

Response to Submissions Table

University of New South Wales – Biological Sciences Project

State Significant Development Application – 6674

Submission Item		Response
1.	Department of Planning and Environment Letter	
2.	ATTACHMENT A: KEY ISSUES	
3.	Traffic and Transport Impacts	
4.	The Department considers that there is a potential for increased student population as a result of the proposal. The Department notes that between 2009 and 2013 that an increase of approximately 6,000 students and 1,000 staff has occurred with minimal acknowledgment of student and staff increases in major projects assessed by the Department. Please identify the building capacity and provide further assessment of the traffic and transport impacts associated with the potential increased staff and student numbers based on building capacity.	- Refer to Section 2.1 of the RtS Report - An increase of 95 staff, and reduction of 792 students is forecast. - The current staff population for the BEES and BABS within the Biological Sciences Buildings (including Building D26, Biolink and Biotheatres Building) is 556. The design of these building and staff arrangements are at a higher concentration of staff/m2 than what UNSW is now providing as the applicable standard for research buildings in their new developments. This is a primary objective of the redevelopment - As part of a future development to upgrade and refurbish Building D26, the number of staff will reduce from 556 to a total of approximately 323, using the spacing requirements and standards for research staff. Available staff seating in the new building (Building E26) as part of this development is anticipated to be approximately 403. - Therefore, the combined total of staff in the precinct could be expected to be 726, which equates to a total of 95 additional, when compared to the current population (556). - As part of the proposal the overall student numbers will reduce from 1417 to 625. This is largely due to the demolition of the lecture theatres within the Biomedical Theatres Building, removing a total of 859 places, being replaced with research and laboratory facilities (within Building E26).
5.	Please provide further details regarding the travel demand management measures that have been implemented at the University and the effectiveness of these measures, including further details regarding changes in travel mode shares.	- Refer to Section 2.3 of the RtS Report - As set out in the Traffic Response (Appendix G), the following travel demand measures have been implemented at UNSW - No additional car parking on-campus - Restricted on-street parking availability - provision of additional student accommodation on campus or adjacent the campus, within walking distance - Improved bus shuttle connections between Central Station and the Campus - Preparation of a Campus Bicycle Master Plan to guide ongoing implementation of end of trip facilities and promotion of cycling as a viable access mode - Improved pedestrian crossing facilities for access to the campus - Increasing availability to distance/correspondence learning where students attend campus less frequently - Promotion of alternative travel modes to private vehicle use for new students and staff through induction processes, and as part of accommodation orientation. - Results of the 2015 Campus Travel Survey, demonstrated that the demand measures implemented by UNSW have been effective in shifting the mode share away from private vehicle travel to other modes, primarily being public transport, as well as bicycle.

Submission Item	Response
6. Built form	
7. Further consideration should be given to the activation of the south eastern corner of the site or the treatment of this facade to provide an improved visual setting given Gate 11 is a designated entrance/exit to the campus and the eastern end of University Mall.	- East Mall via Gate 11 is currently a heavily trafficked route and the main service and vehicular access point for this part of the campus. As there are service access requirements for the proposed Biological Sciences building and access to the car parks it is essential to the functionality of this zone to retain this access. - With this premise the building has been designed to promote the car free areas along Chancellery Walk and around Michael Birt gardens. The main access for the building is via the gardens into the existing D26 building. Access from Botany Street has been encouraged to occur between the Wallace Wurth building and the existing D26 building in the recently constructed walkway adjoining with 'University Walk' (as an entry to the precinct not just the building). - All buildings on campus are entered from a precinct rather than a front door to the street. The south east corner of the building is purposely designed to discourage activity around the heavily trafficked area.
8. Amenity Impacts	
9. Further overshadowing diagrams should be provided to demonstrate solar access impacts at hourly intervals between midday and 3 pm during mid-winter and further analysis of the impacts on living areas and outdoor recreation areas of the impacted properties. The applicant should demonstrate that adequate levels of solar access can be maintained at these properties.	Additional overshadowing Diagrams have been prepared by Woods Bagot (Appendix B) at hourly intervals between midday and 3pm on 21 June (Mid-winter). These diagrams assist in demonstrating that the impacts properties on the eastern side of Botany Street receive adequate levels of solar access (in the morning hours between 9am and 1pm).
10. Further background noise monitoring should be undertaken to ensure the project specific noise levels have been established in accordance with the requirements of the Industrial Noise Policy.	- Acoustic Logic have prepared a response report, addressing the relevant submissions raised above (see Appendix D), and in support of the original acoustic report submitted with the SSD. - This response include further background noise level monitoring as requested by Council. - Refer to Section 2.5 of the RtS for detailed response
11. Landscape Plans	
12. Please also ensure the landscape plans submitted with the application have title blocks.	Revised Landscape Plans have been prepared by Black Beetle and are provided at Appendix E to the RtS
13. Randwick City Council (Council)	
14. 1. Randwick Development Control Plan 2013	
15. In accordance with the State Environmental Planning Policy (State and Regional Development), Clause 11 specifies that the application of development control plans does not apply to development considered to be of state significance. However, the Randwick Development Control Plan 2013 (RDCP2013) is a relevant design guideline which demonstrates site suitability and requires consideration as per the Secretary's Environmental Assessment Requirements (SEAR's). The RDCP2013 adopts the urban design principles of the previously approved The Campus 2020 Master Plan and further complements the broader UNSW Strategic Plan 2005.	Noted - The relevant items of the Randwick Development Control Plan 2013 (DCP 2013) raised by Council have been considered in this submission below.
16. The RDCP2013 was prepared in association with the University of New South Wales and was the result of extensive community consultation and independent architectural and urban design collaboration. Council considers that the aims and objectives of the RDCP 2013 hold significant weight as a development assessment tool to inform on development suitability and appropriate urban form. As such, the DCP is a central matter for consideration within the assessment of this proposal.	

