SSD_7054: LEES 1 BUILDING AND SSD_7055: F23 ADMINISTRATION BUILDING

UNIVERSITY OF SYDNEY RESPONSE TO SUBMISSIONS

The University of Sydney has reviewed all submissions received during the statutory public exhibition period of State Significant Application *SSD 7054 – F07 LEES 1 Building* and the *SSD 7055 – F23 Administrative* Building, both located on the southern edge of the University's Camperdown campus fronting City Road.

This submission addresses both projects as many of the Government agencies have provided a consolidated submission on both projects. We also understand the DPE intention to produce one Assessment Report that addresses both F23 and LEES1.

The University of Sydney's response to submissions has been structured into the following categories in order to differentiate between sources of submissions, relevant disciplines, relevant issues, and changes to design.

This submission should be read in conjunction with other accompanying documentation including:

- Schedule of Design Modification
- Schedule of Amended Plans
- Schedule of Appendices

APPENDICES	
F07 LEES 1 BUILDING	**F23 ADMINISTRATION BUILDING**
• Appendix 1.01 – City of Sydney Notice of Determination TPR/2015/287 dated 16 July 2015 • Appendix 1.02 – City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016 • Appendix 1.03 – HDR Report • Appendix 1.04 - TreeiQ Letter dated 6 September 2016 • Appendix 1.05 – Northrop • Appendix 1.06 – DA Comparison Overlay • Appendix 1.07 – Revised DA Drawings	• Appendix 2.01 - Transport Consultant GTA Letter • Appendix 2.02 - F23 Amended SSD Plans • Appendix 2.03 - STAMP Report • Appendix 2.04 - TreeiQ Assessment • Appendix 2.05 - F23 Amended Architectural Design Statement

1. USYD Response to Department of Planning & Environment

SSD 7054 – F07 LEES 1 Building	
DPE Issue – LEES1	**USYD Response**
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.	The proposed LEES1 Building has been designed to minimise impact on the City Road Figs. Arborist consultant specialists *Tree IQ* were engaged to assess the trees in question, and to determine the extent of the available site area and develop a set of measures that would mitigate the impact of the development on the City Road figs. 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. Stage 1 root pruning works were carried out in August 2105 in accordance with City of Sydney Notice of Determination TPR/2015/287 dated 16 July 2015. A copy the Notice of Determination is at **Appendix 1.01**. Stage 2 root pruning and crown pruning works were carried out on 29 July 2016 in accordance with City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016. A copy the Notice of Determination is attached under **Appendix 1.02**. 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 will represent terminal growth only which can be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back. A copy of the Tree I.Q statement and response is attached under **Appendix 1.04**.

SSD 7054 – F07 LEES 1 BUILDING	
DPE ISSUE – LEES1	**USYD RESPONSE**
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.	The proposal is now to transplant Tree 435 to a landscape area to the front of the proposed F23 building, adjacent to City Road. Tree 435 is considered a viable candidate for transplanting as it is in the early mature stage of growth and in good health. Anecdotally, *Ficus macrophylla* are considered a robust species tolerant of transplanting. Tree transplanting should be undertaken by an experienced Tree Transplanting Contractor.
3. An assessment is required to be undertaken which assesses the impact on the loss of natural light and resultant amenity to the occupants of the existing Carslaw building.	The LEES1 building is designed to functionally integrate with the Carslaw building through a phased process. Both the immediate impact on amenity, and a long term strategy of a functionally combined building, have been considered in the LEES1 planning stage. The Carslaw building is a narrow floorplate building of approximately 14m with a long northern face. Approximately 18% of the south façade adjacent to LEES1 is core area without amenity requirement. The greatest amenity asset of the existing Carslaw building is its long northern façade. The proximity of the LEES1 building to the south does not diminish this. The overall depth of the Carslaw floorplate is similar to many modern commercial buildings window-to-core depth, and is comparable in space typology and functionality to many recently approved buildings in Sydney. An additional 33% of Carslaw south façade is located in east and west zones where LEES1 steps away from Carslaw, providing light and views from these corners. In the immediate LEES1 building stage, the amenity impact on the remainder of spaces will be dealt with through decanting and internal fit-out modification to Carslaw. Many of the remaining rooms are already ancillary or teaching and tutorial spaces with glare control to windows or block-out requirements.

SSD 7054 – F07 LEES 1 BUILDING	
DPE ISSUE – LEES1	**USYD RESPONSE**
	The internal reconfiguration of Carslaw has been the focus of a specific University faculty user group drawn from the current occupants of the Carslaw building. A detailed overview of immediate and future integration strategies is provided in the HDR report attached under **Appendix 1.03**. A level-by-level summary of the immediate Carslaw works is listed below: • Level 1: Existing spaces will be functionally integrated through internal fitout to Carslaw. These spaces include dry stores and teaching preparation laboratory. • Level 2: A level connection to the existing student hub will be made, providing clear and generous access to the LEES1 teaching labs from the north. • Levels 3 & 4: Existing teaching laboratories are entered and mechanically ventilated from the north. A solid wall will be established in these rooms against LEES1 until their future upgrade. • Level 5: Two office spaces on the south will be decanted and replaced with meeting rooms. All other spaces are currently meeting, seminar, and kitchen facilities. • Level 6: Office spaces on the south will be decanted to new office fitout on the north and replaced with seminar space. • Level 7: One office will be decanted. Other spaces include computer labs. • Level 8: Two offices will be decanted. Current replacement options include teaching/collaborative meeting space.

THE UNIVERSITY OF SYDNEY

SSD 7054 – F07 LEES 1 BUILDING

DPE ISSUE – LEES1	USYD RESPONSE
4. Clarification is required regarding the provision of bicycle parking spaces and associated end of trip facilities, i.e. number of parking spaces, lockers and showers and their location. An assessment shall also be undertaken of the availability, access to and adequacy of other shower facilities, as reported in the Traffic and Transport Impact Statement to meet the demands of the proposed development.	Requirements for onsite bicycle parking are guided by the Sydney DCP which states one bicycle space each for every 10 students and 10 staff respectively. The proposed development does not involve additional student or staff to the Camperdown campus as the development relocates various existing facilities into one consolidated new building. Consequently, the SDCP criteria is not applicable in this instance. Notwithstanding, the University's *Sustainable Transport and Mobility Plan* (STAMP), which integrates the campus' mobility provision as a whole, identifies some 1,700 bicycle spaces, 146 showers and 422 lockers available in the campus. A copy of the STAMP is at **Appendix 2.03**. Furthermore, the LEES1 development will be providing the following end of trip facilities in addition to the above:

		LEES Building provisions		
	Peak No	Bike Parking	Shower	Lockers
Staff	150	15	3	90
Student	384	12	1	12

30 staff lockers are associated with a unisex shower and WC's on each staff level (Levels 5, 6, 7). Showers and lockers are co-located on each level as these facilities are also used as staff amenity between workplace/laboratory.

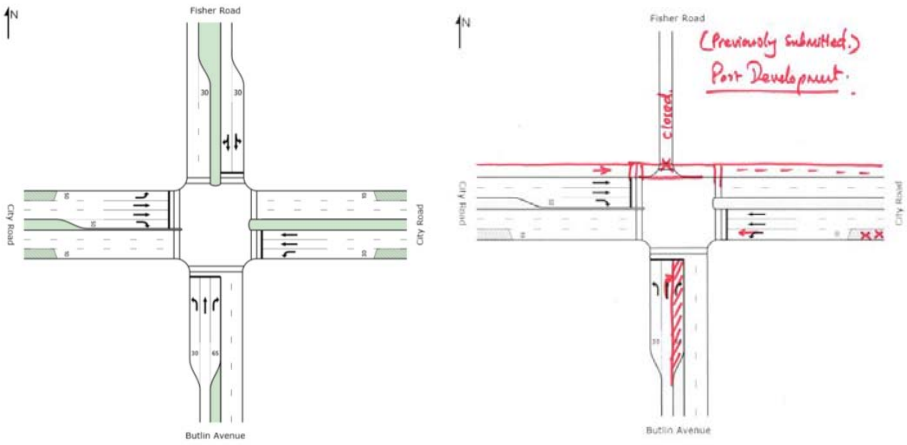
A unisex student shower is provided with the amenity block on Level 1. Student lockers are provided with the bike store on Level 2.

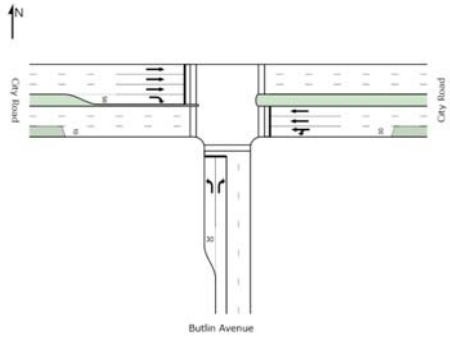
100% of bike parking spaces are secure and protected from the elements.

SSD 7055 – F23 ADMINISTRATION BUILDING	
DPE ISSUE – F23	**USYD RESPONSE**
1. Having regard to the heritage significance of the existing perimeter fencing, the proposed removal of the existing City Road entry gates and pillars is not supported. The Department requires the submission of revised landscaping details demonstrating the integration of these elements into the new Camperdown campus entry public domain.	The University notes the City of Sydney's submission (pp13) which states: *"Heritage* The proposal is supported, in principle, from a heritage perspective. The vehicular entrance gateposts to be removed were constructed in 1974 and incorporated gatepost salvaged elsewhere from the campus. The role of the gates in designating the southern entrance to the university is more symbolic than historic. It is proposed that the two outer gateposts, which have Victoria Park incised on one face, will be relocated to the new entry to Victoria Park from Banff Road." The University's perimeter fencing is ranked as having High significance, primarily for its role in defining the University land. The palisade cast iron fence set in the sandstone plinth is itself considered to be significant building fabric. It is important, however, to note that the fence has been altered over the years, both in the construction of new openings and the replacement of building fabric. The City Road vehicular entrance gates are of relatively recent construction, having been erected in 1974, as part of the realignment of the University entrance with City Road / Butlin Avenue intersection. (SHI, Fig.2.8, p.13). The tallest pair of gate posts, although looking old and solid with detailing based on the original Victoria Park entrance gates [SHI, Fig.2.10, p.15) are actually "stone encased concrete posts" of 1974 vintage. The outer two smaller sandstone posts do have historic significance. Both inscribed Victoria Park, these posts are understood to have been relocated from adjacent to the Victoria Park Gardener's Lodge.

SSD 7055 – F23 Administration Building	
DPE Issue – F23	**USYD Response**
	It is intended that these two posts be reinstalled at the new Barff Road campus entrance to the University from Victoria Park, thereby re-establishing their historic association with Victoria Park. This gateway has been designed and agreed with the City of Sydney Council. The role of the gateway is more symbolic than historic, as accepted by the CoS submission (p.13). The challenge for the University, as noted in the F23 SHI (p.28) is to ensure consideration is given to the inclusion of a new entry 'statement' at the southern end of Eastern Avenue as part of the broader urban design resolution of the Eastern Avenue/City Road /Butlin Avenue intersection.
2. The building design should be revised to minimise its impact on the existing heritage significant Morton Bay Fig Trees, particularly trees 501 to 503 and the subsequent requirement for any crown pruning.	The proposed F23 Building has been designed to accommodate, protect and maintain the Science Road Figs. As indicated within the Arboricultural Impact Assessment Report Rev C (prepared by TreeiQ, dated 11.04.16) the proposed F23 Building footprint is located outside of the TPZ areas of the row of *Ficus microcarpa var. Hilli* (Trees 499-509). The south-western corner of the roof of the building projects to a small degree over the crowns of Trees 503 and 504, and shall have a negligible impact. Although no excavation is proposed within TPZ areas, in line with Arboricultural best practice, the Report recommends root pruning along the line of the proposed basement excavation closest to the trees. This will ensure roots are cleanly pruned (to promote wound compartmentalisation) prior to bulk excavation works. New kerbs and pavements in TPZ areas are to be installed at or above existing grade to minimise any potential impact to the trees. It is understood that existing kerbs directly adjacent to the trees will be left in situ. Modification of new kerbs to prevent root conflict/damage is a common practice and could be undertaken without impacting the trees.

SSD 7055 – F23 Administration Building	
DPE Issue – F23	**USYD Response**
	Selective Pruning will be required to provide building and road clearances. These pruning works represent less than 5% of each individual tree's total crown volume and are not expected to reduce their Useful Life Expectancies or significantly affect their visual symmetry. Further detail is outlined within **Appendix 2.04 TreeiQ Assessment**.
3. The submitted Arborist report recommends replacement planting is to compensate for the proposed removal of 17 trees from the site, however, only two new trees are proposed. Justification is to be provided for the lack of proposed compensatory planting.	An updated Landscape Plan (F23-A-DA-0204 GA Landscape Plan) in **Appendix 2.02** - F23 Amended SSD Plans, includes the provision of additional replacement trees. In addition, Tree 435 is being transplanted from the front of Eastern Avenue to the front of the proposed F23 building, adjacent to City Road.
4. The Department requires greater detail surrounding the proposed use of function spaces and events basis, including the types of events and protected number of attendees. Details are also to be provided demonstrating how the ground level and surrounding public domain space will be activated.	The F23 project addresses Eastern Avenue with its main entrance located in the centre of the eastern facade on ground level. The colonnade on the east and south facades provides a mediating space between the building's interior and public domain. The ground level is accessed via steps from the public domain along City Road and Eastern Avenue. It is envisaged these steps will provide a restful place for people to dwell and congregate. At the north-eastern corner, a café is positioned to activate the building's address to Eastern Avenue and the university's greater campus. Outdoor seating is proposed to spill outdoors to the pedestrian share way located between the F23 site and the adjoining Madsen Building. A secondary entry to the building is via the café's indoor seating area that spills into the building's sprawling ground floor. The ground level has been designed with a number of entry points, which will enable a degree of porosity with the surrounding public domain. The ground level is envisaged as the most transparent of all levels, and will be publically accessible throughout. Along with the building reception and café, the ground level is activated by an auditorium space on the south and an exhibition space on the west.

