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Your Ref: SSD 5087-2011

Peter McManus
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Dear Peter

RE: Australian Institute of Nanoscience (AIN) Building, The University of Sydney (SSD 5087-2011)

Thank you for the opportunity to comment on the state significant development application for the proposed construction of the Australian Institute of Nanoscience (AIN) at the University of Sydney and associated works.

The City of Sydney wishes to make the following points regarding the application:

General

The site is zoned SP2- Educational Establishment under the Sydney LEP 2012, however there are no building height or FSR controls applicable to land within the university under the LEP. The Department should therefore be satisfied that the proposal has appropriately demonstrated design excellence with regard to the surrounding context of built form, landscape features and heritage.

The proposal is considered to be well located having regard to the visual character of the adjoining Physics Building and the broader context. The proposed building would have only limited impacts upon the setting of this conservation area as it is nestled behind the rear of the Physics Building in place of the previous non-original annexe.

The proposal has incorporated ecological sustainability initiatives and has incorporated measures from the Green Building Council Australia, Green Star – Education v1 tool, amongst other international benchmarks including BREEAM and Labs 21. The Department should ensure that the proposed accessibility review meets the relevant requirements of the BCA and Disability Discrimination Act.

Archaeology

The Archaeological Assessment identifies the site as having low potential for historical and aboriginal archaeological relics. As part of any approval it is recommended that the following conditions are imposed:

1. Should the subject area of the development be extended, archaeological assessment of the additional areas will be required

2. Should any historical relics be unexpectedly discovered on the site during excavation, all excavation or disturbance to the area is to stop immediately and the Heritage Council of NSW should be informed in accordance with section 146 of the Heritage Act 1977.

3. Should any Aboriginal objects be unexpectedly discovered then all excavation or disturbance of the area is to stop immediately and NSW Government Office of Environment and Heritage is to be informed in accordance with Section 89A of the National Parks and Wildlife Act, 1974.

Heritage and Urban Design

The Physics Building and adjacent Edward Ford Building are listed within the Sydney LEP 2012 as heritage items (I87 and I88 respectively) and the site is located within the University of Sydney Conservation Area (C5). Overall the proposed building is supported on heritage and urban design grounds and the following comments are provided:

- In view of development over time, the formal Wilkinson Axis is now a series of vistas from points along the axis. It is considered that the proposed new building will respect this axis by having a lower building component behind the centre of the Physics Building which is aligned to the axis.

- The proposed building will be seen as a background element behind the existing Physics Building. It should be noted that views to the north along the Wilkinson Axis from St Paul's College have been obscured by current and proposed additions to the College.

- The proposal will not adversely impact views of Physics Building from along Physics Road, nor will it adversely impact upon views to and of the Edward Ford Building.

- The proposed new buildings at St Paul's College will largely screen the new building from the college oval and grounds.

- The physical impacts on the Physics Building, comprising two new linkages between the buildings and fire separation requirements, are generally acceptable. The links have been designed to retain views to the rear of the Physics Building and create a southern courtyard aligned to the Wilkinson axis. They are unlikely to diminish light levels within the main staircase and the vestibule.

- It is considered that the proposal would have an acceptable impact overall on the Sydney University Conservation Area and listed heritage items within the vicinity.

As part of any approval the following conditions should be imposed:

1. Works for making good to the Physics Building:

   All new internal and external finishes and works of making good to the Physics Building shall match the existing original work adjacent in respect of materials used, detailed execution and finished appearance

2. Other conditions based on the Recommendations on Page 46 of the Heritage Impact Statement by GBA, namely:

   - Original fabric from the Physics Building to be removed is to be tagged and stored for future conservation works
   - Appointment of an experienced heritage consultant
   - Refinement of the landscaping design to include the selection of flowering climbers for the space at the rear of the Edward Ford Building
   - Reuse of the stone pillar, removed following the collapse of the jacaranda tree, in the landscape design
   - Need for protection measures to be undertaken as part of the Construction Management Plan to ensure no unforseen damage to nearby by heritage buildings and the significant tree
   - Archival Photographic Recording of the Physics Building, where works are proposed, to be lodged with Sydney University Archives

Trees & Landscaping

The fig tree near the rear of the Edward Ford Building on the City's Significant Tree Register is to be retained. There was also a Jacaranda Tree near the Edward Ford Building on the register but this fell during a storm in June 2012. Thirty trees subject to the TPO are to be removed as part of Stage 2, fifteen of which have been allocated a value of *Consider for Retention.*

The following recommendations with respect to tree protection and preservation are provided:

1. That the existing trees detailed in Table 1 as identified in the Arboricultural Impact Assessment Report prepared by Tree iQ dated 7 March 2012be retained and protected throughout the proposed development.