Submission Item	Response
17. Sense of Place	
18. Part 4.2.2 refers to the importance in creating a strong sense of place within the campus and the interface that new development has with its local surroundings. The subject site is located on the north-eastern corner of the university campus adjacent to the Botany Street frontage and the desired future character is described as being <i>"Major buildings to define frontage, particularly High/Botany Street Corner"</i> . The proposed development maintains a similar visual bulk and scale to the Wallace Wurth Building (C27) directly north of the subject site given the similarities in building height and mass.	▪ Council's comment in relation to the scale of the proposed building along Botany Street is favourable in order to define the site frontage, particularly towards the corner of Botany and High Streets. ▪ Refer to Section 2.2 of the RtS Report. ▪ The form and design of the south eastern elevation responds to the function of the building use as a research building, containing laboratory and teaching spaces. The design of this façade however, uses a range of colour and materials to create a play of scale and texture, resulting in patterns being set within the modular grid. The reveal back to the ground level student spaces, along with the landscaped setback, draws an expression of the campus onto the edge of the precinct.
19. The objectives of Clause 4.2.2: Sense of Place also places an emphasis on a sense of arrival particularly along the Anzac Parade, High Street and Botany Street frontage. Greater consideration should be given to the frontage at ground floor level of the southeastern wing of the proposed biological science building (E26). The proposed frontage does not encourage a clear and welcoming campus especially given its prominent position directly adjacent to a main gateway (via gate 11) and recent major pedestrian pathway upgrades of East Mall.	
20. A re-design of the frontage of the south-eastern wing should be considered in order to promote a more transparent and active frontage that relates to the public domain at pedestrian level and reduces the stagnant appearance of the buildings frontage. This will also require a reconfiguration of the internal floor plan at the ground floor level in providing more active uses other than the proposed plant and stair access to the upper floor levels.	
21. Legibility	
22. Part 4.2.3 refers to the overall spatial structure and the movement patterns that relates to the urban built form and the provisions of clearly defined entrances, linkages and pedestrian circulation spaces. The proposal should examine further opportunities to improve pedestrian and cycle links through the site in particular connecting major pedestrian thoroughfares including the extension of the East Mall (formerly known as Library Road) to the northern portion of the site along the Chancellery Walk.	▪ Refer to Section 2.2 of the RtS and diagrams provided in the Architectural Design Report (Appendix C).
23. The existing underpass through the Samuels Building (F25) does not provide a clear and dignified route towards the northern portion of the campus and significant open space areas such as the Michael Brit Gardens. The proposal should provide a greater emphasis on the pedestrian access at the intersection between the Chancellery Walk and East Mall and in effect compliment the ceremonial importance of the Chancellery Forecourt areas. Furthermore, the proposed ramp on the western side of the southern wing of the Biolink Building (D26) would benefit from a site-link of a more appropriate width (eg. 6 metres or greater in width) in order to provide greater definition to the circulation spaces and when servicing a greater number of students/staff entering and exiting these areas. The ramp will in effect act as the critical path to buildings D26 and E26 given it offers the shortest distance from the East Mall pedestrian pathway. The softening of the built form by providing landscaping elements along the eastern edge occupies a large portion of the Chancellery Walk and reduces the legibility of the pedestrian footpath movements to the northern side of the campus.	▪ The intersection between the Chancellery Walk and East Mall is part of the overall university master plan and way finding strategy. ▪ Black Beetle disagrees with widening the path to 6m and propose a compromised 3m wide path is in order to maintain an active and passive green pocket space amongst the existing hardscape pedestrian links (Chancellery Walk and East Mall) and surrounding buildings. The provision of the ramp provides an accessible path to the building entrance rather than the main pedestrian through link for the University, located adjacent the ramp with a width of some 12m. ▪ This green space and landscaping in this location is the forecourt to the building and is designed to activate and encourage use by staff and student as well as servicing as extension of the internal informal learning and study space, rather than being a sole pedestrian access away. This area also minimises overland flow from University Walk.
24. Finally, the proposed ground floor plans of the entrance stairs and retail premises on the eastern wing of the Biolink Building (D26) should illustrate the relationship with the wider context including the Chancellery Walk and adjoining campus buildings to the east.	▪ Refer to Section 2.2 of the RtS Report ▪ The retail units lead through to the proposed atrium between Building D26 and the proposed building (Building E26). This route will encourage engagement of the spaces both in the gardens and in the informal ground floor areas leading to the proposed teaching spaces.
25. Knowledge Clusters and Hubs	
26. Part 4.2.4 refers to the re-establishment of existing knowledge clusters and hubs as well as co-locating the emergence of new satellite hubs to similar campus disciplines. The subject site forms part of the Mathews Pavilions and Arcade/Michael Birt Gardens in providing additional biological science facilities adjacent to the health science within the	▪ Council's comment noted.

Submission Item	Response
north-eastern corner. The proposed development complies with the Council's controls in that the refurbishment of the ground floor levels of the Biolink Building (D26) provides ancillary retail and student services facilities to biosciences and medical disciplines.	
27. Landscape	
28. Part 4.2.5 refers to the existing trees to the north-western corner of the Biolink Building (D26) which are identified as ' <i>highest retention priority</i> ' as per figure 5.6(a) and the northern portion of the Biolink Building as ' <i>landscape tradition areas - preserve within guidelines</i> ' as per figure 5.6(b). The statement of environmental effects and attached arborist report details the removal of 31 trees along the northern portion of the Biolink Building (D26) to accommodate new decking and retail/student services component.	- For clarity, the trees identified as 'highest retention priority' and 'high retention priority' within Michael Birt garden as per the Randwick DCP 2013 (Figure 5.6a) will be retained as part of the proposed development, and will not be impacted - The trees proposed to be removed are identified as 'other trees' in this Figure. The Landscape statement notes that the majority of the trees in this location are considered as invasive environmental weeds.
29. The application does not provide a definitive statement that indicates the significance of the trees as a complimentary landscape element to both the Michael Brit Gardens and the Chancellor Walk. The statement only indicates that "the trees are required to be removed given they will be encroached by the construction works and/or new building".	- As noted above, the trees to be removed are identified as being 'other trees' and in many instances, are considered to be weeds. - As discussed in the Architectural Response (Appendix C), the design of an active ground floor uses, including an awning over, seeks to increase the interface and permeability of Michael Birt garden, further enhancing the function and importance of the green space.
30. It is considered that the existing trees add to the landscaped ambience of the open space and high pedestrian areas. Any new proposal should consider the importance of soft landscaping elements adjacent to significant open space area and high pedestrian areas including the Michael Brit Gardens and the Chancellor Walk. Furthermore, the application does not consider possible design options in which landscaping can be provided towards the northern edge or provide any agreed replacement of trees or compensation strategies.	- The proposed selection of palms (<i>Livistona australis</i>) to the western courtyard, adjacent Chancellor Walk provides a continuation of the existing palms (highlighted as 'high retention priority' in figure 5.6a). - It also provides an opportunity to establish a significant grove of palms along the Chancellor Walk. Importantly, the proposal does not erode or affect the existing pedestrian pathway or sight lines along Chancellor Walk. Similarly, the proposed landscaping does not impact on the eligibility of the western entry to the building, but rather provides identification and 'markers' of the building entrance in this location.
31. Buildings	
32. Part 4.2.6 refers to the requirement for regulating the built form of new buildings and major refurbishments of existing buildings and the contribution it makes to the quality of the campus. In particular, the RDCP2013 indicates building envelope controls including a maximum wall height of 24 metres and a minimum front setback of 6 metres for the subject site. The development does not comply with the maximum wall height requirements with a proposed wall height of approximately 36 metres and front setback that varies between a maximum of 12 metres and a minimum of 4 metres from the Botany Street alignment.	Council's comment noted.
33. Nevertheless, the varying front setback and the distribution of building bulk across two front facades improves the level of articulation along the Botany Street frontage. The proposed built form breaks up the prolific visual mass of the Wallace Wurth building and provides some relief by introducing a number of new materials and external finishes including the glass panel feature on the eastern wing and the vertical modules on the south-eastern facade. The use of the materials and the protruding facade elements appropriately combine to provide a greater distinction between buildings rather than a continuation of the visual bulk and scale of its northern neighbour. The south-eastern wing will define the east elevation, however any new development should enhance the adjoining southern corridor of East Mall in order to accentuate the pedestrian experience along the public domain and complement the architectural design of the southern adjoining building (Samuels Building).	- Council's comment in relation to setbacks and height is noted. - The south east corner of the building facade has been purposely designed to discourage pedestrian activity around Gate 11 to achieve the pedestrian-vehicular separation. Notwithstanding, the design of the building at this corner has been carefully considered with regard to its presentation and interface with Botany Street as discussed below. - The East Mall (Library Road) and Gate 11 is currently a heavily used vehicle route and the main service and vehicular access point for the upper Campus. Service access for the proposed Biological Sciences building has been designed to coincide with the existing service access via Gate 11, including access to the Botany Street Parking Station. It is essential for the effective operation and functioning of the building that the East Mall and Gate 11 entry be retained for vehicle and service access.

