

6th September 2016

Attn: Drew Bagnall
University of Sydney
Services Building G12
22 Codrington Street
Darlington NSW 2008

Re: treeIQ Response to Submissions for SSD 7054 – F07 Lees 1

Please see below our response in relation the various tree management issues raised by Department of Planning & Environment, Office of the Government Architect, City of Sydney and NSW Heritage Council regarding the proposed Lees project. Our response summarizes how the proposal has been designed in accordance with *Australian Standard 4970 Protection of Trees on Development Sites (2009)* and *Australian Standard 4373 Pruning of Amenity Trees (2007)*. With the use of best practice tree management during the development period, the proposed works should not significantly impact the health or Useful Life Expectancy of the trees to be retained.

Response to Department of Planning & Environment	
1 - The building design should be revised to minimise its impact on the existing heritage significant Morton Bay Fig Trees fronting City Road and the subsequent requirement for any crown pruning.	<p>The proposed Lees Building has been designed to minimise impacts to the City Road Figs.</p> <p>As part of the design development stage, TreeiQ determined the maximum amount of pruning acceptable based on an individual assessment of the trees' crown form and the constraints of <i>Australian Standard 4373 Pruning of Amenity Trees (2007)</i>. The proposed building was sited based on the trees' crown form, following these pruning works.</p> <p>The pruning works required for the proposed Lees Building were undertaken on the 29th July 2016 in accordance with the City of Sydney Tree Permit dated 15th June 2016.</p> <p>The Pruning Specification was based on a ground level assessment and has identified all larger diameter branches that would potentially conflict with the proposed building. Additional surveying has been undertaken and plans have been prepared to confirm building clearances. As per Section 3.6.7 of the Arboricultural Impact Assessment (Rev D, 11.04.16), any additional pruning in sections of the trees' upper crowns to accommodate sections of the proposed building projection will be limited to branches no greater than 50mm diameter. This pruning work should represent terminal growth only which could be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back.</p>

	<p>The lower levels (Basement-Level 4) of the proposed Lee Building encroaches into the northern side of the Tree Protection Zone areas of Trees 970-973. Whilst the encroachments are only slightly larger than a Minor Encroachment (a Minor Encroachment is less 10% of the TPZ and is considered acceptable by <i>Australian Standard 4970 (2009) Protection of Trees on Development Sites</i> without the need for root investigations), due to the age and significance of the trees, exploratory root investigations were undertaken as part of the design development stage to determine the size and number of roots which would be impacted.</p> <p>No roots greater than 50mm were found as part of the root investigations and it was determined that with the use of best practice tree management, the proposed works should not significantly impact the health or Useful Life Expectancy (ULE) of the trees.</p> <p>Pre-development preparatory works (staged root pruning) were recommended to spread any physiological stress associated with root pruning over an extended period and minimise the impact on the health of the trees.</p> <p>The first stage of the root pruning was undertaken during August 2015 in accordance with the City of Sydney Tree Permit dated 16th June 2015. The second stage of root pruning was undertaken during July 2016 in accordance with the City of Sydney Tree Permit dated 16th June 2015.</p> <p>TreeIQ has been engaged to undertake fortnightly inspections, prepare monthly Compliance Reports and supervise works within the Tree Protection Zones during the construction period.</p>
2 - Clarification is required on whether it is proposed to retain or remove Tree No. 435. Please note, the Department is of the opinion that Tree No. 435 should be retained if possible as its removal does not appear to be necessary to accommodate the proposed development.	<p>The proposal is now to transplant Tree 435 to a landscape area to the front of the proposed F23 building, adjacent to City Road.</p> <p>Tree 435 is considered a viable candidate for transplanting as it is in the early mature stage of growth and in good health. Anecdotally, <i>Ficus macrophylla</i> are considered a robust species tolerant of transplanting. Tree transplanting should be undertaken by an experienced Tree Transplanting Contractor.</p>
Office of the Government Architect	
5 - Retain tree no. 435	<p>The proposal is now to transplant Tree 435 to a landscape area to the front of the proposed F23 building, adjacent to City Road.</p> <p>Tree 435 is considered a viable candidate for transplanting as it is in the early mature stage of growth and in good health. Anecdotally, <i>Ficus macrophylla</i> are considered a robust species tolerant of transplanting. Tree transplanting should be undertaken by an experienced Tree Transplanting Contractor.</p>

City of Sydney

2 - The amount of pruning [of the Moreton Bay Figs on City Road] anticipated in the report does not reflect the distance of the proposed building or allow for scaffolding/hoarding, building clearance and potential construction access associated with construction. Further, the report does not consider any future allowance for tree canopy growth which will inevitably occur each year. Following a recent site inspection, it is considered that major pruning of T971, T972 and T973 will be required to facilitate construction. It is expected that the current design and scaffolding will require the removal of large primary branches (200 – 400mm diameter).

As part of the design development stage, TreeiQ determined the maximum amount of pruning acceptable based on an individual assessment of the trees' crown form and the constraints of *Australian Standard 4373 Pruning of Amenity Trees (2007)*. The proposed building was sited based on the trees' crown form, following these pruning works.

The pruning works required for the proposed Lees Building were undertaken on the 29th July 2016 in accordance with the City of Sydney Tree Permit dated 15th June 2016.

