiltration system, must be designed by a suitably qualified and experienced consultant using infiltration rates determined by the applicant's geotechnical engineer or other appropriately qualified consultant. The location and design of the infiltration system, (detention/infiltration system), must not adversely impact on adjacent

footings/foundations/structural elements. The applicant's geotechnical engineer shall certify that the base of any infiltration system is located sufficiently above the ground water table such that the operation of the infiltration system will not be compromised by any potential future fluctuations in the water table. The referenced certification must be provided to the relevant certifying body prior to the commencement of site construction works.

c) Determination of the required cumulative storage (in the on-site detention and/or infiltration system) must be calculated by the mass curve technique as detailed in Technical Note 1, Chapter 14 of the Australian Rainfall and Run-off Volume 1, 1987 Edition.

d) Infiltration systems/Absorption Trenches must be designed and constructed generally in accordance with "Section 8.5 ABSORPTION TRENCHES" of Randwick City Council's Private Stormwater Code.

e) Should a pump system be required to drain any portion of the site the system must be designed with two pumps connected in parallel (with each pump being capable of discharging at the required discharge rate) and connected to a control board so that each pump will operate alternatively. The pump wet well is required to be sized for the 1 in 100 year, 2 hour storm assuming both pumps are not working. All pump-out water must pass through a stilling pit prior to being discharged by gravity to the kerb and gutter

Pump-out systems must be designed by a suitably qualified and experienced hydraulic consultant/engineer and the pump-out system designed and constructed generally in accordance with Council's Stormwater Code.

f) A sediment/silt arrester pit must be provided prior to stormwater discharging into any required absorption/infiltration system.

The sediment/silt arrester pit shall be constructed in accordance with the following requirements:

- The base of the pit located a minimum 300mm under the invert level of the outlet pipe.
- The pit constructed from cast in-situ concrete, precast concrete or double brick.
- A minimum of 4 x 90 mm diameter weep holes located in the walls of the pit at the floor level with a suitable geotextile material with a high filtration rating located over the weep holes.
- A galvanised heavy-duty screen located over the outlet pipe/s (Mascot GMS multipurpose filter screen or equivalent).
- The grate being a galvanised heavy-duty grate that has a provision for a child proof fastening system.
- A child proof and corrosion resistant fastening system provided for the access grate (e.g. spring loaded j-bolts or similar).
- A sign adjacent to the pit stating:

  "This sediment/silt arrester pit shall be regularly inspected and cleaned."

Note: Sketch details of a standard sediment/silt arrester pit may be obtained from Council's Drainage Engineer.

Seepage/Groundwater

22. Prior to the issuing of a crown construction certificate a report must be obtained from a qualified, experienced Hydro-geological Engineer, which provides an assessment of the site and the potential impact of groundwater and the water table upon the development, prior to commencement of site works to the satisfaction of the Crown Certifier.

The report must confirm whether or not the site is or may be affected by *groundwater* or *fluctuating water table* and the report must include details of the measures to be implemented to effectively manage any groundwater

23. Where the site is affected by groundwater or fluctuating water table (including during the course of construction), the following requirements must be satisfied:

a) Groundwater and subsoil drainage must not be connected or discharged to the stormwater system or to Council's street gutter or drainage system, unless specific written approval has been obtained from Council beforehand, and

b) Groundwater and sub-soil drainage must be restricted from entering the basement level/s and the stormwater drainage system, by tanking and waterproofing the basement areas of the building, and

c) Adequate provisions must be made for the groundwater to drain around the basement level/s and ensure that the basement will not impede the movement of the ground water through the development site, and

d) Details of the proposed methods of managing groundwater, tanking and waterproofing must be prepared by a suitably qualified and experienced Hydro-geological Engineer and be submitted to and approved by the relevant crown certifying authority, prior to issuing the crown construction certificate.

Flooding

24. The 1%AEP (1 in 100year) flood level must be determined for the subject development site. Any openings into the basement area or ground floor level of the building shall be provided at a minimum of 0.5m above the determined 1% AEP flood or suitably protected up to this level.

Construction Traffic Management

25. A detailed *Construction Site Traffic Management Plan* must be submitted to and approved by Council, prior to commencement of any site work.