Submission Item	Response
34. With regards to the non-compliance to the maximum wall height, the proposal will generally remain compatible with adjoining campus buildings including the Wallace Wurth building and the Biolink building (D26) which comprises of similar external wall heights. The departure of Council's controls by approximately 10 metres will continue to maintain a similar height and scale of the adjoining buildings whilst reinforcing the eastern edge along Botany Street. In terms of amenity impacts, developments of considerable scale are more favourable adjacent to Botany Street as prescribed within Section 4.2.2 of the RDCP2012 in that "major buildings to define frontage, particularly High/Botany Street corner". The proposed development is not expected to result in any significant overshadowing impacts to the adjoining residential developments directly to the east given the extent of overshadowing is limited to the afternoon periods only and the neighbouring dwellings along Botany Street will maintain the three hours of solar access during morning to midday periods as demonstrated by the overshadowing plans.	▪ Council's comment noted, particularly in relation to suitable levels of solar access being maintained to the residential dwellings located on the eastern side of Botany Street.
35. Transport and Parking	
36. The proposal notes there is no parking associated with the project, and that existing parking is provided on-site as well as "on-street parking in the surrounding streets" (EIS page 29). Council objects to inclusion of on-street parking in any calculation of parking supply for the University. The Traffic and Transport Report (Appendix V) notes that the 2014 UNSW travel survey indicates: ▪ 19% car mode share ▪ 60% public transport ▪ 21% walk/cycle	▪ Refer to Section 2.3 of the RtS and Traffic and Parking Statement provided at Appendix G ▪ Applying the mode share percentage to the additional staff (95), results in a total of 35 additional cars, and 21 at peak period (in accordance with the Transportation Strategy of the DCP). ▪ The proposal has a reduction of 792 students. ▪ The trend information for the campus as a whole provides a more realistic overall mode usage pattern which shows despite staff and student numbers, private vehicle use between both groups is decreasing. On-street car parking controls continue to limit the ability of more staff and students to drive and hence the trend of reducing car mode will continue as the campus population increases.
37. Council does not have the breakdown of staff and student travel by different transport modes for the 2014 UNSW survey referred to in the EIS, but it is understood that the proportion of staff travelling by private vehicle is significantly higher than that for students, and Council suggests that staff travel patterns only would be a more accurate reflection of travel demand in this instance. For example, the 2013 UNSW travel survey results indicate the following in respect of staff travel patterns: ▪ 43.8% private vehicles ▪ 36.9% public transport ▪ 19.3% walk/cycle	▪ In addition to the current staff (39.4%) and student population (61.5%) who use public transport, the introduction of the CBD and South East Light Rail is anticipated to substantially increase the public transport mode share. This is particularly relevant given the proximity of the High Street stop, within 100m of the Biological Sciences site.
38. Given that the proposed development is expected to generate 170 additional staff, based on the above mode share an additional 75 car parking spaces would be required. Council is concerned about the cumulative impact of significant developments on campus in recent years that have provided no parking, and the high probability that over time the total number of car parking spaces on campus has reduced while the numbers of staff and students continues to increase.	▪ Refer above (DPE Submission) for response to staff and student population numbers.
39. While the Council supports increased active and public transport use and reduced use of private vehicles, the proposal includes only generalised statements about existing travel demand management measures, which are unlikely to mitigate the effects of this development, leading to further increasing pressure on on-street parking in local streets. 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.	
40. It is noted that site establishment and enabling works including demolition of the existing biomedical theatres (located in the site of the proposed new building) were approved through an REF process during 2014. While not stated in the EIS, it is estimated that the net increase in GFA (taking into account a rough estimate of the floor space of the demolished biomedical theatres building) would be over 20,000m².	
41. Student numbers are not proposed to be increased, and there is an estimated increase of 170 staff. An increase in GFA of around 20,000m² appears inconsistent with a relatively minor increase in staff numbers. This would equate to over 117 m² of additional floor space per person. Therefore it is unreasonable to consider that the provisions of an additional	

Submission Item	Response
20,000m² will not contribute to an increased number of students and greater clarification on the operational details of the proposed biological sciences building is necessary at this stage. Standard conditions relating to construction traffic management plans and works zones have been included within this report.	
42. 2. Randwick Local Environmental Plan 2012	
43. In accordance with Clause 4.6: Exceptions to Development Standards, subclause 4(a)(ii) specifies the following: The provisions of a Clause 4.6: Exceptions to Development Standards requires a reasonable justification in how the development will continue to comply with the objectives for building heights. The applicant has provided a written request to vary the building height development standard; however the submitted EIS fails to address how the proposed development will remain consistent with the objectives for building height as required by Clause 4.6, subclause 4. The contravention to the development standard does not consider the objectives of Clause 4.3: Building Height and subsequently, further consideration in demonstrating the compliance with the objectives of building height prior to the issue of any development consent.	An assessment against the 'Height of Buildings' objectives (Clause 4.3 of LEP 2012) was provided in Table 13 on Page 67 of the EIS. This table included a specific assessment against each objectives of this control, and demonstrates that the proposed variation to the building height control will still result in a development that achieves the objectives of the building height development standard.
44. 3. Staff Numbers	
45. It is noted that site establishment and enabling works including demolition of the existing biomedical-theatres (located on the site of the proposed new building) were approved through an REF process during 2014. While not stated in the EIS, it is estimated that the net increase in GFA (taking into account a rough estimate of the floor space of the demolished biomedical theatres building) would be over 20,000m².	Refer to Section 2.1 of the RtS for detailed response
46. Student numbers are not proposed to be increased, and there is an estimated increase of 170 staff. An increase in GFA of around 20,000m² appears inconsistent with a relatively minor increase in staff numbers. This would equate to over 117 m² of additional floor space per person. Therefore it is unreasonable to consider that the provisions of an additional 20,000m² will not contribute to an increased number of students and greater clarification on the operational details of the proposed biological sciences building is necessary at this stage.	Refer to Section 2.1 and 2.3 of the RtS for detailed response
47. 4. Campus Planning Objectives	
48. Randwick LEP 2012 requires a site specific DCP to be prepared for land areas above 10,000sqm. While it is noted that the Randwick Comprehensive DCP 2013 includes a site specific chapter for the UNSW Kensington campus, this is based on a previous master plan prepared by the University, and adopted by Council in 2007. Several significant developments have been undertaken since this DCP was adopted, and there are many aspects that no longer reflect the current UNSW campus and proposed projects.	- UNSW have recently commenced a review of the 10 year strategic plan which involves a review of the Campus Masterplan and Capital Program to support the strategic plans. - It is anticipated that these will be adopted towards the end of 2015
49. UNSW have advised for a number of years that the Campus Development Framework is under review, and Council strongly encourages the University to complete this process, to be consistent with the requirements of RLEP 2012, and to ensure there is a relevant campus DCP that reflects and coordinates with updated UNSW development objectives, and current and future projects.	
50. There is in principle support for the realignment of Gate 11 (as part of the previous REF process) to strengthen the key campus circulation framework of University Mall. The proposal also contributes to the secondary east-west axis (University Walk), connecting to Botany Street via the entry to the Biomedical precinct.	
51. A stronger entry statement and activation at ground level at both of these key access points on Botany Street is supported in order to improve the legibility of the Botany Street frontage, and to present as a campus entry point and not just an entry to a building or driveway. Specialised Centre Precinct Plan recommends locating active uses at ground floors at key campus entry points to provide passive surveillance and reinforce their gateway role.	