SSD 7055 – F23 Administration Building	
DPE Issue – F23	**USYD Response**
	During occasional University events, both spaces will spill outside onto the building's south-western terrace at ground level. Furthermore, the pedestrian share way between the F23 project and Madsen Building has been developed with a view to activate the public domain with study tables, additional café seating and additional tree planting. The maximum occupancy at Level 1 (Ground) is designed for the safety of 400 occupants at any one time.
5. Clarification is required regarding the modelled decrease to the City Road/Butlin Avenue intersection level of service for pedestrian movements during a AM and PM periods, when the proposal seeks to significantly increase the importance of pedestrians and improve pedestrian amenity.	A detailed review of the previously submitted City Road/Butlin Avenue model revealed a geometrical error which resulted in the counter-intuitive output. Details are explained below. The existing layout and previously submitted but erroneous layouts are shown on Figure 2 below. **Figure 2 Existing and Erroneous Layouts** 

SSD 7055 – F23 ADMINISTRATION BUILDING	
DPE ISSUE – F23	**USYD RESPONSE**
	The rectified layout which reflects the most recently proposed design is reflected on Figure 3. **Figure 3 Submitted post-development configuration**  Based on the above, the Sidra model has been revised to using the following parameters: • A three-legged intersection (i.e. T-Intersection) • Deletion of a northbound right turn bay • Appointment of practical cycle time because the intersection is now modified, and therefore readapted signal timings. The outcome of the revised model, which indicates satisfactory provision for both traffic and pedestrians are provided alongside of existing results in table overleaf.

<table>
<tr><th colspan="2">SSD 7055 – F23 Administration Building</th></tr>
<tr><th>DPE Issue – F23</th><th>USYD Response</th></tr>
<tr><td></td><td>Table 1: Sidra Results Comparison
<table>
<tr><th rowspan="3">Peak</th><th colspan="4">Existing</th><th colspan="4">Post-development</th></tr>
<tr><th colspan="2">Traffic</th><th colspan="2">Pedestrians</th><th colspan="2">Traffic</th><th colspan="2">Pedestrians</th></tr>
<tr><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th></tr>
<tr><td>AM</td><td>7.8s</td><td>A</td><td>37.0s</td><td>D</td><td>8.0s</td><td>A</td><td>23.2s</td><td>C</td></tr>
<tr><td>PM</td><td>11.1s</td><td>A</td><td>38.0s</td><td>D</td><td>6.8s</td><td>A</td><td>31.0s</td><td>D</td></tr>
</table>
Details of the revised SIDRA assessment are provided in Appendix 2.01 - Transport Consultant GTA Letter.</td></tr>
<tr><td>6. Additional justification is to be provided for the proposed ‘emergency access’ point and shared way located at the front of the F23 Administration Building. Details are to be provided demonstrating how emergency vehicle access at this location would be managed and the benefits this arrangement provides over vehicles accessing from Fisher Road.</td><td>This access is now deleted from the SSD proposal. Vehicular access will be gained through the left-in/left-out intersection arrangement at Fisher Road with City Road.</td></tr>
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2. USYD Response to Office of the Government Architect

SSD 7054 – F07 LEES 1 Building	
OGA Issue – LEES1	**USYD Response**
1. On the basis of the drawings submitted it is not possible to assess the impact of the LEES1 1 building on the amenity of the Carslaw building. More information is required.	The LEES1 building is designed to functionally integrate with the Carslaw building through a phased process. Both the immediate impact on amenity, and a long term strategy of a functionally combined building, have been considered in the LEES1 planning stage. The Carslaw building is a narrow floorplate building of approximately 14m with a long northern face. Approximately 18% of the south façade adjacent to LEES1 is core area without amenity requirement. The greatest amenity asset of the existing Carslaw building is its long northern façade. The proximity of the LEES1 building to the south does not diminish this. The overall depth of the Carslaw floorplate is similar to many modern commercial buildings window-to-core depth, and is comparable in space typology and functionality to many recently approved buildings in Sydney. An additional 33% of Carslaw south façade is located in east and west zones where LEES1 steps away from Carslaw, providing light and views from these corners. In the immediate LEES1 building stage, the amenity impact on the remainder of spaces will be dealt with through decanting and internal fit-out modification to Carslaw. Many of the remaining rooms are already ancillary or teaching and tutorial spaces with glare control to windows or block-out requirements. The internal reconfiguration of Carslaw is the focus of a specific University user group drawn from the current occupants of the Carslaw building. A detailed overview of immediate and future integration strategy is provided in **Appendix 1.03**. A level-by-level summary of the immediate Carslaw works is listed overleaf:

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	• Level 1: Existing spaces will be functionally integrated through internal fitout to Carslaw. These spaces include dry stores and teaching preparation laboratory. • Level 2: A level connection to the existing student hub will be made, providing clear and generous access to the LEES1 teaching labs from the north. • Levels 3 & 4: Existing teaching laboratories are entered and mechanically ventilated from the north. A solid wall will be established in these rooms against LEES1 until their future upgrade. • Level 5: Two office spaces on the south will be decanted and replaced with meeting rooms. All other spaces are currently meeting, seminar, and kitchen facilities. • Level 6: Office spaces on the south will be decanted to new office fitout on the north and replaced with seminar space. • Level 7: One office will be decanted. Other spaces are existing computer labs. • Level 8: Two offices will be decanted. Current replacement options include teaching/collaborative meeting space.
2. Review the relationship of the LEES1 and Carslaw building envelopes to enhance their legibility either as a unified envelope or as discreet 'tower' forms. Investigate opportunities to maximize the daylight amenity to spaces along the southern façade of the Carslaw building. A courtyard or enlarged atrium could be considered to bring air and light into these spaces.	Although the LEES1 and Carslaw buildings have been designed to be functionally integrated, both buildings serve separate uses, one being a bespoke science building (LEES1), the other a consolidated University administrative building (F23). Effective laboratory buildings require deep floor plates due to their internal functional relationships. On the LEES1 project, the activity and visibility of the southern façade as an address to City Road is considered of high importance.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	This building face is a demonstration of ideals of transparency and engagement - both for the University and its STEM research and teaching programmes. This approach places the research laboratories inside the building, wrapped by a band of work and social space. Laboratory spaces on the perimeter of the building would require substantially darker glazing for tight environmental control, and prevent the use of high-transparency glazing as well as blocking light and views for other uses on the floor. This places support and services spaces against the north façade, at the building's interface with adjoining Carslaw. This allows laboratories to be added to the Carslaw building in the future, supported by services and functions in the LEES1. A racetrack style accommodation around the laboratories ensures the perimeter of the building can be visibly active and transparent while providing flexible access to the internalised laboratories. An atrium space between Carslaw and LEES1 was considered in the planning stage, but was rejected as it provided limited practical amenity, introduced substantial blank and inactivated faces to the atrium space, and jeopardised the phased integration of LEES1 and Carslaw due to the fire and smoke upgrades required to the existing building. Please refer response to OGA point 1 above and diagrams in **Appendix 1.03** to clarify amenity considerations.
3. The proposed encroachment of the western façade beyond the heritage alignment of Eastern Avenue is not supported.	Eastern Avenue has evolved into many building and landscape forms through the development of the campus over the last 100 years. This is evident through a visual walk along Eastern Avenue where, from City Road travelling north, the alignment of buildings and the location and typology of campus domain and landscaping, changes significantly every 50-80 metres.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	Issues of alignment on Eastern Avenue are an urban design discussion, where issues of heritage frame a conversation around what the defining nature of the Camperdown Campus is, and how those qualities can be strengthened through new buildings. Both the LEES1 and F23 designs resulted independently from a similar analysis of the morphology of the University of Sydney campus and the built and landscape conditions of Eastern Avenue – both posing a considered response to the question of how built context – past, present, and future – should define the campus. As the two buildings extend the campus to meet City Road in a meaningful manner, the representation of the University's campus and the correct interpretation of its structure is an important consideration. It should be of note that both designs arrived at the same interpretation of the campus. The major points of this position are: • The intention of the university from its earliest days was to be set apart from the city. This is reflected in the siting of the original Main Building, and in the subsequent campus structure. • All masterplans from 1915 (Burley Griffin) through to current proposals demonstrate continuity of the idea of the 'campus' as distinct to the 'city' urbanisation of the university grounds. Building locations sit within a landscape frame, where alignments are established by axis in the public realm rather than ordered by continuous built edges. • A major quality of the 'campus' is off-set buildings emphasising the importance of corners, individual buildings landing in the campus, and interlocking landscape 'frames' established by the relationships between built and open space.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	• An analysis of the edge conditions in the University reveals that it has not been developed or planned with principles of street walls and urban edges intended, consistent with the legacy of intention on the campus, and the tradition of the 'OxBridge' campus typology. • The limited length of 'alignment' on Eastern Avenue is a recent development, and not a legacy structure in the campus. Prior to this, no indication of edge continuity existed in the built form, yet campus legibility was recognised through the alignments of Science Road and Eastern Avenue. • There is a strong argument that this recent edge is an aberration - not only in the structure of the existing campus, but also in the history of its development and genesis in the tradition of the university campus. • Other existing buildings along Eastern Avenue suggest a limited and implied principal edge line, but also interrupt this rigour, giving definition of individual buildings and entry points while also forming a larger legible urban form. • The LEES1 building continues this morphology, deliberately disrupting the recent inconsistent alignment, and resolves the conclusion of Eastern Avenue by presenting a face to both Eastern Avenue and the City as the building turns the corner into City Road. The University of Sydney Grounds Conservation Plan mentions the importance of Eastern Avenue: - As a major visual axis "Along Eastern Avenue from City Road to University Place." - "This is a tree lined, rising axis towards University Place."

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	- Eastern Avenue lawns: "Strong association because of remnant green space and recreational use" - "axes of development that established the historical form of the University." - "…illustrate post-war absence of a unifying planning and design concept for the university, in face of pressing need for accommodation." - "This landscape has some appealing qualities as a long rising/falling road which is lined with trees. It also provides a view towards University Place." - "The road alignment of Eastern Avenue is of significance" – (the Grounds report was written in 2002, the current form of Eastern Avenue was designed in 2003/2004). - "Lawns and plantings south of the Carslaw Building" - "Further 'wall' effect along Avenue should be avoided." - "…need to maintain sense of City Road as boundary to Camperdown campus." The design of the LEES1 building is not contrary to any of these statements or the policies they form. - The LEES1 building does not impact on the visual axis from City Road to University Place. - The LEES1 building plays a part in disrupting the development of a recent 'wall' to Eastern Avenue, a development contrary to the Grounds Management Plan.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	- The LEES1 building enhances the sense of City Road as the boundary to the Camperdown Campus, and establishes F23 as an important building and site. The interpretation and the result of the design were peer-reviewed by Sydney architect Howard Tanner. Howard Tanner noted in his review "this scheme had merit, as it gave some real definition and conclusion to the view south down Eastern Avenue – which has a dull street wall in this vicinity - and helped conceal the poorly resolved 'baby blue' upper levels of the Carslaw Building. It also provided better, clearer entry into LEES1." A full analysis is provided in **Appendix 1.03**.
4. Relocation of the southern façade north to prevent the major encroachment on trees 970-973.	The LEES1 Building is designed to minimise impact on the City Road Figs. Tree IQ were engaged to assess the trees in question, and to determine the extent of the available site area and develop a set of measures that would mitigate the impact of the development on the City Road figs. 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. Stage 1 root pruning works were carried out in August 2105 in accordance with City of Sydney Notice of Determination TPR/2015/287 dated 16 July 2015. A copy the Notice of Determination is found at **Appendix 1.01**. Stage 2 root pruning and crown pruning works were carried out on 29 July 2016 in accordance with City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016. A copy the Notice of Determination is attached under **Appendix 1.02**.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
	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 will represent terminal growth only which can be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back. A copy of the Tree I.Q statement and response is attached under **Appendix 1.04**.
5. Retain tree no. 435	The proposal is now to transplant Tree 435 to a landscape area to the front of the proposed F23 building, adjacent to City Road. Tree 435 is considered a viable candidate for transplanting as it is in the early mature stage of growth and in good health. Anecdotally, *Ficus macrophylla* are considered a robust species tolerant of transplanting. Tree transplanting should be undertaken by an experienced Tree Transplanting Contractor.
6. Enlarge the entries at levels 02 and 03 to improve clarity, accessibility and connection with the public domain. Investigate ways to provide a greater level of transparency and sense of arrival	Due to existing site and access conditions, it can be difficult to interpret the relationship of the entries to the campus ground planes on Levels 2 and 3. The LEES1 building has been designed with a large single space that allows a high degree of visibility to an internal atrium and teaching laboratories, that also connects each public entry points of the building. It is substantially glazed with high-transparency glass, and is structured to provide a single legible 7m wide connection into the existing Carslaw building. The major connection between Carslaw and the campus ground levels is provided as part of the LEES1 project. Additional connections to student levels will be phased in future works on Levels 3 and 4. Additional images demonstrating the clarity and legibility of entries are provided in **Appendix 01.03**.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
7. Increase the porosity between the teaching and research levels, and between the Carslaw and LEES1 envelopes to better facilitate opportunities for interaction and casual encounter.	In contrast to a typical commercial office environment, interaction and casual encounter within a University environment is found primarily in common informal areas and campus cafes – in particular where interactions between staff and students prevail. LEES1 recognises this by establishing a clear contiguous entry plane on Level 2 with the existing student common and external café space of the existing Carslaw building. A mix of lounge and informal work points are placed in the LEES1 public circulation zones to provide places to take advantage of casual encounter. Research space in LEES1 is designed to be able to be certified to QC2 levels, which requires restriction on access to research spaces including offices. Free access is possible to the lift and stair lobby space on each research level for students to be able to contact and meet staff. Stairs, which also serve as fire escapes, are designed to high quality communicable stair standards, including large hold-open doors. The upper level lobby spaces present a large glazed wall into the laboratory so the research space can be experienced without entering the secure zone. The LEES1 building is designed to be functionally integrated with the Carslaw building though a series of phases that will see high levels of porosity between the two. Please refer to this report response to OGA point 1 and the associated **Appendix 01.03** for further details.
8. Review the proportions of meeting rooms and offices on the upper levels, which currently appear restrictive.	Meeting rooms are designed with a dimension of 3.2m wide, which is effective for the designed occupancy of 8 – 12 people. The offices are designed to be narrower than typical commercial office typologies. This allows a generous length desk for up to 2 people working, plus a large white board on the opposite wall. The narrower width provides an effective working relationship between desk and whiteboard. Whiteboard use is very important in research environments, as researchers are trained to externalise thinking and information.