The Construction Site Traffic Management Plan must be prepared by a suitably qualified person and must include the following details, to the satisfaction of Council:

- A description of the demolition, excavation and construction works
- A site plan/s showing the site, roads, footpaths, site access points and vehicular movements
- Any proposed road and/or footpath closures
- Proposed site access locations for personnel, deliveries and materials

- Size, type and estimated number of vehicular movements (including removal of excavated materials, delivery of materials and concrete to the site)
- Provision for loading and unloading of goods and materials
- Impacts of the work and vehicular movements on the road network, traffic and pedestrians
- Proposed hours of construction related activities and vehicular movements to and from the site
- Current/proposed approvals from other Agencies and Authorities (including NSW Roads & Traffic Authority, Police and State Transit Authority)
- Any activities proposed to be located or impact upon Council's road, footways or any public place
- Measures to maintain public safety and convenience

Public Utilities

26. A public utility impact assessment must be carried out on all public utility services located on the site, roadway, nature strip, footpath, public reserve or any public areas associated with and/or adjacent to the building works. The assessment should include relevant information from public utility authorities and exploratory trenching or pot-holing, if necessary, to determine the position and level of services.

    Documentary evidence from the relevant public utility authorities confirming that their requirements have been or are able to be satisfied, must be submitted to the crown certifier prior to the commencement of any demolition, excavation or building works.

27. The owner/builder must make the necessary arrangements and meet the full cost for telecommunication companies, gas providers, Ausgrid, Sydney Water and other service authorities to adjust, repair or relocate their services as required.

Landscaping & Environmental amenity:

28. Detailed landscape drawings and specifications must be submitted to, and approved by, the relevant certifying body, prior to the commencement of site construction works. The landscape drawings and specifications are to be prepared by a qualified Landscape Architect who is eligible for membership with the Australian Institute of Landscape Architects (AILA).The documentation shall include:

    a. Planting plans which clearly indicate the location of all proposed planting, with all species to be drawn at their mature size.

    b. A planting schedule which includes the quantity of all species proposed.

    c. Position of existing and proposed site services including water, gas, electricity, sewer, stormwater, etc.

    d. Sectional elevations through the site showing the existing and proposed groundlines, building elevations, and mature height of proposed planting.

    e. All planter boxes and garden beds constructed on slab must have a minimum *soil depth* of 600mm and all lawn areas must have a minimum *soil depth* of 300mm.

    f. In order to reduce the amount of stormwater generated by the site, as well as to recharge groundwater supplies, porous paving shall be used for

all hard surfacing not over basement, where possible.

g. Location of easements within the site and upon adjacent sites (if any).

h. To ensure satisfactory maintenance of the landscaped areas, an automatic drip irrigation system shall be installed throughout all planted areas (excluding turf). The system shall be connected to the sites rainwater tanks, with backup connection to the mains supply to all current Sydney Water requirements.

i. Any substation required shall be screened from view. The proposed location, elevation and screening method shall be shown.

j. All detention tanks and below ground stormwater infiltration systems located within the landscaped areas shall have a minimum soil cover of 600mm to ensure sufficient soil depth for the establishment of landscaping.

29. The relevant certifying body must ensure that a professional Arborist who holds a minimum of AQF Level 5 in Arboriculture has been engaged for the duration of works for the purpose of establishing, monitoring and implementing Tree Protection Zones or Tree Protection Measures as necessary, as well as performing or supervising any works that may have an impact on those trees listed for retention, with all site staff to comply with the instruction given by the 'site Arborist'.

D. DURING CONSTRUCTION WORKS

Stormwater Drainage

30. Any required dewatering must be monitored by the consulting Engineer/s to the satisfaction of the principal certifying authority and documentary evidence of compliance with the relevant conditions of consent and dewatering requirements must be provided to the principal certifying authority and the Council.

The site conditions and fluctuations in the water table are to be reviewed by the consulting Engineer prior to and during the excavation/construction process, to ensure the suitability of the excavation and dewatering process and compliance with Council's conditions.

Tree Removals

31. Approval is granted for removal of those trees identified for removal in the Arboricultural Impact Assessment prepared by The Ents Tree Consultancy dated 1 August 2016.

Pruning

32. Permission is granted for pruning should it be necessary in order to avoid damage to the trees listed for retention below, or, for clearances reasons, and must be minimal and selective, and performed by the site Arborist, to the requirements of Australian Standard AS 4373-2007 'Pruning of Amenity Trees,' and NSW Work Cover Code of Practice for the Amenity Tree Industry (1998).