Table 1 - Existing trees to be retained and protected

EXISTING TREES TO BE RETAINED	
Tree Nos: 1, 2, 6, 7, 8, 39, 40	Total: 7

2. An explanation should be provided to provide the reason for the removal of the Jacaranda tree (numbered 40).

3. It is recommended that advice is sought from the applicant's qualified arborist regarding tree species selection, tree planting locations and to assist in the provision of a tree management plan for the site. This should ensure the canopy coverage of the site is replaced.

4. The Arboricultural Impact Assessment Report must be revised by the applicants AQF Level 5 Arborist to include an assessment of the current proposal.

   The report must be:

   - Prepared by a qualified Arborist with a minimum Australian Qualification Framework (AQF) of Level 5 in Arboriculture, and
   - Written in accordance with the Australian Standard AS 4970-2009 Protection of Trees on Development Sites (AS4970).

   The Arboricultural Impact Assessment report must provide the following details:

   (a) An assessment and discussion of the likely impacts the proposed development will have on the trees listed in Table 1. This should include above and below ground constraints on trees that should be retained.

   (b) If excavation is proposed within the setback zones, as listed in Table 1, exploratory root investigation will be required to determine the exact location of existing roots. This shall consist of an 'air knife', gently removing the soil to expose the existing tree roots where construction is likely to impact on the tree or require root pruning to achieve the proposed development design. An assessment of tree root size, number and condition must be provided (including photos). No roots over 30mm will be permitted for removal.

   (c) Recommendations of any design modifications, construction techniques and/or other protection methods required to minimise adverse impact on trees that should be retained during the demolition and construction works, and into the long term. Note: particular attention must be paid to the existing soil levels, required development levels to integrate to the existing building, and the required tree protection measures.

   (d) Details of the tree protection measures in accordance with AS4970-2009 Protection of trees on development site.

   (e) Details of pruning must be provided.

   (f) Information on the Arborist's involvement during the works is also required.

   (g) Any other works that must be prohibited throughout construction and development on site.

5. Landscaping of the site

   Future planning and design of the site should address replacement tree planting to compensate the loss of canopy on the site.

   (a) A detailed landscape plan, drawn to scale, by a qualified landscape architect or landscape designer, should be prepared and include:

      (i) Location of existing and proposed structures on the site including existing trees.

(ii) Site establishment including preparation of soil (use of structural or gap graded soil), continuous trenches, subsurface drainage.

(iii) Details of earthworks including mounding and retaining walls and planter boxes (if applicable).

(iv) Permeable surfaces Detailing of adjoining surfaces and structures to retained trees and consideration for new trees.

(v) A planting schedule of the tree species both botanical and common name, pot size (recommended minimum 200lt) and height at maturity.

(vi) Location of trees to ensure no future conflict of canopy / roots with buildings or services.

(vii) The design must provide a minimum 25% canopy cover across the site, provided by trees that will reach a minimum height of eight (8) metres and minimum canopy spread of six (6) metres. Palms, fruit trees and species recognised to have a short life span are not considered a suitable replacement. See details below of advanced tree planting requirements.

(viii) Details of planting procedure and maintenance during tree establishment. Tree protection should be factored into this, including formative pruning / tree guards etc., required to ensure the tree is not damaged from surrounding land use (e.g. car parking).

(ix) Details of drainage and watering systems. Note Water Sensitive Urban Design and Permeable paving must also be considered.

6. Advanced tree planting

Tree planting within the site should be undertaken in accordance with the following:

(a) The design should provide a minimum 25% canopy cover across the site, provided by trees that will reach a minimum height of eight (8) metres and minimum canopy spread of six (6) metres. Palms, fruit trees and species recognised to have a short life span are not considered a suitable replacement.

(b) The trees must be grown to NATSPEC Guidelines for Specifying Trees to ensure quality trees and more successful establishment.

(c) At the time of planting, the container size is to be a minimum of 100 litres and a minimum height of 1.5 metres.