Submission Item	Response
52. 5. Section 94A Contributions	
53. It is noted that the applicant is seeking exemption for payment of a Section 94A developer contribution. 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. It is not a nexus based Plan, and is not aimed at developers.	■ A detailed discussion around this matter is provided at Section 2.7 of the RfS report. ■ In summary, the University maintains the view that there are numerous reasons why the Minister should not require contributions to be paid for this project under Randwick Section 94A Development Contributions Plan. ■ It is noted that the payment of any contribution on this development is discretionary, and that the approval authority, in this case the Minister for Planning and Environment, while empowered to impose a condition requiring the payment of a monetary contribution is not required to under either the EP&A Act or Council's current Contribution Plan. ■ Justifications for the exemption of contributions include: ○ The University is a registered not-for-profit organisation; ○ The University is an education facility and a nominated charity; and ○ There has been a consistent approach adopted by the Department for UNSW on previous applications of this nature.
54. 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.	
55. The proposal includes no car parking provision, noting that on-street parking is available in surrounding local streets. While Council objects to the consideration of on-street parking in calculations of parking supply for the University, this is an example of the significant and increasing reliance of the University on public assets and services provided by the Council.	
56. The EIS notes (page 9) that "UNSW has ... agreed with RCC that any condition requiring a development contribution will include the words 'for public domain works within the University of New South Wales and Hospitals Precinct. Council has not agreed with this wording, and notes that the majority of development proposals for the UNSW are assessed and determined as State Significant Development by the Department of Planning and Environment - and Council does not have authority to prepare or agree with any conditions of consent.	
57. The EIS also suggests the above quoted wording is "in accordance with Council's Planning Committee report and resolution of 9 February 2010". To clarify, the purpose of this report was to address a request from the University to amend Council's S94A Plan to exempt the University from levies. In response the report noted that UNSW should not be exempt from s94A levies, but that the Works Schedule within the Plan could "specifically include public domain works around the University and linking to the nearby town centres." Council has, in subsequent updates of the S94A Plan, included this within the Works Schedule.	
58. The Section 94A Plan also allows for alternative methods of payment or provision of a public benefit, such as works-in-kind in lieu of a contribution to be negotiated via a Voluntary Planning Agreement process. Council notes that the University has not suggested such a process to date for any developments on campus, but this remains an option should the University seek public domain improvements or other suitable works directly in the vicinity of the campus.	
59. The EIS notes that previous consents (such as the Tyree Building) on the UNSW campus have adopted a reduced developer contribution based on the net increase in staff and/or student numbers. This approach is not supported by Council.	
60. The subject application proposes no increase in student numbers, an increase of 170 staff, but an overall increase in floorspace of over 20,000m². In comparison, the Tyree building, comprising a broadly similar combination of research, teaching and work spaces proposed a total GFA of 13,100 m² to house 1,111 staff. Council seeks clarification about the small number of staff compared to the large amount of floor space, and does not support new staff numbers as the basis for calculation of developer contributions. This is not considered an accurate reflection of the impact of the proposal.	
61. The subject land owned by the University is not subject to payment of rates. Contributions under Council's Section 94A plan are considered reasonable and appropriate to reflect the impact of and use by the University of Council-provided facilities and services. Council requests that any consent issued for the development should include a requirement	

Submission Item	Response
consistent with the S94A Plan for a developer contribution of 1% of the project cost of \$129,528,092, equating to \$1,295,280.	
62. Notwithstanding the above, it should be noted that Council has recently adopted the Randwick City Council Section 94A Contributions Plan 2015 and Council's position is that the UNSW Campus generally falls outside the parameters of Clause 13.2.2: Exemptions to the Levy in that the UNSW is not considered to be a small scale charity, established by the exemption criteria in both the recently adopted and previous s94A Contribution Plans.	
63. 6. Public Domain	
64. In line with previous suggestions regarding improved legibility and activation of campus gateways at Botany Street, it is recommended that differentiated threshold treatment at Gate 11 is introduced in order to not read as a public road going through the campus, and to provide a continuous and safe pedestrian footpath.	▪ A differentiated paving and threshold treatment of cobbles has been proposed as part of the Gate 11 enabling works to replicate the cobbled pavement at the existing Gate 11. The location of this crossover is restricted by below ground services in the zone directly adjacent Botany Street. The arrangement, along with University sign posting will contribute to the entry not reading as a public road. The proposed arrangement also provide continuous paths of travel for pedestrians travelling north/south along the western side of Botany Street. ▪ Refer to revised landscaping plans provided at Appendix E.
65. 7. Building Height	
66. The proposal exceeds the maximum perimeter building height in RLEP by up to 12.5m. The intention of the perimeter height limit in RLEP is to allow for a suitable and consistent streetscape scale and proportions, and to protect the amenity of the public domain. This is broadly consistent with building envelopes anticipated in the current UNSW chapter of the Randwick DCP 2013. Council reiterates its position that an updated master plan and site specific DCP for the campus is needed, which would allow for a strategic and well-informed review of this and other aspects of campus planning.	▪ Council comment noted. ▪ UNSW have recently commenced a review of the 10 year strategic plan which involves a review of the Campus Masterplan and Capital Program to support the strategic plans. ▪ It is anticipated that these will be adopted towards the end of 2015.
67. 8. Design excellence	
68. As a requirement of the Director General Requirements, Council notes that an Environmentally Sustainable Design Report has been prepared by EMF Griffiths identifying positive steps and a comprehensive range of measures to achieve sustainability. Sustainability is noted as a key element of design excellence in RLEP 2012, however the proposal is non-committal in regard to achieving any kind of benchmark in a recognised ratings system, and only notes compliance with Section J of the BCA, with other methods suggested for consideration during design development stage. A stronger commitment to sustainable building design and operation is encouraged for such a significant building on campus.	▪ In response to this item, a further design excellence/ESD statement has been prepared by EMF Griffiths (Appendix H). This report confirms that all sustainable design strategies to be adopted in the areas of mechanical, electrical, and hydraulic design of the building are in line with the University's policies and internal benchmarking. They are also based in principle of Green Star, Section J and best practice design principles. ▪ Refer to the additional ESD comment provided at Appendix H for details to the initiatives commitment to as part of the project
69. Environmental Health Advice	
70. <u>Land Contamination:</u> Preliminary advice has been received from Douglas and Partners titled Preliminary Site Investigation with Limited Sampling Biological Sciences Project UNSW Gate 11, Botany Street, Kensington Project no: 73492.03- Rev 4 was submitted in support of this application (See Appendix K Statement of Environmental Effects).	▪ Douglas Partners have prepared a further response to this item in response to the EPA submission (Appendix F). This advice confirms that as stated in the Preliminary Site Investigation (submitted with the SSD), the site can be made suitable for the proposed Educational Establishment Use.
71. The report identifies potential contaminants of concern, however no confirmed opinion on the site's suitability or required remedial actions have been provided, therefore a detailed site investigation is recommended. The preliminary site investigation advises based on limited sampling further detailed investigation would be required to enable works to proceed.	▪ The advice confirms that Douglas Partners have been engaged to provide the following: ○ Validation of the removal of the underground petroleum storage system (UPSS) in accordance with Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014; ○ Further soil testing in the footprint of the now demolished building (which was not accessible at the time of the Preliminary Site Investigation (PSI)); and ○ Provision of a report detailing the results of the UPSS validation and further testing in general accordance with the NSW Office of Environment and Heritage (OEH)
72. It should be noted a UPSS has been identified and advice has been received it will be removed in accordance with NSW legislative requirements. Also based on building rubble being identified in BHS potential for asbestos contamination has been identified. Appropriate conditions have been provided.	