SSD 7054 – F07 LEES 1 BUILDING	
OGA ISSUE – LEES1	**USYD RESPONSE**
9. Appropriate architectural treatment of the loading dock is required to mitigate any negative visual impact along City Road.	The eastern façade against Carslaw and loading dock door is designed to be visually recessive and discrete. To assist in reducing the visual impact of the loading dock, a blade stair extends from the building to create a visual 'pocket' for the dock. Materials on the recessed face are dark grey (RAL 9007). Additionally, the loading dock includes a portion internal to the building for materials set-down and unpacking – behind the dock's door. No loose material or goods will be left external to the building. For security reasons, the dock door will be closed unless a vehicle is actively unloading.
10. A commitment to the materials listed in part 03 of the Architectural Design Report, including the provision of clear glazing is required.	There is no change in materials from the Architectural design report. Glazing is specified at high-performance low-iron glass, with a 70% VTL. Material samples can be provided, or conditioned in the SSD approval.
11. Targeting a formal certification against an accredited ESD rating scheme would better demonstrate the University's commitment to leadership in sustainability.	The University has developed The University Sustainability Framework (SFW), a bespoke ESD rating tool for major construction projects. The University has conducted a comparison of the University SFW to Green Star and it demonstrates that the University SFW aligns with greater than 75% of the Green Star initiatives of the Design & As-built v1.1. Further, the SFW exceeds the initiatives set-out in Green Star through environmental initiatives and targets that are specific to the needs of the University. The SFW is integrated in the University's Capital Projects Gateway process. This process consists of 6 phases and is a structured to examine and confirm critical decision points from project request through to project realisation. This ensures the SFW aspiration target is committed and costed throughout the project cycle from design to built/hand-over stage. The SFW and associated as-built documentation are required to be submitted and signed off by the University at relevant points in the process. Submissions are peer reviewed by credible ESD consultants.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
1. A review of the overall building footprint is recommended. A reduction in bulk will benefit the public domain, and enable improved environmental performance.	As part of the SEARs with DPE in May 2015, the University included an Indicative Building Envelope that described the overall building footprint and massing. This envelope comprised an overall building footprint of 3,210 m^2, with a parapet height of RL 66.24 and plant height of RL 70.24. The F23 proposal comprises a total development footprint of 2,822m^2 (including external terraces, raised planters and ground level). The Gross Building Area of a typical level (including outer extremity of external terraces) is only 2,098 m^2. By comparison the overall SSD building footprint is significantly reduced from the Request for SEARs envelope. Subsequently, the F223 SSD application reduced the overall building mass by proposing a pitched roof that reduces the overall bulk compared to the original SEARs envelope. The SSD proposal includes a ridge height of 58.88 and lift overrun height of 59.78, which is significantly less height by comparison. Furthermore, the eave line of the pitched roof at RL 54.98, which is the predominant height at the outer envelope extremity, is significantly 11 meters lower compared to the original SEARs envelope. For the most part, the building mass of the F23 proposal falls largely within the Indicative Building Envelope, except for the south-eastern extremity of the roof overhang only. As OGA suggests, by having proposed a building with significantly less bulk than the original SEARs envelope the F23 proposal will benefit the public domain and improve environmental performance. The pitched roof form and horizontality of the projecting slabs and balconies will further reduce the building's overall bulk. The public domain at the ground plane is further enhanced by access provided to the public at ground level. Refer to DPE comment Item 4 regarding the building's ground plane activation.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
2. The proposed encroachment of the Eastern façade into Eastern Avenue is not supported. Consider aligning the eastern façade of the building with the primary façade of the historic Madsen building	The Request for SEARs application previously aligned the eastern boundary of the building envelope with the Chemistry Building, which encroaches well beyond the Madsen Building. The F23 proposal aligns the primary façade on the eastern boundary to the lower portico of the Madsen Building, which extends significantly less into Eastern Avenue. Aligning the eastern facade of F23 to the Madsen Building has not been addressed after observing that buildings fronting Eastern Avenue do not align. Rather than create a public space of uniform building height and width, Eastern Avenue is characterised by a diversity of building height, setbacks and alignments. This is evident through a visual walk along Eastern Avenue where, from City Road travelling north, the alignment of buildings and the location and typology of campus domain and landscaping, changes significantly every 50-80 metres. Consequently, Eastern Avenue benefits by having a series of both expansive spaces (lawn in front of The Quadrangle) and compressed spaces (between Chemistry Building and Eastern Avenue Auditorium). Importantly the F23 proposal does not encroach on the long vista of Eastern Avenue when looking south from the lawn in front of The Quadrangle. The overarching principle of Eastern Avenue being wide at the north and narrow at the south has been maintained. Furthermore, the F23 proposed roofline extends beyond the Madsen Building in order to emphasise the new building's purpose (in conjunctions with LEES1 building) as a new gateway to the campus when approached from City Road. The alignment of F23 along its eastern facade provides definition to a new forecourt along the City Road entrance. In summary, the F23 roofline extension past the primary facade of Madsen Building has been purposefully considered with respect to the evolving development and spatial character of Eastern Avenue.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
3. An increased setback from the Madsen building would benefit the porosity of the campus. Removal of vehicular access to create a pedestrian street with provision for soft landscaping and informal seating would support a more active pedestrian use. Retention of trees 471, 473, 475 and 477 is encouraged.	The northern setback of the F23 proposal considers both a requirement to maintain vehicular access to the Madsen Building driveway, as well as pedestrian movement between Fisher Road and Eastern Avenue. It is not evident how increasing the setback from Madsen Building would necessarily benefit porosity of the campus beyond what is already a significant improvement to the current condition of this space. By removal of the vehicular entrance along City Road and its adjacent carpark; and the creation of a share way between F23 and Madsen Building, porosity of the campus will be significantly improved. Whilst not proposed as part of the SSD submission, current proposals exist to improve pedestrian amenity in the share way between F23 and Madsen Building by way of providing outdoor furniture for seating and new tree planting. Important to also note is that the University intends to significantly redevelop Madsen Building in the future, and at which time the opportunity to fully pedestrianise the campus domain between F23 and Madsen Building and provide additional soft landscaping will present itself. The University notes that the Madsen Building is neither a local heritage listed item nor a State heritage listed item. However, the Madsen Building is included on the University's S.170 Register and ranked in the Grounds CMP (unofficially endorsed by the Heritage Council) as being of *Moderate* significance. This ranking is less than the adjoining Chemistry building (*High*) and the Anderson Stuart building (*Exceptional*). Consequently, whereas a new building on Eastern Avenue should 'respect' the Madsen Building, it is inappropriate to use Madsen as the benchmark to determine the height and bulk of an important "gateway" building such as the F23 Administrative Building.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
4. Relocate the emergency vehicle, campus security and VIP drop-off at the southern edge of the site to the western edge of the building, and create a pedestrian friendly public open space as the primary address along City Road.	Emergency vehicles will now access the campus via a left in and left out only arrangement from Fisher Road and no longer require to access across the pedestrian area at the southern side of the building. Details of swept paths demonstrating a fire truck entering the site are provided in **Appendix 2.01** - Transport Consultant GTA Letter.
5. Relocation of the loading bay to the basement would be supported.	Relocating the proposed loading dock to the basement is not supported as it will necessitate a minimum headroom clearance of 4.5 metres in place of standard 2.2 metres. Further, the AS2890.2 design criteria for a heavy vehicle access ramp would pose onerous geometrical demands which practically render the site infeasible for the proposed development. The proposed loading arrangements, which has now been downgraded to accommodating up to an 8.8 metre Medium Rigid Vehicle (MRV), will: • Be entirely accommodated within the dedicated indented areas • Not encroach onto the oncoming traffic lane • Have appropriate separation by way of kerb and gutter from pedestrian footways. Details of swept path assessment demonstrating satisfactory access provision at the loading dock are provided in **Appendix 2.01** - Transport Consultant GTA Letter. Notwithstanding, it is proposed to dedicate a parking bay in the basement for access by regular service/parcel deliveries (B99). In conclusion, the amended loading arrangements will be satisfactory for the purpose that they have been intended for and will not have adverse impact on the surrounding road users.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
6. The extension of the accessible entry and provision of a continuous public domain both in grade and hard surface treatment would be supported.	The Indicative Building Envelope submitted as part of the Request for SEARs submission set the ground level RL as 35.00. Eastern Avenue immediately in front of the building slopes from RL 34.91 at the north-east corner to RL 34.29 at the south-east corner adjacent to City Road. An accessible path of travel is provided from the site boundary at City Road to the accessible entrance available along the external colonnade commencing in front of the café. Accessible access is also provided at the south west entrance of the building. The DDA report prepared by Morris Goding Accessibility Consulting concludes that this design solution complies with the *National Construction Code Series Building Code of Australia* and referenced standard AS1428.1-2009.
7. Consider the inclusion of programs on the eastern and southern edges of the ground level that will activate public open space and allow for support of night-time economy functions.	The proposed use of ground level function spaces includes the auditorium space on the south; exhibition space on the west; display area in the foyer; and café / restaurant to the north. The auditorium, exhibition and foyer spaces will be used for University related multi-function events during the day and evening for up to 120 people. The two divided seminar rooms will accommodate up to 60 people. Catered / sit down events will accommodate up to 60 people. University events will also enable patron activation and spill-out to both the south-west, south-east terraces at ground level, and the south landscaped area (which includes external seating).
8. A significant reduction in car spaces is recommended.	The proposed car parking for the F23 site accords with traffic and access principles contained within the SSD approved Campus Improvement Program (SSD 13_6123 approved 16 February 2015), in particular the CIP Access Strategy prepared by Arup. In that Strategy, the University commits to:

SSD 7055 – F23 ADMINISTRATION BUILDING	
OGA ISSUE – F23	**USYD RESPONSE**
	• Creating a sense of pedestrian and cycle prioritisation with the hearts of Camperdown and Darlington campuses, and limiting vehicle access to essential services, emergency, and persons with accessible requirements; • Alleviating much of the central campus domain of Camperdown and Darlington from surface car parking over time as CIP development of the campus proceeds; • Focussing campus car parking to new development sites that are located on the peripheries of the campuses where they interface with arterial roadways (e.g. City Road, Parramatta Road). The intention here is to limit the extent of vehicle penetration into the campus. Furthermore, the CIP applies a condition *A9 Car Parking* requiring that the total on-campus car parking provisions shall not exceed 2,800 spaces at the completion of the approved CIP. The proposed 96 parking spaces for F23 (an additional 33 spaces above the existing 63 surface spaces that exist on this site) complements the CIP Access Strategy and complies with the CIP A9 parking condition. Consequently, the SSD application proposes to retain the number of parking spaces proposed.
9. Demonstrate how the northern and western facades will be protected from solar gain, and investigate opportunities for the provision of operable glazing. Commitment to the provision of clear glazing on all facades is required to reinforce the transparency of the building and maintain the quality of the public domain.	The F23 project is committed to providing clear glazing on all facades to reinforce transparency of the building and engagement with the public domain. Glass on all four elevations has been uniformly specified to have the same performance values and thereby achieve the same degree of transparency throughout. Environmental performance of the building has been demonstrated to meet requirements of NCA Part J without the need for shading protection on the northern and western facades.

SSD 7055 – F23 Administration Building	
OGA Issue – F23	**USYD Response**
	The same applies to the eastern and southern facades, whereby the proposed louvres, together with the colonnade and over sailing roof, are more of an architectural device to strengthen the building's civic address to both Eastern Avenue and City Road. The F23 project proposes operable glazing throughout the building by way of floor-to-ceiling stackable sliding doors to the terraces. Not only will these doors provide opportunity for building occupants to control their indoor environmental quality, the adjacent terraces will provide a great deal of amenity to embrace Sydney's hospitable year round warm temperate climate.
10. Targeting of a formal certification against an accredited rating scheme would demonstrate industry best practice, and better serve the University and the building's ambitions to embody 'visible leadership'.	The University has developed The University Sustainability Framework (SFW), a bespoke ESD rating tool for major construction projects. The University has conducted a comparison of the University SFW to Green Star and it demonstrates that the University SFW aligns with greater than 75% of the Green Star initiatives of the Design & As-built v1.1. Further, the University SFW exceeds the initiatives set-out in Green Star through environmental initiatives and targets that are specific to the needs of the University.

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
OGA COMBINED ISSUES – LEES1 & F23	**USYD RESPONSE**
1. It is strongly recommended that the University undertake a co-ordinated and place based master planning approach that considers the future of the entire campus.	The University has already engaged international architect and landscape/public domain specialist **Jan Gehl** to inform its strategy of delivering a connected campus through the development of a Public Realm Strategy and Urban Design Principles. The Study has provided principles both for the Camperdown-Darlington campus, and also for connections to other destinations in the surrounding precinct (Broadway, Camperdown, SLHD, Eveleigh, Redfern etc…). The Gehl Principles incorporate the following: 1. **Knowledge & Innovation for All**… *allowing for a global & local focus* 2. **Cultures of Collaboration**…*engagement at a global & local focus* 3. **A Unified Campus Landscape**…*unified in vision, strategy & delivery* 4. **A More Legible and Accessible Campus**…*simpler - easier to navigate and better connected with its neighbours* 5. **A More Polycentric Campus**…*a unified campus with many hearts* 6. **An Indoor & Outdoor Learning Landscape**…*making the most of Sydney's climate & lifestyle* 7. **A More Inclusive and Welcoming Campus**…*breaking down the barriers physically & metaphorically* The development of these Principles includes engagement with other stakeholders to inform the development of strategies which will connect the campus internally and externally.