The Pruning Specification was based on a ground level assessment and has identified all larger diameter branches that would potentially conflict with the proposed building. Additional surveying has been undertaken and plans have been prepared to confirm building clearances. As per Section 3.6.7 of the Arboricultural Impact Assessment (Rev D, 11.04.16), any additional pruning in sections of the trees' upper crowns to accommodate sections of the proposed building projection will be limited to branches no greater than 50mm diameter. This pruning work should represent terminal growth only which could be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back.

The proposed building has been designed so that Level 5 projects forward in a stepped fashion towards the trees by up to 2.5m. The trees have an asymmetric crown form resulting from high levels of shading from the adjacent trees and the existing building to the north. Although the proposed building is located in closer proximity to the trees (than the current building), the level of shading will not be significantly altered. *Ficus macrophylla* are a species tolerant of shading and the shade cast by the proposed building is not anticipated to significantly impact the trees.

The growth on the northern side of the trees' crown will continue to be minimal and can be maintained as part of general maintenance by the pruning of small diameter terminal growth from an Elevated Working Platform.

TreeiQ has been engaged to undertake fortnightly inspections, prepare monthly Compliance Reports and supervise works within the Tree Protection Zones during the construction period.

Concern is also raised with regard to works within the Tree Protection Zone (TPZ) of the Moreton Bay Fig trees.

The lower levels (Basement-Level 4) of the proposed Lee Building encroaches into the northern side of the Tree Protection Zone areas of Trees 970-973. Whilst the encroachments are only slightly larger than a Minor

<p>The Arborist report does mention a possibility that roots may be present at greater depths [below the excavated trench of 500-600mm].</p> <p>It is recommended that any proposed incursion into the TPZ, which is defined as a major encroachment, should be further investigated to establish the exact extent of impact the proposal will have on the trees. This is to occur another 300-600mm below the area of excavation previously undertaken. Subsequent to the resolution of the above, and due to the sensitivity of the existing Figs, the existing understory planting should also be retained and protected.</p>	<p>Encroachment (a Minor Encroachment is less 10% of the TPZ and is considered acceptable by <i>Australian Standard 4970 (2009) Protection of Trees on Development Sites</i> without the need for root investigations), due to the age and significance of the trees, exploratory root investigations were undertaken as part of the design development stage to determine the size and number of roots which would be impacted.</p> <p>No roots greater than 50mm were found as part of the root investigations and it was determined that with the use of best practice tree management, the proposed works should not significantly impact the health or ULE of the trees.</p> <p>Pre-development preparatory works (staged root pruning) were recommended to spread any physiological stress associated with root pruning over an extended period and minimise the impact on the health of the trees.</p> <p>The first stage of the root pruning was undertaken during August 2015 in accordance with the City of Sydney Tree Permit dated 16th June 2015. The second stage of root pruning was undertaken during July 2016 in accordance with the City of Sydney Tree Permit dated 16th June 2015.</p> <p>The existing understory vegetation can be retained if required. In addition, irrigation has been installed under the trees' crowns and is to be extended to the proximity of TPZ prior to the commencement of works on site.</p>
<p>The Arborist Report also recommends the removal of a semi-mature Moreton Bay Fig (T435), located close to the footbridge, on the opposite side of where the new building will be constructed. As it is outside of the works area, the removal of this tree is not warranted nor should it form part of any SSD approval.</p>	<p>The Arboricultural Report recommended the transplanting of Tree 435 as it was in the early mature stage of growth and in good health.</p> <p>The proposal now shows Tree 435 is to be transplanted to a landscape area to the front of the proposed F23 building, adjacent to City Road.</p>
<p>NSW Heritage Council</p>	
<p>The encroachment of the proposed LEES 1 Building to within the canopy and Tree Protection Zone of the four (4) Moreton Bay Figs would have a significant adverse heritage impact on the identified state heritage values of <i>The University of Sydney and Victoria Park as connected landscapes</i>. The trees date from the 1880s when this portion of land was part of Victoria Park and are graded Exceptional and High significance in the Grounds CMP.</p>	<p>TreeIQ cannot comment on heritage issues. However, TreeIQ determined the maximum amount of pruning acceptable based on an individual assessment of the trees' crown form and the constraints of <i>Australian Standard 4373 Pruning of Amenity Trees (2007)</i>. The proposed building was sited based on the trees' crown form, following these pruning works.</p> <p>The pruning works required for the proposed Lees Building were undertaken on the 29th July 2016 in accordance with the City of Sydney Tree Permit dated 15th June 2016.</p>

The Heritage Council recommends that the University of Sydney submit revised architectural design drawings for assessment. The southern façade (levels 1-4) and overhanging stepped façade (levels 5- 8) should be setback a further 3 metres from these Morten Bay Figs; to ensure that the LEES1 Building development does not encroach into the canopy and Tree Protection Zone of the four (4) Moreton Bay Figs along City Road, numbered T970, T971, T972 and T973 in the Arborist Report.

The Pruning Specifications was based on a ground level assessment and has identified all larger diameter branches that would potentially conflict with the proposed building. Additional surveying has been undertaken and plans have been prepared to confirm building clearances. As per Section 3.6.7 of the Arboricultural Impact Assessment (Rev D, 11.04.16), any additional pruning in sections of the trees' upper crowns to accommodate sections of the proposed building projection will be limited to branches no greater than 50mm diameter. This pruning work should represent terminal growth only which could be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back.

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Yours sincerely



Anna Hopwood - Director