Submission Item	Response
	Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites. The report will include comments on the site suitability for the proposed development. ○ Douglas Partners believe that further groundwater investigations is not required based on the previous groundwater investigation results and no potential contamination of concern being identified in the available UPSS validation results. If significant contamination is identified following removal of the UPSS pipework (currently not accessible for removal), the need for further groundwater investigation will be reviewed.
73. Potential Acid Sulphate Soils: The Statement of Environmental Effects has not provided any advice on Acid Sulphate Soils therefore further information would be required.	▪ The EIS submitted with the SSD, confirmed in Section 6.9.3 (page 54) that the site is not mapped under Randwick LEP 2012 as having Acid Sulphate Soils, nor are they anticipated on the site according to Douglas Partners investigations.
74. Acoustics: An acoustic report titled UNSW Biological Sciences Project Acoustic Assessment of Secretarial Environmental Assessment Requirements is provided in section of Statement of Environmental Effects. The potential noise issues associated with this development are considered to be: Noise from plant and equipment ▪ • Impact of existing ambient noise on the project ▪ • traffic ▪ • Other residential receivers. 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 recommendations are provided on noise levels with specific attenuation of plant and equipment once selected items are finalised.	▪ Refer to Section 2.5 of the RiS for a detailed response in relation to acoustic impacts. ▪ Further Acoustic Analysis of background noise levels was undertaken by Acoustic Logic (see Appendix D). ▪ With regard to cumulative impacts, the background noise measurement location were undertaken in locations that were not impacted by pre-existing noise from the Biological Sciences building and outside of the Campus, removes the potential for background creep. In any event, the noise emission goal for the site has been set by the EPA Amenity Criteria which is lower than the ambient background noise levels.
75. 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.	
76. Legionella Control: Cooling Towers may be proposed. Suitable conditions to be imposed to address this issue.	▪ Noted
77. Storage and Handling of Dangerous Goods: A report prepared by RAWRISK Engineering dated 22 January 2015, the design configuration has been confirmed as being able to comply with NSW Work Health And Safety Regulation 2011.	▪ Noted
78. The report confirmed due to the threshold limits of quantities used and stored at the site SEPP 33 does not apply.	
79. Waste Management: Operation of the facility will generate a variety of solid and liquid wastes including biological wastes, electronic waste, radioactive wastes and chemical waste and requires a range of management strategies.	▪ Noted
80. Disposal of hazardous wastes is managed through the Universities Disposal of Hazardous Waste Procedures and must comply with EPA requirements (POEO ACT, regulation) for the removal of hazardous substances, dangerous goods and biological hazardous waste to ensure compliance with regulatory requirements.	
81. UNSW have provided Preliminary Operational Waste Management Plan dated 26 November 2014 to address in house waste management, separation, storage and removal of wastes.	
82. Development Engineering Advice	
83. Drainage comments	▪ Noted

Submission Item	Response
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.	
84. Sufficient geotechnical investigation must be undertaken and documentation provided to assess the application with respect to impact on groundwater and groundwater related construction requirements, (e.g. tanking of basement levels and temporary dewatering requirements).	
85. Civil Works Comments All works within the Botany Street road reserve must be carried out in accordance with plans and specifications approved by Council. Conditions of consent relating to these requirements have been included within this report.	Noted
86. Landscape Comments The Arborists Report has assessed a total of 59 trees, and while numerous large Gums within the site, along the length of the Botany Street frontage, as well as others towards the Wallace Worth development have already been removed as part of major drainage and infrastructure works, there are several Brush Box's remaining in the Botany Street footpath, comprising three to the south of the existing entry/exit, with a further four to the north of the access (T12-15), with these four shown as being removed to allow for a B Class Hoarding. These trees are part of a formal avenue planting, so provide a positive contribution to the streetscape, and if retained, would also assist in minimising or softening the impact of such a large building on the public domain. However, they are not significant examples of the species, so for a development of this size, we could reluctantly allow them to be removed and replaced with additional street trees of the same species as has been shown, with conditions requiring that the applicant cover all costs for this. Part 4.0 of the Arborists Report identifies that the footprint of the proposed works will encroach 100% into each and every tree's Tree Protection Zone (TPZ), with the majority of these being weeds anyway (Umbrella Trees, T16-26, 33-46), which can all be removed without consent, irrespective of these works, as they are classified as invasive environmental weeds. There are several other established, more desirable native trees within the site, along the western edge of the works, such as T27-32, that would also need to be removed, and while the UNSW DCP identifies some trees around/adjacent the northwest corner of the site as having either 'high' or 'highest' retention priority, Council would not object to removals here given a combination of the following factors: - the large scope of works; - the fact that any benefit they currently provide to amenity or the local environment is restricted to this specific area of the site; - and the landscape scheme shows the amount of planting and green space in this area will actually be increased compared to what is currently provided, and should adequately cater for the loss of any existing canopy cover. While some native Tree Ferns are shown for transplanting elsewhere in the site, Council would not formally require this, and would consent to their removal. The Design Intent describes 3 major Landscape Components: - Botany St & Eastern Courtyard;	- Council comments noted - Refer to revised landscape drawing prepared by Black Beetle (Appendix E). - The street trees identified for removal are to be replaced by <i>Lophostemon confertus</i> with additional trees to contribute and continue the streetscape character of a formal avenue planting - The proposed replacement trees are in accordance with Council's Street Tree Master Plan.