(d) The trees should be planted by a qualified Horticulturalist or Arborist of Level 2 under the Australian Qualifications Framework (AQF).

(e) The replacement plantings should be planted in such a manner as to promote good health during the establishment period, and must be maintained, as far as practicable to ensure tree growth into maturity.

7. Tree supply, installation & maintenance plan

A detailed supply, installation and maintenance specification should be prepared a qualified Consultant Arborist, who holds the Diploma in Horticulture (Arboriculture), Level 5 under the Australian Qualification Framework and consider the following:

(a) Replacement trees should be contract grown to meet the requirements of the project.

(b) The estimated time required to produce trees for replacement planting should meet the requirement of the proposed removal program.

(c) To ensure the consistency of quality plant material at the time of supply, periodic inspection of the trees by a qualified arborist throughout the growing period should be undertaken to ensure compliance and quality control.

(d) The newly planted trees on site should be appropriately maintained on an on-going basis.

(e) Maintenance includes watering, weeding, removal of rubbish from tree bases, pruning (in accordance with AS4373-2007), fertilizing, pest and disease control and any other operations required to maintain a healthy robust tree.

Contamination & Health

The report reveals that all results from soil sampling at the site are within the established PPIL's. EIS have subsequently concluded that the potential for significant widespread soil contamination at the site is relatively low, and that the site can be made suitable for the proposed development.

There are also some secondary concerns regarding noise impacts arising from the proposed development:

1. Community consultation to be undertaken regarding noise and dust, and the use of intrusive appliances.
2. The use of intrusive appliances is to be limited to include respite periods so as to reduce impacts to nearby receivers.
3. Times of demolition/ construction at the site to be in accordance with Council's normal practice.

Additionally, due to the proposed demolition of some structures, requirements regarding asbestos removal should also be included.

It is recommended that the following conditions be applied with respect to land contamination and asbestos:

LAND CONTAMINATION

ASBESTOS REMOVAL WORKS

(a) All works removing asbestos containing materials must be carried out by a suitably licensed asbestos removalist duly licensed with WorkCover NSW, holding either a Friable (Class A) or a Non- Friable (Class B) Asbestos Removal Licence which ever applies.

(b) Five days prior to the commencement of licensed asbestos removal, WorkCover must be formally notified of the works.. All adjoining properties and those opposite the development must be notified in writing of the dates and times when asbestos removal is to be

conducted. The notification is to identify the licensed asbestos removal contractor and include a contact person for the site together with telephone number and email address.

(c) All works must be carried out in accordance with the Work Health and Safety Regulation 2011 and the NSW Government and WorkCover document entitled How to Safely Remove Asbestos, Code of Practice and the City of Sydney Asbestos Policy.

(d) Standard commercially manufactured signs containing the words "DANGER ASBESTOS REMOVAL IN PROGRESS" measuring not less than 400mm x 300mm are to be erected in prominent visible positions on the site.

(e) Asbestos to be disposed of must only be transported to waste facilities licensed to accept asbestos. The names and location of these facilities are listed in Part 6 of the City of Sydney's Asbestos Policy.

(f) No asbestos products are to be reused on the site (i.e. packing pieces, spacers, formwork or fill etc).

(g) No asbestos laden skips or bins are to be left in any public place without the approval of Council.

(h) A site notice board must be located at the main entrance to the site in a prominent position and must have minimum dimensions of 841mm x 594mm (A1) with any text on the notice to be a minimum of 30 point type size.

The site notice board must include the following:

(i) contact person for the site;

(ii) telephone and facsimile numbers and email address; and

(iii) site activities and time frames.

Traffic & Transport

- With regard to bicycle parking, the Sydney DCP 2012 requires 1 space per 10 staff and 1 space per 10 students for a tertiary educational institution. The AIN building is going to house 518 staff and students, this will require 52 bicycle parking spaces to be provided within the site. The plans show an area of bike racks which does not appear to be suitable for this level of bicycle parking. The DCP also requires end trip facilities to be provided for cyclists. The requirements are for 52 lockers to be provided and 6 showers and change cubicles.

- The number of car spaces is below the maximum number of spaces required by the LEP2012. A total of 12 spaces, 2 of which are accessible are considered to be acceptable for this development.

The following conditions are recommended with respect to traffic and parking:

ASSOCIATED ROADWAY COSTS

All costs associated with the construction of any new road works including kerb and gutter, road pavement, drainage system and footway shall be borne by the developer. The new road works must be designed and constructed in accordance with the City's "Development Specification for Civil Works Design and Construction".