Protection of Significant Trees

33. Trees identified for retention in the Arborists Report, are to be protected and retained as part of the proposed works in accordance with the tree protection recommendations included in the Arboricultural Impact Assessment prepared by The Ents Tree Consultancy dated 1 August 2016.

Stormwater Drainage

34. Any required dewatering must be monitored by the consulting Engineer/s to the satisfaction of the crown certifier and documentary evidence of compliance with the relevant conditions of consent and dewatering requirements must be provided to the crown certifier and the Council.

The site conditions and fluctuations in the water table are to be reviewed by the consulting Engineer prior to and during the excavation/construction process, to ensure the suitability of the excavation and dewatering process and compliance with Council's conditions.

Waste Management

35. Waste Management provisions shall be implemented in general accordance with the Waste Management Plan submitted with the application.

E. PRIOR TO OCCUPATION OF THE BUILDING / PREMISES

36. The owner/developer must meet the full cost for Council or a Council approved contractor to repair/replace any damaged sections of Council's footpath, kerb & gutter, nature strip etc. which are due to building works being carried out at the above site. This includes the removal of cement slurry from Council's footpath and roadway.

37. All external civil work to be carried out on Council property (including the installation and repair of roads, footpaths, vehicular crossings, kerb and guttering and drainage works), must be carried out in accordance with Council's Policy for "Vehicular Access and Road and Drainage Works" and the following requirements:

a) All work on Council land must be carried out by Council, unless specific written approval has been obtained from Council to use non-Council contractors.

b) Details of the proposed civil works to be carried out on Council land must be submitted to Council in a Pre-paid Works Application Form, prior to an occupation certificate being issued for the development, together with payment of the relevant fees.

c) If it is proposed to use non-Council contractors to carry out the civil works on Council land, the work must not commence until the written approval has been obtained from Council and the work must be carried out in accordance with the conditions of consent, Council's design details and payment of a Council design and supervision fee.

d) The civil works must be completed in accordance with Council's conditions of consent and approved design and construction documentation, prior to occupation of the development, or as otherwise approved by Council in writing.

Sydney Water Requirements

38. A Section 73 Compliance Certificate, under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. An Application for a Section 73 Certificate must be made through an authorised Water Servicing Coordinator. For details, please refer to the Sydney Water web site www.sydneywater.com.au > Building and developing > Developing your Land > Water Servicing Coordinator or telephone 13 20 92.

Please make early contact with the Water Servicing Co-ordinator, as building of water/sewer extensions may take some time and may impact on other services and building, driveway or landscape design.

The Section 73 Certificate must be submitted to the relevant certifying body prior to *occupation of the development*.

Stormwater Drainage

39. Prior to the issuing of a Crown Completion Certificate a works-as-executed drainage plan prepared by a registered surveyor and approved by a suitably qualified and experienced hydraulic consultant/engineer must be forwarded to the Crown certifier and the Council. The works-as-executed plan must include the following details (as applicable):

- Finished site contours at 0.2 metre intervals;
- The location, diameter, gradient and material (i.e. PVC, RC etc.) of all stormwater pipes;
- Details of any pumping systems installed (including wet well volumes).

40. Prior to the issuing of a Crown Completion Certificate the applicant shall submit to the Crown certifier (PCA) and Council, certification from a suitably qualified and experienced Hydraulic Engineer, which confirms that the design and construction of the stormwater drainage system complies with the Building Code of Australia, Australian Standard AS3500.3:2003 (Plumbing & Drainage- Stormwater Drainage) and conditions of this development consent.

The certification must be provided following inspection/s of the site stormwater drainage system by the Hydraulic Engineers to the satisfaction of the PCA.

41. Prior to the issuing of a Crown Completion Certificate the applicant shall submit to the Crown certifier (PCA) and Council certification from a suitably qualified and experienced professional Engineer, to the satisfaction of the Crown certifier confirming that the basement tanking/waterproofing and any sub-soil drainage systems (as applicable) have been provided in accordance with the conditions of consent and relevant Standards.

Landscaping

42. Documentary evidence is to be obtained from a qualified Landscape Architect, and submitted to the relevant certifying body, with a copy forwarded to Council, prior to the issuing of a final Crown Completion Certificate, which confirms that the landscaping has been completed in accordance with the approved plans and relevant conditions of consent.