Submission Item	Response
- Western Courtyard and Chancellery Walk; - Gate 11 Entry/Samuels Building South The project intends to provide a functional and usable setting for the Biological Sciences Precinct that will activate and encourage use of the buildings and surrounds, with plant selection to blend seamlessly with existing, established palettes.	
87. Office of Environment and Heritage (OEH)	
88. 1. Flood Risk Management	
89. The proposed development is located within the University of New South Wales and involves three design stages for the construction of a nine storey building. The current stages of the proposal (Stages 1 and 2) are limited to internal stormwater drainage design, and accordingly OEH makes no flood risk management comments. OEH advises however, that consultation with Randwick City Council may be prudent for the various stages of the project.	Noted
90. 2. Aboriginal Cultural Heritage	
91. OEH notes the project occurs in a highly disturbed area however an Aboriginal site occurs within approximately 300 m. The Preliminary Site Investigation conducted by Douglas Partners (February 2014) confirmed that the subject site has not been a part of the nearby former landfill activities, and that the natural material at the site is classified as Virgin Excavated Natural Material (VENM). Given the apparent lack of prior disturbance specific to the subject site and the recording of a nearby Aboriginal site, OEH recommends that consideration is given to the possibility of Aboriginal objects remaining on site, prior to undertaking any excavation of previously undisturbed areas. Consideration should be given to how any remaining Aboriginal objects may be affected, if at all, through the proposed development.	Noted
92. Roads and Maritime Service	
93. Roads and Maritime has reviewed the final draft EIS and advises that a Construction Traffic Management Plan (CTMP) should be submitted to the department for approval prior to issue of construction certificate.	Noted. As stated in the EIS and subsequent Traffic and Parking Response (Appendix 2.3), a Construction Traffic Management Plan will be prepared in accordance with this requirement, prior to the commencement of works on the site.
94. Transport for NSW	
95. CBD and South East Light Rail (CSELR) project	
96. TfNSW advises that the CSELR project was determined by the Department of Planning and Environment (DP&E) on 4 June 2014 as per the assessment contained within the Environmental Impact Statement (EIS). Construction has now commenced and will be carried out in accordance with the existing approvals and any modifications subsequently approved.	Noted - The delivery and timing of the CBD and South East Light Rail has been considered as part of the subject application
97. Construction Traffic Management Plan	
98. TfNSW requests that a Construction Traffic Management Plan (CTMP) be prepared in consultation with TfNSW prior to the commencement of construction. The CTMP needs to specify any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works. The CTMP should include the cumulative construction impacts of projects including CSELR. Should any impacts be identified, the duration of the impacts and measures proposed to mitigate these should be clearly identified and included in the CTMP.	Noted – As requested a CTMP will be prepared prior to works commencing on the subject site, and will take account of the potential implications with the CSELR
99. Bicycle Parking and End of Trip Facilities	
100. Based on the Traffic and Transport Report prepared as part of the development application, a Bicycle Masterplan for the Kensington Campus has been completed and increased bicycle parking has been proposed at key locations as part of the Masterplan. However, it is not clear from the Traffic and Transport report whether a detailed analysis has been undertaken to assess the existing and future demand for bicycle parking facilities. TfNSW requests that:	- Refer to Section 2.4 of the RtS for detailed response - Shower provision is included within the proposed building on all levels except for the teaching levels (Ground Floor and Level 1). These are provided within the accessible toilets found on these levels as shown on the attached Architectural Plans (Appendix B).

Submission Item	Response
▪ The proponent undertakes a detailed analysis in relation to existing and future demand and provision of bicycle facilities. ▪ The proponent provides information in relation to bicycle parking and end of trip facilities assigned for the proposed development and location of these facilities.	
101. Sydney Water	
102. All Submission Items and attachments	▪ All items contained within the submission have been noted
103.	▪ No further response is required in relation to the SSD at this stage
104. Environmental Protection Agency	▪
105. 1. General	
106. The EPA considers that the project the subject of the EIS comprises distinct phases of construction and operation and has set out its comments on that basis.	▪ Noted
107. The EPA understands that certain site preparation works are to be undertaken pursuant to a separate planning process. And, is concerned that the assessment and management of the environmental impacts of those preparatory works and the work the subject of the EIS may not be seamless.	▪ Each of the specific items detailed within the EPA submission are addressed in detail below.
108. The EPA notes for instance the proximity of surrounding residences and 2 nearby hospitals which may be adversely affected by noise impacts during site preparation, construction and operation phases of the project. And that, the EIS identifies the presence of uncontrolled fill materials and an underground petroleum storage system on the development site.	
109. The EPA emphasises that it does not review or endorse environmental management plans or the like for reasons of maintaining regulatory 'arms length'. And, has not reviewed the environmental management plans forming part of or referred to in the EIS.	
110. 2. Construction phase	
111. The EPA anticipates that construction and construction-related activities will be undertaken in an environmentally responsible manner with particular emphasis on — ▪ Site investigation and remediation, ▪ compliance with recommended standard construction hours, ▪ intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting), ▪ feasible and reasonable noise and vibration minimisation and mitigation, ▪ effective dust control and management, ▪ runoff, erosion and sediment, and ▪ waste handling and management, particularly concrete waste and rinse water,	▪ The proposed works will be carried out in accordance with all conditions of approval and as set out in the final Construction and Environmental Management Plan.
112. 2.1 Site investigation and remediation	
113. EIS section 6.9.1 states that the site was at one time a quarry which "... was backfilled in an uncontrolled manner with deep contaminated and heterogeneous material." And, confirms the possible presence of asbestos, especially in the fill material.	▪ As stated in the additional response (Appendix F), Douglas Partners have been engaged to provide validation of the removal of the underground petroleum storage system (UPSS) in accordance with Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014.
114. The EPA understands from the EIS that a Phase 1 contamination assessment was undertaken by Douglas Partners as outlined in EIS Appendix K. The EPA is concerned that 'enabling works' for the project (which presumably include site excavation and remediation) may not be encompassed by the EIS or form part of the SSD 6674 application.	▪ Douglas Partners have also been engaged to undertake a report detailing the results of the UPSS validation and further testing in general accordance with the NSW Office of Environment and Heritage (OEH) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites.
115. <i>Underground Petroleum Storage System (UPSS)</i> EIS Appendix K (p.32) indicates that an existing UPSS is to be removed from the site pursuant to a separate REF process, presumably under Part 5 of the Environmental Planning and Assessment Act 1979. And, incorrectly refers to the 2008 Regulation which was superseded in September 2014.	▪ The report submitted with the SSD confirmed the suitability for the proposed development.

Submission Item	Response
116. The EPA emphasises that the UPSS removal work must be undertaken in accordance the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 and related technical notes and guidelines available on the EPA web site via the following links —	
117. Recommendation The proponent be required to obtain a validation report pursuant to the requirements of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 before undertaking work the subject of the EIS.	
118. <i>Enabling works</i> The EPA notes that the final paragraph of the Executive Summary to EIS Appendix K concludes that the site can be made suitable for the proposed use as an educational establishment subject to undefined site "... Enabling Works ...".	Noted– see response to recommendation below.
119. Recommendation The proponent be required prior to commencing work the subject of the EIS — (a) to undertake additional detailed investigation of potential soil and groundwater contamination, (b) to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, and (c) to develop and implement site clean up and remediation as necessary.	- The advice provided by Douglas Partners (Appendix F), confirms that they have been engaged to provide the following: - Validation of the removal of the underground petroleum storage system (UPSS) in accordance with Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014; - Further soil testing in the footprint of the now demolished building (which was not accessible at the time of the Preliminary Site Investigation (PSI)); and - Provision of a report detailing the results of the UPSS validation and further testing in general accordance with the NSW Office of Environment and Heritage (OEH) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites. The report will include comments on the site suitability for the proposed development. - Douglas Partners believe that further groundwater investigations not required based on the previous groundwater investigation results and no potential contamination of concern being identified in the available UPSS validation results. If significant contamination is identified following removal of the UPSS pipework (currently not accessible for removal), the need for further groundwater investigation will be reviewed. - It is anticipated that these requirements will be conditioned as appropriated by the DPE.
120. Recommendation The proponent should commit to satisfying the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 'asbestos wastes'.	Noted
121. Recommendation The proponent should commit to consulting with Workcover NSW concerning the handling of any asbestos waste that may be encountered.	Noted
122. 2.2 Noise and vibration	
123. The EPA notes the proximity of noise sensitive receivers, including - residences on the eastern side of Botany Street - residences on the northern side of High Street, - residences to the south - Sydney Childrens Hospital (Randwick), and - Royal Hospital for Women.	Noted – see response to recommendation below.
124. The EPA emphasises the importance of properly managing noise and vibration impacts during demolition, site preparation, construction and construction-related activities, especially in regard to high noise impact activities, such as grinding, jack hammering, pile driving, rock breaking and hammering, rock drilling, saw cutting, and vibratory rolling. The	