BICYCLE FACILITIES

A bicycle facilities room must be provided close to staff / employee bicycle parking and include:

a) 6 showers with change area; and
b) 52 personal lockers.

BICYCLE PARKING

A minimum of 52 bicycle parking spaces must be provided for this site.

The layout, design and security of bicycle facilities either on-street or off-street must comply with the minimum requirements of Australian Standard AS 2890.3 – 1993 Parking Facilities Part 3: Bicycle Parking Facilities except that:

a) all bicycle parking for occupants of residential buildings must be Class 1 bicycle lockers, and
b) all bicycle parking for staff / employees of any land uses must be Class 2 bicycle facilities, and
c) all bicycle parking for visitors of any land uses must be Class 3 bicycle rails.

CAR PARKING SPACES AND DIMENSIONS

A maximum of 12 off-street car parking spaces must be provided. The design, layout, signage, line marking, lighting and physical controls of all off-street parking facilities must comply with the minimum requirements of Australian Standard AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking and Council's Development Control Plan. The details must be submitted to and approved by the Principal Certifying Authority prior to a Construction Certificate being issued.

TRAFFIC WORKS

Any proposals for alterations to the public road, involving traffic and parking arrangements, must be designed in accordance with RMS Technical Directives and must be referred to and agreed to by Local Pedestrian, Cycling and Traffic Calming Committee prior to any work commencing on site.

VEHICLES ACCESS

The site must be configured to allow all vehicles to be driven onto and off the site in a forward direction.

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

a) A Construction Traffic Management Plan must be submitted to and approved by Council prior to a Construction Certificate being issued.

ACCESS DRIVEWAYS TO BE CONSTRUCTED

Approved driveways are to be constructed for all vehicular access to the construction site in accordance with the requirements of Council's "Driveway Specifications" to the satisfaction of Council.

LOADING AND UNLOADING DURING CONSTRUCTION

The following requirements apply:

a) All loading and unloading associated with construction activity must be accommodated on site.

b) If, during excavation, it is not feasible for loading and unloading to take place on site, a Works Zone on the street may be considered by Council.

c) A Works Zone may be required if loading and unloading is not possible on site. If a Works Zone is warranted an application must be made to Council at least 8 weeks prior to commencement of work on the site. An approval for a Works Zone may be given for a specific period and certain hours of the days to meet the particular need for the site for such facilities at various stages of construction. The approval will be reviewed periodically for any adjustment necessitated by the progress of the construction activities.

d) In addition to any approved construction zone, provision must be made for loading and unloading to be accommodated on site once the development has reached ground level.

e) The structural design of the building must allow the basement and/or the ground floor to be used as a loading and unloading area for the construction of the remainder of the development.

NO OBSTRUCTION OF PUBLIC WAY

The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances. Non-compliance with this requirement will result in the issue of a notice by Council to stop **all** work on site.

USE OF MOBILE CRANES

The following requirements apply:

a) Mobile cranes operating from the road must not be used as a method of demolishing or constructing a building.

b) For special operations including the delivery of materials, hoisting of plant and equipment and erection and dismantling of on site tower cranes which warrant the on-street use of mobile cranes, permits must be obtained from Council for the use of a mobile crane. The permits must be obtained 48 hours beforehand for partial road closures which, in the opinion of Council will create minimal traffic disruptions and 4 weeks beforehand in the case of full road closures and partial road closures which, in the opinion of Council, will create significant traffic disruptions.

c) Special operations and the use of mobile cranes must comply with the approved hours of construction. Mobile cranes must not be delivered to the site prior to 7.30am without the prior approval of Council.

ACCESSIBLE PARKING SPACE

The design, layout, signage, line marking, lighting and physical controls of all off-street accessible parking facilities must comply with the minimum requirements of Australian Standard AS/NZS 2890.6 - 2009 Parking facilities Part 6: Off-street parking for people with disabilities. The details must be submitted to and approved by the Principal Certifying Authority prior to a Construction Certificate being issued.

Should you wish to speak with a Council officer about the above, please contact Calvin Houlison, Specialist Planner, on 9246 7857 or at choulison@cityofsydney.nsw.gov.au.

Yours sincerely,

Graham Jahn AM
Director
City Planning I Development I Transport