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
OGA COMBINED ISSUES – LEES1 & F23	**USYD RESPONSE**
	Importantly, this approach seeks to invite the community in to the University. The University has identified Broadway, Carriageworks, ATP, Mirvac development and future CBA community….and connections to Redfern station and to the RPA and Health campus. Gehl are currently refining the Principles aimed at creating a rich and vibrant places across the campus including interface areas such as the University/City Road junction. The University welcomes the opportunity of presenting the Gehl Principles to the DPE.

THE UNIVERSITY OF SYDNEY

3. USYD Response to City of Sydney Council Submission

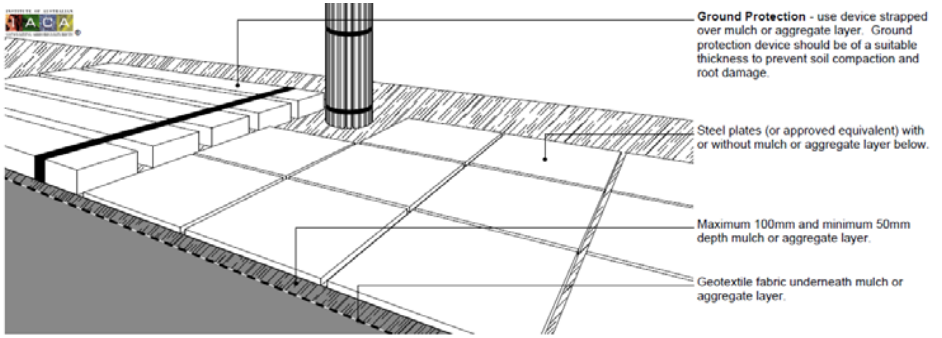
SSD 7054 – F07 LEES 1 Building	
CoS Issue – LEES1	**USYD Response**
1. Eastern Avenue Alignment Levels 5 – 8 will protrude two metres beyond the alignment of the adjoining Carslaw Building and the established axial arrangement along Eastern Avenue (**Figure 3**). This is the University's principal north-south axis. As illustrated in **Figure 2**, the existing condition and straight vertical silhouette against the sky will be lost through encroachment of the upper levels of LEES 1. It is therefore recommended that the upper levels of the Eastern Avenue elevation are redesigned such that the building, in its entirety, does not protrude beyond the alignment of the adjoining Carslaw Building.	Eastern Avenue has evolved into many building and landscape forms through the development of the campus over the last 100 years. This is evident through a visual walk along Eastern Avenue where, from City Road travelling north, the alignment of buildings and the location and typology of campus domain and landscaping, changes significantly every 50-80 metres. Issues of alignment on Eastern Avenue are an urban design discussion, where issues of heritage frame a conversation around what the defining nature of the Camperdown Campus is, and how those qualities can be strengthened through new buildings. Both the LEES1 and F23 designs resulted independently from a similar analysis of the morphology of the University of Sydney campus and the built and landscape conditions of Eastern Avenue – both posing a considered response to the question of how built context – past, present, and future – should define the campus. As the two buildings extend the campus to meet City Road in a meaningful manner, the representation of the University's campus and the correct interpretation of its structure is an important consideration. It should be of note that both designs arrived at the same interpretation of the campus. The major points of this position are: • The intention of the university from its earliest days was to be set apart from the city. This is reflected in the siting of the original Main Building, and in the subsequent campus structure.

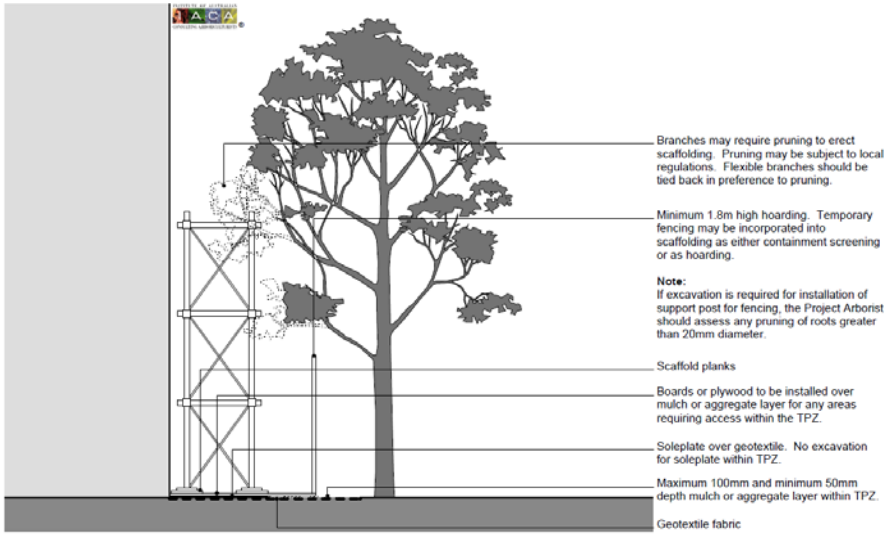
SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	• All masterplans from 1915 (Burley Griffin) through to current proposals demonstrate continuity of the idea of the 'campus' as distinct to the 'city' urbanisation of the university grounds. Building locations sit within a landscape frame, where alignments are established by axis in the public realm rather than ordered by continuous built edges. • A major quality of the 'campus' is off-set buildings emphasising the importance of corners, individual buildings landing in the campus, and interlocking landscape 'frames' established by the relationships between built and open space. • An analysis of the edge conditions in the University reveals that it has not been developed or planned with principles of street walls and urban edges intended, consistent with the legacy of intention on the campus, and the tradition of the 'OxBridge' campus typology. • The limited length of 'alignment' on Eastern Avenue is a recent development, and not a legacy structure in the campus. Prior to this, no indication of edge continuity existed in the built form, yet campus legibility was recognised through the alignments of Science Road and Eastern Avenue. • There is a strong argument that this recent edge is an aberration - not only in the structure of the existing campus, but also in the history of its development and genesis in the tradition of the university campus. • Other existing buildings along Eastern Avenue suggest a limited and implied principal edge line, but also interrupt this rigour, giving definition of individual buildings and entry points while also forming a larger legible urban form. • The LEES1 building continues this morphology, deliberately disrupting the recent inconsistent alignment, and resolves the conclusion of

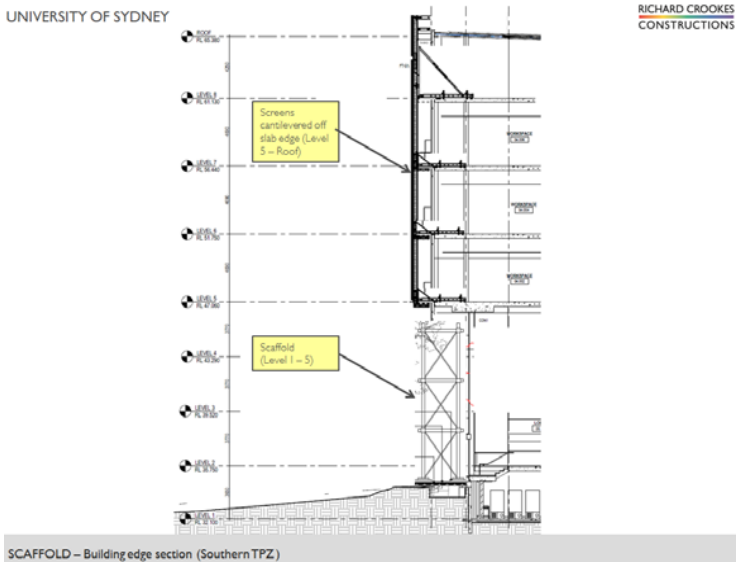
SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	Eastern Avenue by presenting a face to both Eastern Avenue and the City as the building turns the corner into City Road. The University of Sydney Grounds Conservation Plan mentions the importance of Eastern Avenue: - As a major visual axis "Along Eastern Avenue from City Road to University Place." - "This is a tree lined, rising axis towards University Place." - Eastern Avenue lawns: "Strong association because of remnant green space and recreational use" - "axes of development that established the historical form of the University." - "…illustrate post-war absence of a unifying planning and design concept for the university, in face of pressing need for accommodation." - "This landscape has some appealing qualities as a long rising/falling road which is lined with trees. It also provides a view towards University Place." - "The road alignment of Eastern Avenue is of significance" – (the Grounds report was written in 2002, the current form of Eastern Avenue was designed in 2003/2004). - "Lawns and plantings south of the Carslaw Building" - "Further 'wall' effect along Avenue should be avoided." - "…need to maintain sense of City Road as boundary to Camperdown campus."

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	The design of the LEES1 building is not contrary to any of these statements or the policies they form. - The LEES1 building does not impact on the visual axis from City Road to University Place. - The LEES1 building plays a part in disrupting the development of a recent 'wall' to Eastern Avenue, a development contrary to the Grounds Management Plan. - The LEES1 building enhances the sense of City Road as the boundary to the Camperdown Campus, and establishes F23 as an important building and site. The interpretation and the result of the design were peer-reviewed by Sydney architect Howard Tanner. Howard Tanner noted in his review "this scheme had merit, as it gave some real definition and conclusion to the view south down Eastern Avenue – which has a dull street wall in this vicinity - and helped conceal the poorly resolved 'baby blue' upper levels of the Carslaw Building. It also provided better, clearer entry into LEES1." A full analysis is provided in **Appendix 1.03**.
2. Landscaping and Trees 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.	The proposed LEES1 Building has been designed to minimise impacts to, and to preserve and maintain, the City Road Figs. As part of the design development stage, arborist specialist consultants *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.

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
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). To minimise the impacts of the new building on the significant fig trees, it is recommended that the building is setback further from the trees to allow a minimum distance of 2 metres from the edge of the existing canopy. This allows for scaffolding to be located within a 1 metre zone from the final edge of the building façade. Further, once the construction is complete it allows the tree 1 metre for growth, and 1 metre for clearance of the building facade. An accurate survey of the tree height, spread and crown shape should be undertaken and overlayed onto the proposed plans to ensure the setback is sufficient from the existing significant trees.	Stage 1 root pruning works were carried out in August 2105 in accordance with City of Sydney Notice of Determination TPR/2015/28, 16 July 2015. A copy the Notice of Determination is attached under **Appendix 1.01**. Stage 2 root pruning and crown pruning works were carried out on 29 July 2016 in accordance with City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016. A copy the Notice of Determination is attached under **Appendix 1.02**. 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 scaffolding (encompassing both the formwork support system & edge protection) required to access the building edge during construction is temporary in nature and will be coordinated in conjunction with advice from the Arborist consultant. To protect the underlying soil from compaction temporary ground protection such as ground mats, steel road plates or approved equivalent will be installed.

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	Indicative ground protection within Tree Protection Zone detail follows:  04 Examples of Branch, Trunk and Ground Protection Not to Scale Copyright © 2010 IACA Scaffolding shall not be in contact with any tree. As necessary, this shall be achieved by erecting scaffolding around branches or branches shall be tied back and protected as deemed necessary by the Project Arborist. Indicative scaffolding within Tree Protection Zone detail follows:

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	 05 Indicative Scaffolding within a Tree Protection Zone (TPZ) Not to Scale The proposed scaffolding will project approximately 2.0m from the final edge of the building façade, extend from Ground Level to the underside of Level 5; above this level proprietary screens will be utilised which are supported on the as constructed slab edge (not ground level) and extend approximately 700mm from the final edge of the building.

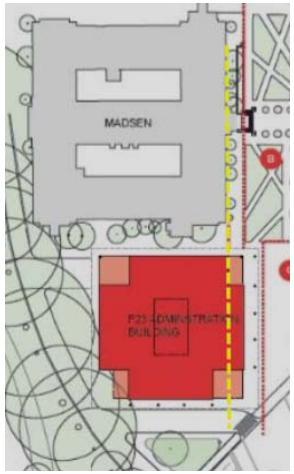
SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	Scaffold building edge section follows:  Prior to removal of the scaffold from Level 1-5 the external façade will be finished, utilising the existing scaffold, including finish coating of façade surfaces, glazing and soffit installation. After final casting of the reinforced concrete super structure and installation of the upper level structural steelwork the screens from Level 5-Roof will be removed and the prefabricated curtain wall will be installed by lowering in to position utilising the site crane. Any access requirements after curtain wall installation shall be undertaken utilising rope access or the site crane (man box). A copy of the Tree I.Q statement and response is at **Appendix 1.04**.

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
3. Tree Protection Zones Concern is also raised with regard to works within the Tree Protection Zone (TPZ) of the Moreton Bay Fig trees. The Arborist report does mention a possibility that roots may be present at greater depths *[below the excavated trench of 500-600mm]*. 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 understorey planting should also be retained and protected.	The lower levels (Basement-Level 4) of the proposed LEES1 Building encroaches into the northern side of the Tree Protection Zone areas of Trees 970-973. The encroachments are only slightly larger than a Minor Encroachment (a Minor Encroachment is less 10% of the TPZ and is considered acceptable by Australian Standard 4970 (2009) Protection of Trees on Development Sites 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. 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. 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. Stage 1 root pruning works were carried out in August 2105 in accordance with City of Sydney Notice of Determination TPR/2015/287, 16 July 2015. Stage 2 root pruning and crown pruning works were carried out on 29 July 2016 in accordance with City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016. 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. A copy of the Tree I.Q statement and response is at **Appendix 1.04**.