Submission Item	Response
EPA strongly recommends that intra-day respites be imposed in negotiation with NSW Health and hospital managements (see also intra-day respites below). 125. The EPA understands that the proposal includes the demolition of existing structures. The EPA provides guidance material available on its web site including downloadable copies of — ▪ the Interim Construction Noise Guideline (2009), and ▪ Assessing Vibration: a technical guideline (2006). The EPA considers that the project is likely to generate significant noise and vibration impacts on surrounding residences and both hospitals during demolition, site preparation, construction and construction-related activities.	
126. Recommendation The proponent be required to establish the background noise level at the most affected residential receivers and both hospitals.	▪ Refer to the additional Acoustic response prepared by Acoustic Logic, provided at Appendix D. ▪ Additional background noise monitoring was conducted at the residence at 89 Botany Road, with the resulting background noise levels higher than those used in the original assessment. Acoustic Logic consider that the noise goals determined from the original assessment are correct, and should be adopted. ▪ Background noise monitoring at the hospital is not required by the INP, as noise impacts are not determined with reference to background noise levels. Given the 200m distance and the more relaxed acoustic criteria applicable for the hospital, compliance with noise impact requirements of the hospital will be achieved.
127. <i>2.2.1 general construction hours</i> EIS Section 3.2 indicates that all construction and construction-related activities will be undertaken during standard construction hours as recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009	▪ Noted ▪ Construction will be undertaken in accordance with the hours of operation as condition.
128. <i>2.2.2 intra-day respite periods</i> ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents. The EPA anticipates that those site preparation, demolition, construction and construction-related activities generating noise with particularly annoying or intrusive characteristics would be subject to a regime of intra-day respite periods where a) they are only undertaken after 8.00 am, b) they are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and. c) (c) 'continuous' means any period during which there is less than an uninterrupted 60 minute respite between temporarily halting and recommencing any of the work referred to in ICNG section 4.5	▪ Refer to Acoustic Response at Appendix D for further detail. The items are summarised below
129. Recommendation The proponent be required to schedule intra-day 'respite periods' for construction activities identified in the Interim Construction Noise Guideline as being particularly annoying to noise sensitive receivers, including surrounding residents and both nearby hospitals.	▪ Adoption of blanket intra-day respite periods is contrary to the Interim Construction Noise Guidelines which recommends the use of respite periods only in the event that construction noise exceeds the "Highly Noise Effected" level at a nearby residence. ▪ A blanket adoption of respite periods is likely to have an undesirable impact on residential amenity, compelling work to cease during the middle of the day, at time where many surrounding residents are not home, and instead, prolongs to overall construction period. ▪ Given that construction noise is not anticipated to exceed 75dB(A) at nearby residences (as per section 6.2.1 of the Acoustic Logic original Acoustic Assessment submitted with the SSD), a blanket adoption of respite periods is considered not to be warranted. ▪ As a safeguard, attended measurements of construction noise can be conducted during initial stages of building works (footing construction, initial concrete pours) to ensure that

Submission Item	Response
	noise impacts to not exceed the ICNG 'Highly Noise Affected level' (the trigger for adoption of respite periods).
130. 2.2.3 <i>queuing and idling construction vehicles and vessels</i> The EPA is aware from previous major infrastructure projects that community concerns are likely to arise from noise impacts associated with the early arrival and idling of construction vehicles (including concrete agitator trucks) at the development site and in the residential precincts surrounding that site.	■ Noted – see below
131. Recommendation The proponent be required to ensure construction vehicles (including concrete agitator trucks) and vessels involved in construction and construction-related activities do not arrive at the project site or in surrounding residential precincts outside approved construction hours.	■ Noted – as part of the Construction Traffic Management Plan required to be prepared, details will be included in relation to vehicle queuing and arrival times, particularly those that may have an impact to surrounding land uses and neighbours.
132. 2.3 Dust Control and management	
133. The EPA is unclear whether the proposal involves bulk earthworks and the likelihood of large stockpiles of excavated material on the project site. The EPA considers dust control and management to be an important air quality issue during demolition, site clearance and preparation, and subsequent construction. Bulk earthworks inevitably generate dust as a result of — a) demolition, b) the excavation, processing and handling of excavation spoil, c) wind action on spoil stock piles, and d) wind action on and plant movement across areas bare of vegetation or other cover.	■ The details recommended by the EPA will be incorporated as part of the final Construction Management Plan.
134. Recommendation The proponent be required to : a) minimise dust emissions on the site, and b) prevent dust emissions from the site.	■ The details recommended by the EPA will be incorporated as part of the final Construction Management Plan.
135. 2.4 Erosion and Sediment Control	
136. <i>Managing Urban Stormwater Soils and Construction, 4th Edition</i> published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective erosion and sediment control on construction sites. However, the proponent should implement all such feasible and reasonable measures as may be necessary to prevent water pollution in the course of developing the site.	■ Noted ■ The details recommended by the EPA will be incorporated as part of the final Construction Management Plan.
137. The EPA emphasises the importance of — a) not commencing demolition, earthmoving, construction and construction-related activities until appropriate and effective erosion and sediment controls are in place, and b) daily inspection of erosion and sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.	
138. 2.5 Waste control and management (general)	
139. The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the Waste Avoidance and Resource Recovery Act 2001, is one that ensures that resource management options are considered against the following priorities: ■ Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government ■ Resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources Disposal including management of all disposal options in the most environmentally responsible manner. All wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines to ensure proper treatment, transport and disposal at a landfill legally able to accept those wastes. The	■ Noted ■ The details recommended by the EPA will be incorporated as part of the final Construction Management Plan.

Submission Item	Response
EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the project. 140. Recommendation The proponent be required to ensure that : (1) all waste generated during the project is assessed, classified and managed in accordance with the "Waste Classification Guidelines Part 1: Classifying Waste" (Department of Environment Climate Change and Water, December 2009); (2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and (3) (mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.	
141. 2.6 Waste control and management (concrete and concrete rinse water)	
142. The EPA anticipates that during the course of the project concrete deliveries and pumping are likely to generate significant volumes of concrete waste and rinse water. The proponent should ensure that concrete waste and rinse water is not disposed of on the project site and instead that — a) waste concrete is either returned in the agitator trucks to the supplier or directed to a dedicated watertight skip protected from the entry of precipitation, and b) (b) concrete rinse water is directed to a dedicated watertight skip protected from the entry of precipitation or a suitable water treatment plant.	▪ Noted ▪ The details recommended by the EPA will be incorporated as part of the final Construction Management Plan.
143. Recommendation The proponent be required to ensure that concrete waste and rinse water are not disposed of on the development site;	
144. 3. Operational Phase	
145. The EPA considers that environmental impacts that arise once the development is operational should be able to be largely averted by responsible environmental management practices, particularly with regard to: a) feasible and reasonable noise mitigation measures, b) appropriate clinical and related waste management, and c) radiation d) energy efficiency and water conservation measures.	▪ Noted – no response required
146. 3.1 Noise and vibration impacts	
147. EIS section 6 indicates that the proposed 9 storey building and associated development will include rooftop cooling towers and other mechanical ventilation plant as well as a loading dock and an emergency generator. The EPA anticipates that operational noise impacts are likely to include noise from amongst other things – ▪ mechanical ventilation plant and equipment, including a chiller plant on the lower ground floor, ▪ truck movements (incl. reversing beepers) associated with use of the loading dock and with waste collection services, and ▪ • testing of emergency generators.	▪ See below
148. The EPA anticipates the proposed development may have significant operational noise impacts on nearby sensitive receivers, including residences to the east, north and south, Sydney Children's Hospital and the Royal Hospital for Women.	

Submission Item	Response
149. However, EIS Appendix G indicates that noise monitoring to establish background noise levels, which are fundamental to assessing operational noise impacts, are questionable because the measurements: a) were limited to only 5 days of background monitoring rather than the minimum of 7 days required by the guidance material in the NSW Industrial Noise Policy (INP); b) are not supported by any assurance that they measurements were not affected by adverse meteorology (i.e. rain or winds with a velocity exceeding 5 metres per second); c) were not made at or near the boundary of noise sensitive receivers (example: most affected residences particularly to the east but including the most affected nearby residences to the north and south); d) were not made at nearby hospitals located to the east along Hospital Road; and e) were made at a location adjacent to a university building, which may have raised night-time background levels due to the influence of – (i) mechanical plant, and (ii) façade reflection.	
150. The EPA is further concerned that EIS Appendix G presents generic/qualitative comments and recommendations in relation to noise objectives and defers quantification of impacts to the detailed design stage. The EPA considers that a detailed assessment of the operational noise impacts of the proposed development against the relevant INP criteria is impracticable given the omission of quantitative objectives for plant and equipment, loading dock operations and emergency generator testing.	
151. Recommendation The proponent be required to undertake background monitoring at the most affected residential receivers and both hospitals in accordance with the guidance material provided in the NSW Industrial Noise Policy.	▪ Background noise monitoring at the hospital is not required by the INP, as noise impacts are not determined with reference to background noise levels. Given the 200m distance and the more relaxed acoustic criteria applicable for the hospital, compliance with noise impact requirements of the hospital will be achieved.
152. Recommendation The proponent be required to ensure that all noise resulting from operation of plant and equipment associated with operation of the building, loading dock operations and waste collection services does not exceed properly determined night, evening and day background levels by more than 5dB at the potentially most affected residence on Botany Road.	▪ This is agreed, and was adopted by Acoustic Logic in any event in setting noise emission goals for the development as set out in section 5.1.3 of our original Acoustic Assessment (being the INP Intrusiveness Criteria).
153. 3.2 Radiation Control Act and Regulation	
154. The EPA administers the Radiation Control Act 1990 (and Radiation Control Regulation 2013) and anticipates that 'regulated material' will be stored and possessed on the university campus. 'Regulated material' means – a) radioactive substances, b) ionising radiation apparatus, c) non-ionising radiation apparatus of a kind prescribed by the regulations, and d) sealed source devices. A 'person responsible' within the meaning of section 6 of the Radiation Control Act 1990 is obliged to hold an appropriate 'radiation management licence' in respect of regulated material at the university campus. A natural person who uses regulated material at the university campus must hold a 'radiation user licence' and must comply with any conditions to which the licence is subject. Frequently asked questions about radiation management licences is available via the following link	▪ Noted – As required by suitable conditions of approval, the proponent will consult with the EPA in regard to any necessary amendments to the University's relevant radiation licence(s).
155. Recommendation The proponent be required to consult with the Environment Protection Authority in regard to any necessary amendment to the University's 'radiation management licence' in respect of regulated material at the new facilities and the management and handling of waste containing radioactive material.	

Submission Item	Response
156. 3.3 Radioactive Waste	
157. EIS Appendix W identifies various Class 7 radioactive (substances wastes) that may be generated during operation of the project.	Noted – As required by suitable conditions of approval, the proponent will consult with the EPA in regard to any necessary amendments to the University's relevant radiation licence(s).
158. However, EIS Appendix W section 3.9 incorrectly refers to the Office of Environment and Heritage rather than the EPA as the regulatory authority.	
159. Waste containing radioactive material must be classified in accordance with the EPA's Waste Classification Guidelines including Part 3: Waste Containing Radioactive Material.	
160. Radioactive material must be placarded, consigned, packed and loaded for transport and transported in accordance with the Radiation Control Act 1990 (and Radiation Control Regulation 2013).	
161. Recommendation The proponent be required to consult with the Environment Protection Authority in regard to the management of radioactive waste — see also recommendation to section 3.2 to these comments.	
162. 3.4 Clinical and related waste	
163. The EPA anticipates that the proposed facilities will generate 'clinical and related waste' which are defined under the Protection of the Environment Operations Act 1997. Clinical and related waste includes clinical waste; cytotoxic waste; pharmaceutical, drug or medicine waste; and sharps waste.	Noted – As required by suitable conditions of approval, the proponent will consult with the EPA in regard to any necessary amendments to the University's assessment, handling, storage, transport, treatment and disposal of clinical and related waste arising from operation of the proposal.
164. EIS Appendix W sections 3.10 to 3.13.2 briefly outline a range of clinical and related wastes likely to be generated but appears to omit any reference to the special requirements relating to clinical and related waste pursuant to clause 113 to Protection of the Environment Operations (Waste) Regulation 2014.	
165. Clinical and related waste has been pre-classified as a 'special waste'. This allows the EPA to set more stringent and specific requirements for the transport and management of the waste to minimise the risk to the environment and human health. Clause 43 to the Protection of the Environment Operations (Waste) Regulation 2005 prescribes requirements for managing certain clinical and related waste.	
166. Waste managers/operators who transport, store, treat or dispose of clinical and related waste should check the details of the Protection of the Environment Operations Act and the Protection of the Environment Operations (Waste) Regulation 2005 for licensing and generic requirements in relation to clinical waste.	
167. Recommendation The proponent be required to consult with the Environment Protection Authority in regard to proper assessment, handling, storage, transport, treatment and disposal of clinical and related waste arising from operation of the new facilities.	
168. 3.5 Trackable Waste	
169. The EPA considers it likely that that the proposed facilities will generate some wastes likely to be 'trackable waste' within the meaning of the Protection of the Environment Operations (Waste) Regulation 2014.	Noted
170. 3.6 Water Conservation	
171. The EPA emphasises that water conservation is an essential component of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.	Noted
172. The EPA considers the design stage of the project to be the optimum time to integrate measures to achieve water conservation through stormwater collection, treatment and re-use for non-potable purposes.	Noted
173. 3.7 Energy Efficiency	
174. The EPA emphasises that energy efficiency is an essential component of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.	Noted
175. The EPA considers the design stage of the project to be the optimum time to integrate measures to achieve passive and active energy efficiency throughout the new facilities.	Noted