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
4. Tree Removal T435 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.	The proposal is now **amended** to transplant Tree 435 to a landscape area to the front of the proposed F23 building, adjacent to City Road. Tree 435 is considered a viable candidate for transplanting as it is in the early mature stage of growth and in good health. Anecdotally, *Ficus macrophylla* are considered a robust species tolerant of transplanting. Tree transplanting should be undertaken by an experienced Tree Transplanting Contractor.
5. Ground Plane Resolution Two entrances are proposed to this building, one at Level 2 (under the footbridge) and one at Level 3 (at the upper level of the footbridge). Neither of the entrances are clear and legible for visitors. Alternative structural solutions may allow the column to be relocated or reorientated to allow for a more generous and visible opening.	Due to the existing site and access conditions, it can be difficult to interpret the relationship of the entries to the campus plans on Levels 2 and 3. The LEES1 building has been designed with a large single space that allows a high degree of visibility to an internal atrium and teaching laboratories, that also connects the public entry points of the building. It is substantially glazed with high-transparency glass, and is structured to provide a single legible 7m wide connection into the existing Carslaw building (from day 1 on Level 2; phased in future works on Levels 3 and 4). Additional images demonstrating the clarity and legibility of entries are provided in **Appendix 01.03**.
6. Accessibility Two The accessible route from City Road to the closest entrance to the proposed building appears to be lengthy in comparison to the primary path. As an Accessibility Report was not submitted with the application, there is insufficient information available to determine whether alternative accessible routes are available. However, the opportunity for an accessible at grade route should be explored further to comply with DDA requirements.	The primary path of accessible movement is north/south across the existing City Road bridge. The majority of all pedestrians crossing City Road occurs via the bridge. Due to the level change and stairs across Eastern Avenue, accessible movement from the south at the City Road kerb brings people closer to the major entry in the Carslaw building – which is also the primary entry to the LEES1 building from the north. Major and accessible entries are therefore: - Level 2 north (integrated with Carslaw) - Level 3 south (at City Road bridge level)

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	The LEES1 building is designed to open up to an additional entry at Level 2 onto Eastern Avenue in the future. This requires major regrading works to a significant portion of Eastern Avenue adjacent to the LEES1 and F23 buildings, and is beyond the scope of the current project. The University is developing other public realm project overlapping this area of Eastern Avenue. Diagrams clarifying movement and entry are provided in **Appendix 01.03**.
7. Materials and Finishes The main solid cladding to the City Road frontage is described as "terracotta panels or *similar*". This does not provide certainty of the final result and should be conditioned so as to require details of the final material.	The selected material is MOEDING Alphington, colour "Ivory" – a high quality extruded integral colour terracotta panel. Material samples can be provided for visual inspection, and/or conditioned in the approval.
8. Overshadowing Detailed diagrams are required to differentiate the existing shadow from that of the shadows cast by the proposal.	Amended shadow diagrams have been updated an included in **Appendix 01.03**.
9. Flooding The site is subject to flooding. The recommended finished floor levels specified in the Flood Report must be applied to the proposed development and thus comply with the City of Sydney Interim Floodplain Management Policy. As there are a number of stormwater upgrades proposed, a stormwater quality assessment should be provided in accordance with the Sydney DCP 2012 requirements.	Flood levels have been provided as per the civil stormwater report dated 16 March 2016. The finished floor levels are required to be 500mm above the levels as specified i.e. FFL 35.70 (proposed FFL 35.75) at entrances' to the western side, and FFL31.80 (proposed FFL 32.10) on the eastern (Barff Rd) side, thus complies with the City of Sydney's Interim Floodplain Management Policy. Refer to the attached drawings indicating the proposed FFLs. With respect to the water quantity, since the issue of the report, the stormwater strategy has changed in that we are now discharging to the Council/ Sydney Water system in City Road rather than the University of Sydney's downstream network. The University is required to comply with parameters that Sydney Water has sent is in terms of OSD volume (37m^3)

SSD 7054 – F07 LEES 1 BUILDING	
COS ISSUE – LEES1	**USYD RESPONSE**
	and PSD (47L/s). In accordance with the City of Sydney's DCP 2012, the University will be incorporating water quality measures in the tank by means of proprietary filter cartridges (Stormwater 360) and a GPT (CDS Nipper). These systems have been designed to comply with City of Sydney's water quality targets and modelling files can be provided if requested. Updated stormwater report to incorporate the amendments i.e. revised Water Quality and Quantity (OSD) strategies, as well as include modelling results. A copy of Northrop civil engineers letter and reference drawings are attached under **Appendix 1.05**.
10. Public Domain The proposal for the LEES 1 building does not include works to the public domain. However, a Footpath Damage Bank Guarantee will be required.	The University confirms the project does not include any construction or demolition works to the public domain and therefore a Footpath Damage Guarantee is not required. Should the project require works to the public domain in the future, a Footpath Damage Bank Guarantee will be provided.

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
1. Built Form & Scale - Building Alignment It is recommended the preferred eastern alignment for the F23 building respects the primary façade alignment of the Madsen Building.  	The alignment of the Marsden and Anderson Stuart Buildings is more apparent in plan, than in reality. Wilkinson's vision of having a series of major university buildings fronting Victoria Park (SHI, Fig.2.3, p.8) was shattered by the post WWII construction of several new buildings. The building alignment on the western edge of Eastern Avenue was disrupted by the construction of the Chemistry Building (1958) and this was followed by the construction of several buildings on the city side of Eastern Avenue. The slight protrusion of F23 beyond the Madsen Building, therefore, is of less importance than the urban design issue of establishing "a better sense of identity, arrival and transition as the eastern gateway to the main campus and provide a more complementary solution and scale to the open landscape of the junction between City Road and Eastern Avenue linking into the axial arrangement of Eastern Avenue" as raised by the HC, and previously flagged in the F23 SHI (p.28). Refer to architectural response to OGA Items 1&2 covering the proposed building mass and alignment.
2. Built Form & Scale - Juxtaposition with Madsen Building Given the close proximity of the proposed building to the Madsen Building (approximately 10m), it would be preferable for the northern elevation to acknowledge the bulk and form of the Madsen Building architecturally, perhaps by referencing a similarly solid form to the same height as the main parapet line.	The University notes that the Madsen Building is neither a local heritage listed item nor a State heritage listed item. However, the Madsen Building is included on the University's S.170 Register and ranked in the Grounds CMP (unofficially endorsed by the Heritage Council) as being of *Moderate* significance. This ranking reflects the end of the traditional use of the "Collegiate Gothic" styling on campus. It is not of itself a building of any great architectural distinction (sandstone veneer on the front façade and face brickwork elsewhere). This ranking is less than the adjoining Chemistry building (*High*) and the Anderson Stuart building (*Exceptional*).

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
	The nature of the F23 Administration Building is such that it will be a significant building on campus, both visually and symbolically. Consequently, whereas a new building on Eastern Avenue should 'respect' the Madsen Building, it is inappropriate to use Madsen as the benchmark to determine the height and bulk of an important "gateway" building such as the F23 Administrative Building. Important to note is the University's longer term plan to redevelop the Madsen building, which would later render any architectural references of the F23 project to the building as meaningless.
3. Landscaping & Trees The Arborist Report prepared for the development recommends the removal of 10 trees only. Council supports this recommendation.	Noted
4. Landscape design amendments A. Realign the building footprint to align with the Madsen building façade, thereby encompassing the western pedestrian crossing within the gateway plaza and removing the pinch point at the south-eastern corner of the building;	Refer to this submission's architectural response to OGA item 2 covering the proposed building alignment. The University notes that reference to the term 'pinch point' suggests a compression of space that is problematic for the safe movement of pedestrians along City Road into the 'Gateway Plaza'. The current proposal does not encroach beyond the current footpath dimension and entrance to the university grounds. The proposal for the south-eastern corner of the building should be adequate for managing current and projected pedestrian movements in that area.
B. Continue the asphalt paving of the City Road footpath across the vehicle threshold;	Refer to updated Landscape Plan (F23-A-DA-0204 GA Landscape Plan) in **Appendix 2.02** F23 Amended SSD Plans.
C. Reconfigure or remove the steps to the base of the F23 building to remove this projecting corner from the public domain. The alignment and connection to City Road should	An accessible path of travel is provided from the site boundary at City Road to the accessible entrance available along the external colonnade commencing in front of the café. Accessible access is also provided at the

SSD 7055 – F23 ADMINISTRATION BUILDING	
COS ISSUE – F23	**USYD RESPONSE**
read more strongly than the building footprint in this area;	south west entrance of the building. The DDA report prepared by Morris Goding Accessibility Consulting concludes that this design solution complies with the *National Construction Code Series Building Code of Australia* and referenced standard AS1428.1-2009.
D. Ensure pedestrian priority is maintained regardless of the traffic requirements for the drop-off/emergency lane: - Ensure the traffic control measures e.g. boom gates do not interrupt the pedestrian routes. - Ensure that both the levels and paving material form a continuous public domain leading from Eastern Avenue to both sides of the City Road pedestrian crossing.	The original proposed emergency shareway has now been deleted from the SSD application in response to this concern.
E. Retain the current alignment of the heritage wall to slightly reduce the size of the triangular planted space. Ensure the design incorporates this space as a logical landscape element, not just leftover space.	The heritage fence alignment has been maintained. The triangular planted space has been designed to incorporate carefully positioned trees along the northern edge in order to provide amenity and shade to the seating located adjacent. The southern or City Road edge provides the university with the opportunity for displaying traditional public art – at the 'front door' to the University. 

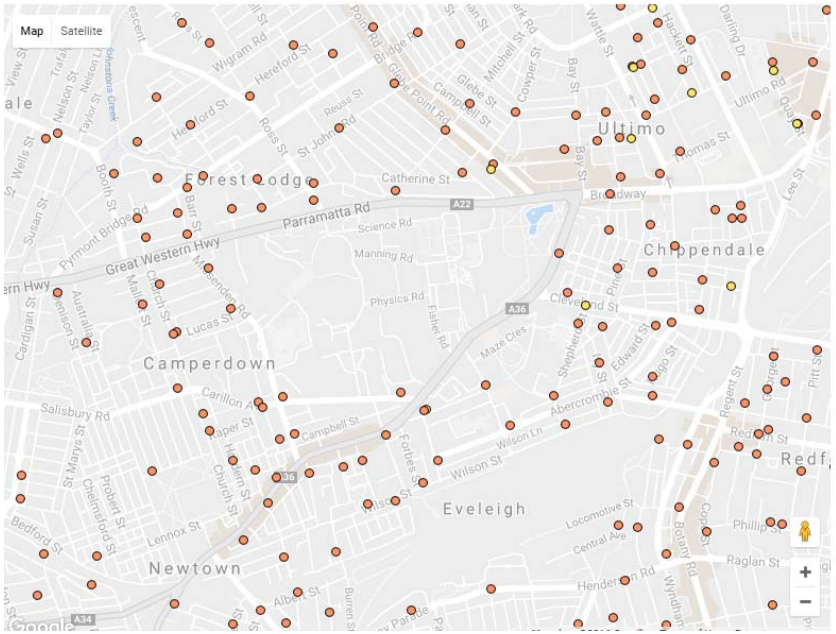
SSD 7055 – F23 ADMINISTRATION BUILDING	
COS ISSUE – F23	**USYD RESPONSE**
5. Heritage The proposal is supported, in principle, from a heritage perspective. As stated in the HIS, consideration should be given to a new entry statement at the southern end of Eastern Avenue as part of the broader urban design resolution of Eastern Avenue / City Road / Butlin Avenue intersection.	The University, as part of its future Knowledge Hub initiative, is undertaking a detailed review of its campus planning strategy. A "new entry statement" is one part of the University's urban design brief, which is currently being addressed in detail with its specialist advisory partners. The engagement of Gehl Architects, to develop an evidence based public realm and connectivity strategy, is supported by a detailed campus life survey and assessment of campus movements patterns. Traffic and pedestrian counts have been undertaken by Arup, and demonstrate that pedestrian movements across City Road are equal to vehicle volumes on City Road and are comparable to CBD movements at Martin Place and George Street. It is a dynamic and congested space at the heart of the campus. The urban design resolution of the Eastern Avenue, City Road and Butlin Avenue intersection is key to the success of delivering an integrated campus as part of the University's vision for a vibrant Knowledge Hub. Cox Architects have been engaged to prepare urban design concepts for the Knowledge Hub, including the Eastern Avenue, City Road and Butlin Avenue intersection. The role of the Eastern Avenue gateway and the delivery of cross campus connection are key criteria in the University's brief, and at the heart of the Gehl's public realm strategy and core to the Cox team's urban design brief.

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
6. Flooding A. The site is subject to flooding. The recommended finished floor levels specified in the Flood Report must be applied to the proposed development and thus comply with the City of Sydney Interim Floodplain Management Policy.	The flood report prepared by SCP delves into greater detail than the WMA Tuflow flood model used in the original flood study for Council. The WMA study is based on Lidar data which has a lower order of accuracy than the ground control survey used for the SCP Flood study. This is due to the focus of our study being more specific to the development at the University and incorporates finer detail such as the influence of small kerbs, elevation changes and medians. The result is an altered flow pattern around the F23 building and in particular lower flows along Fisher Road. The Flood Report accompanying this SSD application addresses this aspect and states the design complies with the City of Sydney Interim Floodplain Management Policy.
B. As there are a number of stormwater upgrades proposed, a stormwater quality assessment should be provided in accordance with the Sydney DCP 2012 requirements	The proposed site development removes existing surface car parking and replaces this with a new building incorporating increased pedestrian activation to the site, landscaping areas and walkways. Gross pollutant can be captured within the stormwater discharge pits and existing GPTs installed in the university before the water discharges into the Sydney Water culverts. SCP proposes to demonstrate using MUSIC modelling that the pollution loads are reduced and within the constraints of the site there will a net improvement in the water quality discharged from the site into the waterways. Assessment for a neutral or beneficial effect on water quality is required under the Environmental Planning and Assessment Act 1979. For practical application, a proposed activity will have a neutral or beneficial effect on water quality if there are no factors involved that have any potential to impact on water quality and the development will not adversely affect water quality off the site. The performance will be demonstrated in MUSIC against the criteria below for a merit based assessment by council.

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
	Merit Assessment Criteria proposed: Changes to the site conditions of the activity will not occur in any way that has the potential to: a) directly change pollutant loadings by introducing or increasing substances into the hydrological cycle (such as waste flows, increased erosion, nutrients and sediments), or b) indirectly change the quality of water in the hydrological system by changing the bio-physical characteristics of the site in any way that reduces, or poses a significant threat of reducing, the capacity of the site and related hydrological/ ecological components to assimilate, treat and otherwise produce water of at least equal quality to that contributed by the existing systems. The activity will not adversely affect water quality off the site because: a) pollutant loads that occur as a result of the activity can be transported to acceptable downstream treatment and disposal facilities without adverse off-site water quality impacts, and/or b) any water quality issues can be effectively managed on-site such that there are no adverse water quality impacts occurring off-site, and c) there are no adverse water quality impacts that arise or are likely to arise indirectly as a result of changes to factors that affect the treatment, assimilation of pollutants, or affect the quality of water as part of the hydrological cycle (such as changes to flow or flow paths, water courses or riparian corridors) that can adversely affect water quality off the site.
7. Public Domain The area of public domain for the Footpath Damage Bank Guarantee calculation includes 40 linear metres (which covers the City Road frontage between the F23 and LEES1 site). A Footpath Damage Bank Guarantee will be required.	Acknowledged

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
COS COMBINED ISSUES – LEES1 & F23	**USYD RESPONSE**
1. **Transport:** A Green Travel Plan is required to demonstrate that the site will encourage modal shift away from car use and to the use of Sustainable Transport options (for staff, customers and residents) such as walking cycling and public transport.	The University has prepared a Sustainable Transport and Mobility Plan (STAMP) and Sustainable Access Strategy, a holistic strategy on movements to and through the University's main Camperdown-Darlington campus. A copy of the STAMP report is found within **Appendix 2.03** - STAMP Report The STAMP prioritises active travel, walking and cycling to campus and details initiatives / strategies to achieve this. Main STAMP objectives are: a. increase public transport and active travel uptake by staff and students; b. improve health outcomes of students and staff living close to the University through active modes of transport; c. manage car parking demand through appropriate pricing; d. reduce vehicle movements through the University to improve amenity and ease congestion; e. consider social equity requirements of community members with specific car parking, transport and mobility needs; f. provide accessible, affordable and quality active transport infrastructure; g. improve connections to the city's bicycle and public transport networks; h. reduce vehicle carbon emissions by avoiding travel where possible. i. promote staff telecommuting; and j. monitor, measure and report on staff and student travel patterns.

SSD 7055 – F23 ADMINISTRATION BUILDING	
COS ISSUE – F23	**USYD RESPONSE**
	The Active Planning section under the STAMP Infrastructure and Planning chapter identifies the location of bicycle parking and their associated connectivity with the wider cycle network between the campus and its surrounding road network. Further, the report documented the availability, location and connectivity of other modes such as motorcycles, trains and finally car parking. Additionally, the document identifies the University's progressive initiatives to encouraging trip reductions, i.e. working from home, telecommunication, work base learning etc. In conclusion, the University's STAMP sufficiently demonstrates the availability of sustainable transport option for its users.
2. **Motorcycle Parking:** Council does not support the provision of additional motorcycle parking above the maximum permitted in the Sydney LEP 2012.	The University understands and interprets the DCP objective as discouraging private car usage and encouraging other modes of transportation. The increased provision of motorcycle parking is in line with this objective. The University and traffic consultants GTA do not view the provision of additional motorcycle bays and problematic, or inconsistent with the DCP.
3. **Car share spaces** must be provided on site as per DCP12 Section 3.11.2.	The DCP car share requirement does not apply to tertiary education institution. However, the University notes that the areas surrounding the campus are well served by car share spaces (**Figure 1** overleaf). While there is no statutory requirement for such provision within the campus, the University and traffic consultants GTA support the appointment of a car share bay in the campus to service local students/staff. However, placement of these spaces within basement carpark is not ideal due to issues relating to accessibility and security. Therefore, should they be provided then it is recommended that they are located at ground level

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
	Figure 1 Car Share spaces near the campus 
4. Loading Dock: A revised loading management plan should be provided to demonstrate how the docks of both buildings will be managed. The on-site loading area is to be available to all tenancies/uses of the particular building.	The University and traffic consultants GTA acknowledges the request and can prepare a LDMP as part of the SSD conditions of consent.
5. F23 Loading Area: The location of the loading area for the Administration Building is not supported. The location is adjacent to the street and will lead to poor pedestrian amenity. Loading must be undertaken from within the building envelope. It is noted that this position is supported by the DCP including Section 3.11.6 (1) of the DCP 2012.	Relocating the proposed loading dock from the existing indented configuration to the basement is not supported as it will necessitate a minimum headroom clearance of 4.5 metres in place of a standard 2.2 metres.

SSD 7055 – F23 Administration Building	
CoS Issue – F23	**USYD Response**
	Furthermore, the AS2890.2 design criteria for a heavy vehicle access ramp would pose onerous geometrical demands which practically render the site infeasible for the proposed development. The proposed loading arrangements, which has now been downgraded to accommodating up to an 8.8 metre Medium Rigid Vehicle (MRV), will: • Be entirely accommodated within the dedicated indented areas • Not encroach onto the oncoming traffic lane • Have appropriate separation by way of kerb and gutter from pedestrian footways. Details of swept path assessment demonstrating satisfactory access provision at the loading dock are provided in **Appendix 2.01** - Transport Consultant GTA Letter. Notwithstanding, it is proposed to dedicate a parking bay in the basement for access by regular service/parcel deliveries (B99). As such, it is our view that the amended loading arrangements will be satisfactory for the purpose that they have been intended for and will not have adverse impact on the surrounding road users.
6. Bicycle Spaces: Additional parking facilities are required. In this regard, 304 visitor bicycle parking spaces (40 for the Administration Building and 264 for the LEES1 Building) are required.	Requirements for onsite bicycle parking are guided by the Sydney DCP which states one bicycle space each for every 10 students and 10 staff respectively. The proposal does not involve additional student or staff. As such the above criteria will not be applicable in this context. Notwithstanding, the University's Sustainable Transport and Mobility Plan (STAMP), integrates the campus' mobility provision as a whole, and incorporates over 1,700 bicycle spaces, 146 showers and 422 lockers available throughout the campus.

<table>
<tr><th colspan="2">SSD 7055 – F23 ADMINISTRATION BUILDING</th></tr>
<tr><th>COS ISSUE – F23</th><th>USYD RESPONSE</th></tr>
<tr><td>7. End of Trip Facilities: Improved bicycle parking and end of trip facilities (such as lockers and showers) are required.</td><td>As part of the LEES 1 and Administration building projects, the below Cycle Parking and End of Trip facilities are being provisioned.
<table><tr><td>Building</td><td>No. of Bike Parking</td><td>No. of Showers</td><td>No. of Lockers</td></tr><tr><td>LEES1</td><td>27</td><td>4</td><td>Min 27</td></tr><tr><td>Administration</td><td>90</td><td>8</td><td>Min 24</td></tr></table>
Additionally, the University is currently drafting an End of Trip masterplan for the main Camperdown and Darlington campuses. Objectives are to review current cycle parking and end of trip infrastructure and identify areas for improvement / opportunities to encourage more active travel, e.g. precinct centralised EoT hub(s) with secure bike parking, changing facilities and lockers.</td></tr>
<tr><td>8. Access from City Road: The operations of the proposed shared zone which would connect into the existing traffic signals on City Road would need approval from the RMS. It is proposed this would only be used for emergency vehicles and not remain open during normal operations. This road will need to be closed by some form of bollards to ensure that we are not permitting two full-time vehicle exits onto City Road.</td><td>This access is now deleted from the SSD proposal.</td></tr>
<tr><td>9. Site Contamination: Council Officers reviewed the Geotechnical Reports and are dissatisfied with its findings. The Report has failed to adequately describe potential contaminants and has not properly investigated the suitability of the site for the intended uses.
It is recommended that a Detailed Site Assessment and Remediation Action Plan are undertaken for the sites.</td><td>F23 SSD application: In a response to this issue, the DPE advised in its email dated 2 May 2016 by stating that “In regards to the F23 site and having regard to the additional information provided by Douglas Partners, the Department is satisfied that the investigations undertaken within the PSI report are adequate for exhibition”. On this basis, no further information is required to be lodged or F23 to address this issue.</td></tr>
</table>

SSD 7055 – F23 ADMINISTRATION BUILDING	
COS ISSUE – F23	**USYD RESPONSE**
	LEES1 Application: In response to this request, the following documents have been included within the EIS: • Phase 2 Contamination Report prepared by Douglas Partners (May 2016) located within Appendix Q. • Remediation Action Plan prepared by Douglas Partners (May 2016) located within Appendix Q. • Letter of clarification prepared by Douglas Partners (28 April 2016) located within Appendix Q. • Unexpected Finds Protocol (UFP) prepared by Richard Crookes Constructions (26 April 2-16) located within Appendix Q.
10. ESD: It is recommended that the Department apply a condition requiring compliance with the ESD reports for LEES 1 and the F23 Administration Building.	The Sustainability Framework has a rating scale to reward ESD features that go beyond standard industry practice, Bronze (65%), Silver (70%), Gold (75%) and Platinum (80%). The ambition level for the Administration building is 'Gold' and LEES 1 building is 'Silver'.
11. Public Art A Public Art Strategy is required for the two sites. The Strategy must be consistent with the *City of Sydney Guidelines for Public Art in Private Development* and the *Public Art Policy* (available at cityofsydney.nsw.gov.au).	The University has a *Public Arts Strategy*, as well as the University's *Wingara Mura-Bunga Barrabugu Strategy* which commits the university to Aboriginal and Torres Strait Islander participation, engagement, education and research. Both strategies commit the University to provision of public art within all projects. The university commits to the provision of public art throughout the campus and integrated into the new F23 and LEES1 projects.

THE UNIVERSITY OF SYDNEY

4. USYD RESPONSE TO NSW HERITAGE COUNCIL

SSD 7054 – F07 LEES 1 BUILDING	
HC ISSUE – LEES1	**USYD RESPONSE**
1. 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 *The University of Sydney and Victoria Park as connected landscapes*. 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. 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 proposed LEES1 Building has been designed to minimise impacts to, and to preserve and maintain, the City Road Figs. As part of the design development stage, arborist specialist consultants *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 building was sited based on the trees' crown form, following these pruning works. • Stage 1 root pruning works were carried out in August 2105 in accordance with City of Sydney Notice of Determination TPR/2015/28, 16 July 2015. A copy the Notice of Determination is attached under **Appendix 1.01**. • Stage 2 root pruning and crown pruning works were carried out on 29 July 2016 in accordance with City of Sydney Notice of Determination TPR/2016/228 dated 15 June 2016. A copy the Notice of Determination is attached under **Appendix 1.02**. 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 shall represent terminal growth only which could be either pruned with hand tools from hoardings/scaffolding or temporarily pushed back. The building envelope 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 building is located in closer proximity to the trees, the level of shading will not be significantly altered. *Ficus macrophylla* are a species tolerant of shading

SSD 7054 – F07 LEES 1 BUILDING	
HC ISSUE – LEES1	**USYD RESPONSE**
	and the shade cast by the proposed building is not anticipated to significantly impact the trees. *TreeiQ* will undertake fortnightly inspections, prepare monthly Compliance Reports and supervise works within the Tree Protection Zones during the construction period.

SSD 7055 – F23 ADMINISTRATION BUILDING	
HC ISSUE – F23	**USYD RESPONSE**
1. It is recommended that the F23 Administration Building should respect the established axial arrangement of Eastern Avenue, which is graded as Exceptional significance in the Grounds CMP, by not protruding past the alignment of the Marsden and Anderson Stuart Buildings. It should contribute to a better sense of identity, arrival and transition as the eastern gateway to the main campus and provide a more complementary solution and scale to the open landscape of the junction between City Road and Eastern Avenue linking into the axial arrangement of Eastern Avenue. In part the F23 Administration Building proposal does achieve these design requirements. Its stylistic attributes including the large eave overhang, and ratio of glazing to solid to screening is complimentary to the historic setting. The Heritage Council recommends that the University of Sydney submit revised architectural drawings for assessment. The eastern façade should be setback a minimum of 4 meters	The alignment of the Marsden and Anderson Stuart Buildings is more apparent in plan, than in reality. Wilkinson's vision of having a series of major university buildings fronting Victoria Park (SHI, Fig.2.3, p.8) was shattered by the post WWII construction of several new buildings. The building alignment on the western edge of Eastern Avenue was disrupted by the construction of the Chemistry Building (1958) and this was followed by the construction of several buildings on the city side of Eastern Avenue. The slight protrusion of F23 beyond the Madsen Building, therefore, is of less importance than the urban design issue of establishing "a better sense of identity, arrival and transition as the eastern gateway to the main campus and provide a more complementary solution and scale to the open landscape of the junction between City Road and Eastern Avenue linking into the axial arrangement of Eastern Avenue" as raised by the HC, and previously flagged in the F23 SHI (p.28).

SSD 7055 – F23 ADMINISTRATION BUILDING	
HC ISSUE – F23	**USYD RESPONSE**
to respect the alignment of the Marsden and Anderson Stuart Buildings, and provide more open landscape (public domain) at the southeast corner of the proposed building at City Road.	

5. USYD Response to Office of Environmental Heritage

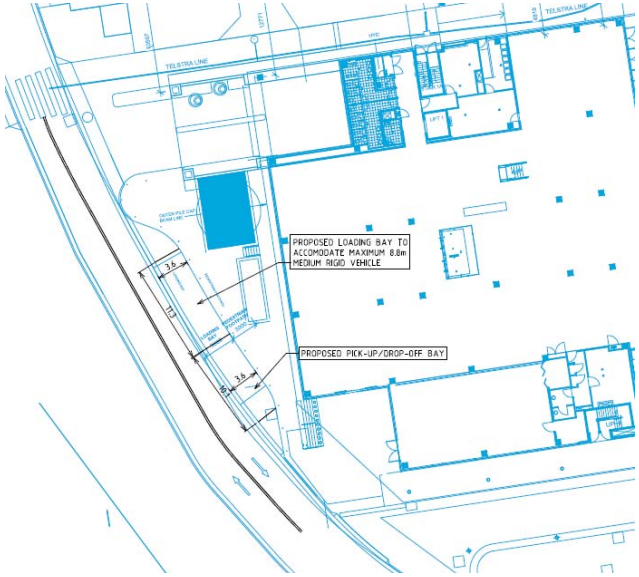
SSD 7054 – F07 LEES 1 Building AND SSD 7055 – F23 Administration Building	
OEH Combined Issues – LEES1 & F23	**USYD Response**
1. **Unexpected Finds Protocol:** A search of the Aboriginal Heritage Information Management System (AHIMS), however reveals record #45-6-2745 (University of Sydney Law Building PAD) is within the University of Sydney campus. The site was recorded in 2005 and while located on the other side of City Road to the current proposed development area, it demonstrates a possibility that Aboriginal objects may be present within the University grounds, unless previous activities have resulted in the destruction of all potential artefact-bearing deposit. In any approval of these development proposals, OEH therefore recommends an unexpected finds protocol to be in place in the event that Aboriginal objects are uncovered during development.	As stated in the AHIA, prepared by AHMS, two registered Aboriginal sites identified within the University of Sydney, #45-6-2745 (USYD Law PAD1) and #45-6-2822 (USYD: Central) comprise isolated stone artefacts recovered from disturbed contexts. The artefacts were assessed as having low scientific significance and low research potential. Both sites have been destroyed. (AHIA, p.8.) The AHIA recommends "the site status of #45-6-2745 and #45-6-2833 should be updated with the AHIMS Registrar to reflect their destruction." AHIA, p.66) The preparation of an Unexpected Finds Protocol for the project is supported as an SSD condition. This is in line with the recommendation in the AHIA (p.65).

6. USYD Response to Transport for NSW Submission

<table>
<tr><th colspan="2">SSD 7054 – F07 LEES 1 Building</th></tr>
<tr><th>TfNSW Issue – LEES1</th><th>USYD Response</th></tr>
<tr><td>1. Loading Dock: The proposed loading dock access arrangement may increase crashes adjacent to City Road. Any incidents in the vicinity of the loading dock would have the potential to cause queuing on City Road. It is requested that the applicant assesses the implications in relation to traffic and pedestrian safety for the proposed loading dock access arrangement.</td><td>The University and traffic consultants GTA acknowledge that any potential safety issue is likely to be associated with truck movements/manoeuvres in the immediate vicinity of the loading dock, and not as a consequence of deficiency of the existing roadway. The University notes that truck loading activities are not expected to significantly increase over and above what already occurs onsite. Notwithstanding, the LDMP can be tailored to address the relevant loading dock safety deficiencies. If required an independent Road Safety Audit can be sought, as required by any relevant SSD consent condition.
A copy of GTA Letter noting the above is attached under Appendix 2.01.</td></tr>
<tr><td>2. Loading Dock Management: The loading dock is located in close proximity to City Road. The proposed arrangement of loading dock would have the potential to impact on traffic and bus operation along City Road.
It is requested that the applicant prepares a loading dock management plan to manage traffic and pedestrian impacts associated with the loading dock operation.</td><td>The University acknowledges the request, and can prepare a Loading Dock Management Plan as part of the SSD conditions of consent as/if required by the consent authority.</td></tr>
<tr><td>3. Pedestrians and Cyclists:
The development application does not provide bicycle parking and end of trip facilities. TfNSW requests that the applicant:
• Provides bicycle parking and end of trip facilities for pedestrian and bicycle riders in accordance with City of Sydney Council development control plans, standards and guideline documents;
• Locates bicycle facilities in secure, convenient, accessible areas close to the main entries incorporating adequate lighting and passive surveillance and in accordance with Austroads guidelines; and</td><td>The LEES1 building provides the following:
<table>
<tr><td></td><td></td><td colspan="3">LEES1 Building provisions</td></tr>
<tr><td></td><td>Peak No</td><td>Bike Parking</td><td>Shower</td><td>Lockers</td></tr>
<tr><td>Staff</td><td>150</td><td>15</td><td>3</td><td>90</td></tr>
<tr><td>Student</td><td>384</td><td>12</td><td>1</td><td>12</td></tr>
</table>
</td></tr>
</table>

SSD 7054 – F07 LEES 1 Building	
TfNSW Issue – LEES1	**USYD Response**
• Develops wayfinding strategies and travel access guides to assist with increasing the mode share of walking and cycling.	30 staff lockers are associated with a unisex shower and WC's on each staff level (Levels 5, 6, 7). Showers and lockers are co-located on each level as these facilities are also used as staff amenity between workplace/laboratory. A unisex student shower is provided with the amenity block on Level 1. Student lockers are provided with the bike store on Level 2. 100% of bike parking spaces are secure and protected from the elements.

SSD 7055 – F23 Administration Building	
TfNSW Issue – F23	**USYD Response**
1. **Loading Dock Access:** Based on Appendix B of the Transport Impact Assessment for the SSD 7055, the swept path of the proposed loading dock vehicle encroaches on the incoming traffic lane on Fisher Road. TfNSW requests that the proponent assesses the implications in relation to traffic and pedestrian safety for the proposed loading dock access arrangement and provide mitigation measures.	The University acknowledges the request and can prepare a LDMP as part of the SSD conditions of consent as required by the consent authority.
2. **Pedestrians and Cyclists:** TfNSW requests that the applicant develops wayfinding strategies and travel access guides to assist with increasing the mode share of walking and cycling.	A mandatory requirement of the University's *Sustainability Framework* is the production of a Building User Guide (BUG) for each project. The BUG will have a section that details Sustainable Transport, including information on cycle parking facilities and EoT facilities. Additionally, the University's website and maps will be updated with the additional cycle parking and EoT facilities. This is accessible by students, staff and visitors.

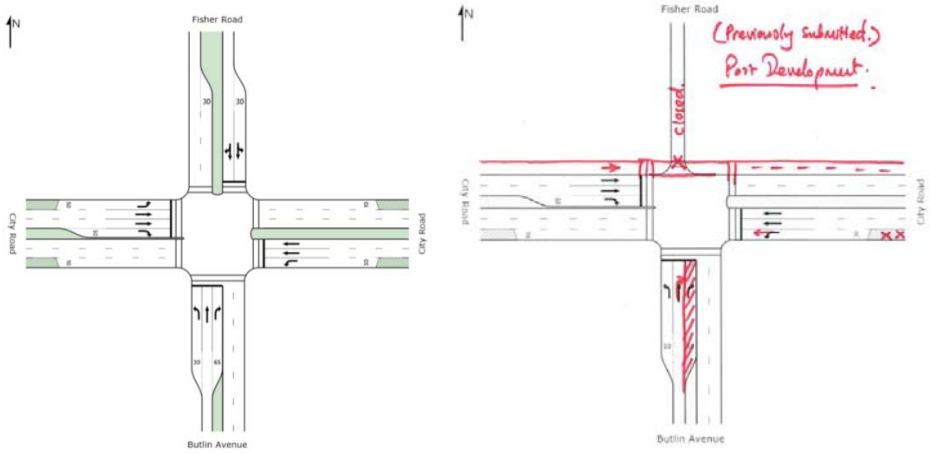
SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
TFNSW COMMON ISSUES – LEES1 & F23	**USYD RESPONSE**
1. **Drop Off and Pick Up Arrangement:** No information in relation to drop off and pick up locations within the site is provided in the development application in particular for taxis. This would have the potential to encourage taxis to undertake drop off and pick up activities on street. TfNSW requests that the applicant provides drop off and pick up locations within the site for the proposed developments.	There is currently no dedicated set down and pick up area for taxis within the campus grounds. It was observed that taxis typically set down/pick up passengers within the available car parking spaces and do not appear to impede on the relatively lowly trafficked campus road network. Notwithstanding, traffic consultants GTA conclude that a dedicated set down and pick up area would be a positive enhancement to the campus amenity and accessibility as a whole, and therefore recommend the appointment of one adjoining the F23 building (refer Figure 5 of the **Appendix 2.01** - Transport Consultant GTA Letter). **Figure 5 Recommended Set Down and Pick Up bay** 

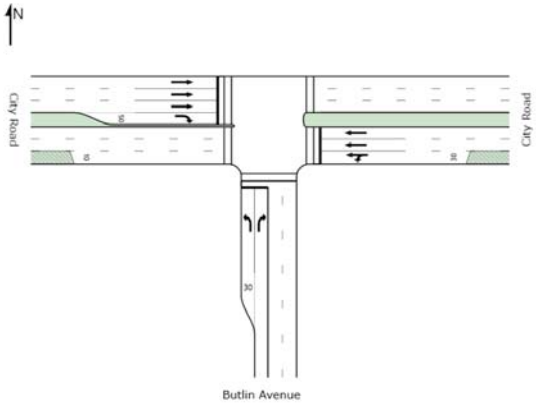
SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
TFNSW COMMON ISSUES – LEES1 & F23	**USYD RESPONSE**
2. Several construction projects are likely to occur at the same time as this development within the vicinity of the CBD. The cumulative increase in construction vehicle movements from these projects could have the potential to impact on general traffic and bus operations within the vicinity of the CBD, as well as the safety of pedestrians and cyclists particularly during commuter peak periods.	**Agreed:** Recommended as a SSD condition of consent. The University acknowledges that construction traffic must be controlled and managed with great care during the implementation of these projects. A CTMP Has been prepared by Lend Lease for both proposed developments.
TfNSW Recommended Consent Conditions	
3. LEES1 – Loading Dock Access: TfNSW requests that the applicant be conditioned to undertake a concept design (Stage 2) road safety audit for the proposed loading arrangement in accordance with *Austroads Guide to Road Safety Part 6: Road Safety Audit* by an independent TfNSW accredited road safety auditor. Based on the results of the road safety audit, the proponent needs to implement road safety measures.	The University acknowledges the request and can prepare a LDMP as part of the SSD conditions of consent.
4. LEES1 – Loading Dock Management: TfNSW requests that the applicant be conditioned to prepare a loading dock management plan in consultation with City of Sydney and Roads and Maritime Services.	The University acknowledges the request and can prepare a LDMP as part of the SSD conditions of consent.
5. F23 & LEES1 Construction & Pedestrian Management Plan: • Prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with CBD Coordination Office within TfNSW and Roads and Maritime Services. The CPTMP needs to specify, but not to be limited to, the following:	The University acknowledges that construction traffic must be controlled and managed with great care during the implementation of these projects. A CTMP Has been prepared by Lend Lease for the proposed developments.

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
TFNSW COMMON ISSUES – LEES1 & F23	**USYD RESPONSE**
o Location of the proposed work zone; o Haulage routes; o Construction vehicle access arrangements; o Proposed construction hours; o Estimated number of construction vehicle movements; o Construction program; o 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; o Cumulative construction impacts of projects including projects within the CBD. Existing CPTMPs for developments within or around the development site should be referenced in the CPTMP to ensure that coordination of work activities is managed to minimise impacts on the road network; and o Should any impacts be identified, the duration of the impacts and measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts should be clearly identified and included in the CPTMP • Submit a copy of the final plan to the City of Sydney, prior to the commencement of any work	

7.USYD RESPONSE TO ROADS & MARITIME SERVICES SUBMISSION

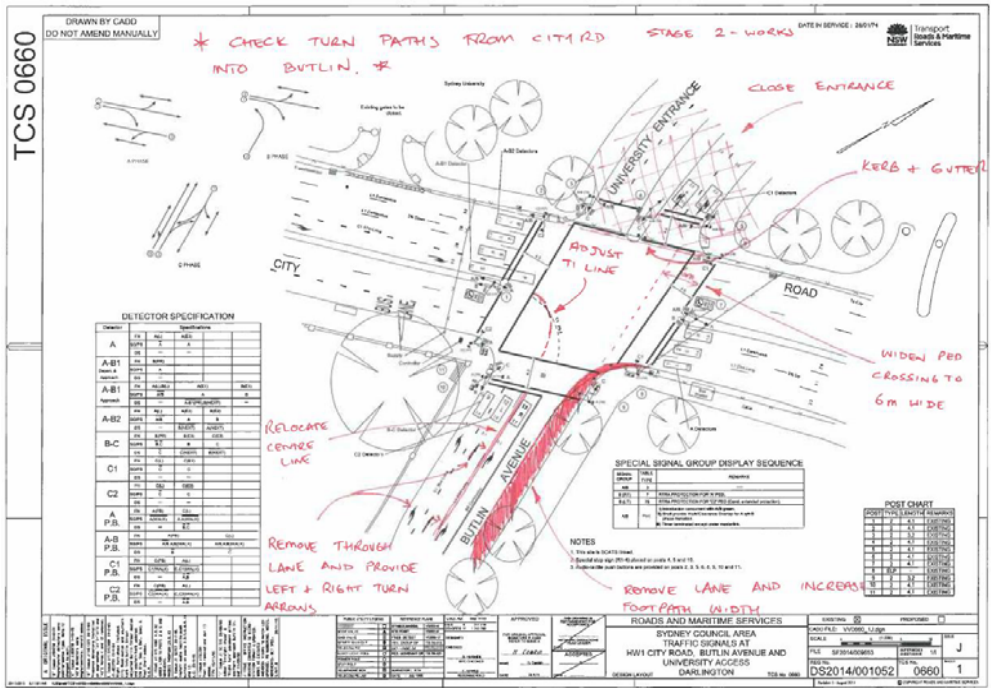
SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING

RMS COMBINED ISSUES – LEES1 & F23	USYD RESPONSE
1. The traffic report submitted does not highlight the changes that were proposed at the meeting held with RMS and the consultants. Some of the notable changes were that the Fisher road access was to be left-in left- out with the median separation and access from the main gate entry was no longer being proposed with a T- Intersection type treatment bring the final layout. The report and plans show that there is an exit only from Eastern Avenue, which is the main entry gate and that's to be completely closed as per the updated information.	A detailed review of the previously submitted City Road/Butlin Avenue model revealed a geometrical error which resulted in the counter-intuitive output. Details are explained below. The existing layout and previously submitted but erroneous layouts are shown on Figure 2 below. **Figure 2 Existing and Erroneous Layouts**  The rectified layout which reflects the most recently proposed design is reflected on Figure 3 overleaf.

RMS COMBINED ISSUES – LEES1 & F23	USYD RESPONSE
	Figure 3 Submitted post-development configuration  Based on the above, the Sidra model has been revised to using the following parameters: • A three-legged intersection (i.e. T-Intersection) • Deletion of a northbound right turn bay • Appointment of practical cycle time because the intersection is now modified, and therefore readapted signal timings. The outcome of the revised model, which indicates satisfactory provision for both traffic and pedestrians are provided alongside of existing results in the Table overleaf.

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING

RMS COMBINED ISSUES – LEES1 & F23	USYD RESPONSE
	Table 1: Sidra Results Comparison <table><tr><th rowspan="3">Peak</th><th colspan="4">Existing</th><th colspan="4">Post-development</th></tr><tr><th colspan="2">Traffic</th><th colspan="2">Pedestrians</th><th colspan="2">Traffic</th><th colspan="2">Pedestrians</th></tr><tr><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th><th>AVD</th><th>LOS</th></tr><tr><td>AM</td><td>7.8s</td><td>A</td><td>37.0s</td><td>D</td><td>8.0s</td><td>A</td><td>23.2s</td><td>C</td></tr><tr><td>PM</td><td>11.1s</td><td>A</td><td>38.0s</td><td>D</td><td>6.8s</td><td>A</td><td>31.0s</td><td>D</td></tr></table> Details of the revised SIDRA assessment are provided in **Appendix 2.01** - Transport Consultant GTA Letter.
2. A detailed CTMP is to be submitted with the access routes and methods undertaken. At the meeting there was discussion regarding larger vehicles existing on to the middle of the intersection which was a concern from RMS and consideration was to be given once a detailed CTMP is provided.	The University acknowledges that construction traffic must be controlled and managed with great care during the implementation of these projects. A CTMP Has been prepared by Lend Lease for the proposed developments.
3. The applicant was to contact the panel members involved with the works being undertaken on City Road/Butlin Avenue intersection as part of the Sydney Uni proposal. This included the pedestrian crossing across City Road. RMS Traffic Engineer had also provided detailed works being undertaken at the intersection to the representatives at the meeting which was noted.	Noted: Traffic consultants GTA has previously consulted with the RMS and has been provided with a guiding signal plan to progress with the design. Details of the proposed Signal Plan issued by RMS are indicated in Figure 6 overleaf and found within the **Appendix 2.01** - Transport Consultant GTA Letter. This design will be developed and formalised by GTA and submitted to RMS with accompanying traffic signal control plan modifications for their review and formal approval.

SSD 7054 – F07 LEES 1 BUILDING AND SSD 7055 – F23 ADMINISTRATION BUILDING	
RMS COMBINED ISSUES – LEES1 & F23	**USYD RESPONSE**
	Figure 6 Indicative Signal Plan by RMS 

8. USYD Response to Environment Protection Authority Submission

SSD 7054 – F07 LEES 1 Building	
EPA Issue – LEES1	**USYD Response**
Site investigation and remediation **1.** The proponent be required prior to commencing works to prepare and implement an appropriate procedures for identifying and dealing with unexpected findings of site contamination, including asbestos containing material, for each of the building sites.	An *Unexpected Finds Protocol* (UFP) report, prepared by Richard Crookes Constructions (26 April 2-16) was included with the SDD application and located within EIS Appendix Q.
2. The proponent be required to satisfy the requirements of the *Protection of the Environment Operations Waste Regulation 2014* with particular reference to Part 7 'asbestos wastes'.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent.
3. The proponent be required to consult with SafeWork NSW concerning the handling of any asbestos waste that may be encountered during the course of the project.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent.
Noise and vibration **4.** The proponent be required to ensure that demolition, site preparation, construction and construct-related work is undertaken only during the standard construction hours recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent.
Construction hours (intra-day respite periods) **5.** 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.	Agreed

SSD 7054 – F07 LEES 1 BUILDING	
EPA ISSUE – LEES1	**USYD RESPONSE**
Queuing and idling construction vehicles and vessels **6.** The proponent be required to ensure construction vehicle (including concrete agitator trucks) involved in construction and construction-related activities do not arrive at the project site or in surrounding residential precincts surrounding that site.	A traffic management plan has been issued to RMS and Council for review and comment. RMS has approved a construction zone adjacent to the site on city road. It is noted that the construction zone has time restrictions associated with its usage. The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
Dust control and management **7.** The proponent be required to: (a) minimise dust emissions on the site, and **(b)** prevent dust emission from the site.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
Erosion and sediment control **8.** 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 and 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 motorised plant leaves the premises.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.

SSD 7054 – F07 LEES 1 BUILDING	
EPA ISSUE – LEES1	**USYD RESPONSE**
Waste control and management **9.** The proponent be required to ensure that appropriate waste and rinser water on not disposed of on the development site.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
Noise and vibration impacts **Mechanical plant and equipment** **10.** The proponent be required to: (a) provide a worst case quantitative assessment of the 'night-time' background noise level in accordance with the guidance material provided in the New South Wales Industrial Noise Policy; and (b) ensure plant and equipment does not generate noise that exhibits tonal or other annoying characteristics.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
11. That consideration be given to requiring the proponent - (a) To undertake noise compliance monitoring and assessment during commissioning of the mechanical plant and equipment serving each building; and (b) to report the results of the compliance assessment monitoring referred to in (a) to confirm that noise levels do not exceed levels predicted in the required noise impact assessment and acceptable noise criteria identified in the NSW Industrial Noise Policy, January 2000.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
Waste management **12.** The proponent be required to identify and implement feasible and reasonable opportunities for reuse and recycling of waste, including food waste.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.

SSD 7054 – F07 LEES 1 BUILDING	
EPA ISSUE – LEES1	**USYD RESPONSE**
Clinical and related waste – LEES1 **13.** The proponent be required to identify the nature and scope of any clinical and related waste likely to be generated during operation of the LEES1 (Carslaw building extension) and the measures proposed to handle, store, transport and dispose of those wastes, in any.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.

9. USYD Response to Sydney Water Submission

Sydney water's submission recommends the imposition of certain SSD consent conditions.

SSD 7054 – F07 LEES 1 Building AND SSD 7055 – F23 Administration Building	
SW Combined Issues – LEES1 & F23	**USYD Response**
6. Approved plans to be submitted to Sydney water Tap in ™ online service to determine whether development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.
7. A S73 Compliance Certificate under *the Sydney Water Act 1994* must be obtained from Sydney Water. Application must be made through an authorised Water Servicing Coordinator.	The University acknowledges the request and can satisfy the requirements as part of the SSD conditions of consent, as required by the consent authority.

10. USYD Response to Darlington Resident Submission

SSD 7054 – F07 LEES 1 Building AND SSD 7055 – F23 Administration Building	
Resident Issue – LEES1 & F23	**USYD Response**
1. Solar Access The objector is concluded to a resident along Abercrombie Street, Darlington. **Issue:** Concern at potential loss of solar access and heat to dwelling along Abercrombie Street. Shadow plans have not extended to Abercrombie Street.	**Nil Impact:** The objector has misinterpreted the SSD shadow plans. Both shadow plans by Rice d'Aubney (LEES1) and Grimshaw (F23) conclude that the proposed new buildings will create maximum additional shadows across City Road (F23 and LEES1) and minor part of the southern City Road footpath (LEES1 only). The proposed new buildings will have not solar effect upon Abercrombie Street or any buildings located there. Abercrombie Street is located at a minimum 215 metres south of the F23 and LEES1 building sites.

11. Design Amendments

Minor design amendments have been incorporated into both SSD applications through a combination of responding to design matters raised in submissions, and identification of superior materials to best serve the building purpose. The tables below identify the design amendments introduced, and list the updated schedule of SSD architectural plans for each SSD application.

SSD 7054 – F07 LEES 1 Building	
Design Change	**Rationale for Change**
1. Refinement of South West Corner Entry Structure	The rationale to refine the South West corner entry structure on Levels 2 – 4, is in response to OGA comments to improve transparency into the building spaces. Refer to comparison plans attached under **Appendix 1.06**.
2. Extending the Width of the Southern Stairs	The rationale of extending the width of existing external southern stairs on Level 2 is to improve the legibility of the building entrance to city road. Refer to comparison plans attached under **Appendix 1.06**.
3. Refinements to Internal Planning Levels 1 – 7	The rationale for the changes is to refine internal layouts to achieve greater efficiencies of spaces and adaptability to user requirements. Service riser sizes have also been rationalise as a response to design development. Refer to comparison plans attached under **Appendix 1.06**.
4. Refinement of Level 8 Plant Room Layout	The rationale for the plant room refinements are in response to design development of the laboratory spaces services provisions. Service riser sizes have also been rationalise as a response to design development. Refer to comparison plans attached under **Appendix 1.06**.

SSD 7054 – F07 LEES 1 BUILDING	
DESIGN CHANGE	**RATIONALE FOR CHANGE**
Updated Schedule of SSD Plans: • HDR-AR-DWG-DA01 Rev G dated 13.09.2016 • HDR-AR-DWG-DA02 Rev G dated 13.09.2016 • HDR-AR-DWG-DA03 Rev G dated 13.09.2016 • HDR-AR-DWG-DA04 Rev G dated 13.09.2016 • HDR-AR-DWG-DA05 Rev G dated 13.09.2016 • HDR-AR-DWG-DA06 Rev G dated 13.09.2016 • HDR-AR-DWG-DA07 Rev G dated 13.09.2016 • HDR-AR-DWG-DA08 Rev G dated 13.09.2016 • HDR-AR-DWG-DA09 Rev G dated 13.09.2016 • HDR-AR-DWG-DA10 Rev G dated 13.09.2016 • HDR-AR-DWG-DA11 Rev G dated 13.09.2016 • HDR-AR-DWG-DA12 Rev G dated 13.09.2016 • HDR-AR-DWG-DA13 Rev G dated 13.09.2016 • HDR-AR-DWG-DA14 Rev G dated 13.09.2016 • HDR-AR-DWG-DA15 Rev G dated 13.09.2016 • HDR-AR-DWG-DA16 Rev G dated 13.09.2016 • HDR-AR-DWG-DA17 Rev G dated 13.09.2016 • HDR-AR-DWG-DA18 Rev G dated 13.09.2016	Plans attached under **Appendix 1.07**.

SSD 7055 – F23 Administration Building	
Design Change	**Rationale for Change**
1. Façade cladding change from GRC to Sandstone; panel sizes and therefore overall module will differ slightly.	The overall aesthetic is similar, though the texture and feel relates more closely to the sandstone language ubiquitous to the campus.
2. Extent of Solid Façade Elements slightly increased in elevation	Southern services core has increased in size as part of design development. Also, an additional solid wall is introduced on the northern façade to achieve required fire separation between level 1 and the carpark.
3. Roof Shape has become slightly steeper (though poses no impact to the overall building height). The lift overrun has increased slightly from 24.78m to 24.98 to allow for a flashing detail.	An adjustment in pitch, resulting in a slightly steeper roof line, has been implemented to suit the change in atrium shape and the design development of services located in the level 6 plant room.
4. Change in atrium Size	Overall atrium size has decreased in size slightly, and shape has evolved from a singular shaft to a form that steps in and out. This change seeks to increase connectivity between floors by enabling users to visibly connect with/ look down on collaboration spaces below.
5. Landscape Adjustments: Change in the extent of soft landscaping to the south, including the deletion of the hardstand denoting emergency vehicle parking; increase in seating around all sides of the building	The changes are in response to the GAO and CoS comments requesting further clarification of activation on the ground plane and a more considered approach to the building and surrounding environment's relationship to City Road.
6. Level 5 eastern terrace has been pulled back to align with the façade line and the line of terraces below; as well, the level 5 south- western terrace has been deleted. as the use is no longer required.	The rationale was to pare back overall building mass to respond to comments by CoS and rationalise the building form. The use of the south-west building is no longer required.

SSD 7055 – F23 Administration Building	
Design Change	**Rationale for Change**
Updated Schedule of SSD Plans: • F23-A-DA-0204 GA Landscape Plan • F23-A-DA-0303 GA Plan- Level 1 • F23-A-DA-0304 GA Plan- Level 2 • F23-A-DA-0305 GA Plan- Level 3 • F23-A-DA-0306 GA Plan- Level 4 • F23-A-D A-0307 GA Plan- Level 5 • F23-A-DA-0308 GA Plan- Roof Plant • F23-A-DA-0309 GA Plan- Roof Plan • F23-A-DA-0601 GA Elevation- North • F23-A-DA-0603 GA Elevation- South • F23-A-DA-0602 GA Elevation- East • F23-A-DA-0604 GA Elevation- West	