UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
Executive Summary	E7	Table: Key regional impacts and benefits of the CSELR - Regional traffic, transport & access	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cylists and pedestrians.
	E9	Table: Key regional impacts and benefits of the CSELR - Local traffic, transport & access	
	E10	Table: Key regional impacts and benefits of the CSELR - Impacts on planted trees	It is noted that a large number of trees will be removed along Anzac Parade, Wansey Road and probably High Street. UNSW is concerned at the loss of these trees and the consequential adverse impact on landscape amenity and historical significance of the district in general and the UNSW campus in particular.
	E12	Table: Key regional impacts and benefits of the CSELR - Surface water, hydrology/drainage	The existing local stormwater flooding along Anzac Pde from High Street to Day Street adjacent to UNSW is not addressed. The UNSW overland stormwater flood path drains onto Anzac Parade across the proposed construction compound and the UNSW Anzac Parade stop.
Part B : The proposal & its development. Chapter 4 Definition design development	4-5	Table 4.1 Alignment strategies	It is unclear how the Park typology will apply at the UNSW High Street stop and the Boulevard typology at the UNSW Anzac Parade stop, given that grass tracks will not be implemented and the track treatment for each will be Park/Concrete and Boulevard/Concrete. The statement within the column "Response to requirements" to allow for interchange facilities at the UNSW Anzac Parade stop is incorrect. The interchange is at the Kingsford stop.
	4-9	Figure 4.3 Key design options considered	It is noted and supported that the use of the King Street tram shed for maintenance and the use of Racecourse land near the intersection of Wansey Road and High Street for stabling, were not considered further as options.
	4-17 & 4-18	4.3.3 Alignment on Wansey Road & Figure 4.8 Wansey Road alignment options	Option 1 is supported as the preferred alignment option along Wansey Road.
Part B : The proposal & its development. Chapter 4 Definition design development	4-23	Table 4.4 Short-listed alternative stop locations considered for the CSELR project	The statement for the proposed side running track option that "pedestrian movements between the light rail platforms and the lower campus of UNSW would not require crossing of Anzac Parade", is incorrect. Pedestrians on the western side of Anzac Parade will have to cross the road to access the platforms. Similarly, those alighting from the light rail carriages who wish to access the western side of Anzac Parade will have to cross the road. The side running track on UNSW land is not supported and it should be changed to a centre running track with an island platform so as to avoid loss of UNSW land, relocation of underground services, removal of significant trees and landscaping along the campus frontage. The preservation and maintenance of all significant fig trees along Anzac Parade in the vicinity of the UNSW campus is considered essential to preserve the amenity and character of the campus. No tree replacement strategy is provided. It is unclear how the Boulevard typology will apply at the UNSW Anzac Parade stop, given that grass tracks will not be implemented and the track treatment will be Boulevard/Concrete. Further discussion with UNSW is required as to how pedestrians, cyclists and buses will be managed at this stop.
	4-29	4.5.1 Stabling and maintenance facility options	It is noted and supported that the use of the King Street tram shed for maintenance and the use of Racecourse land near the intersection of Wansey Road and High Street for stabling, were not considered further as options.
Part B: The proposal & its development. Chapter 5 Proposed infrastructure & operations	5-16	5.2.2 The CSELR stops - bicycle parking facilities	The statement that "Convenient bicycle parking facilties would be provided near platforms." requires clarification. For the two UNSW stops, bicycle parking facilities are already provided on the campus.
	5-44 & 5.45	Figure 5.31 Indicative section - UNSW High Street stop & Figure 5.32 Indicative plan - UNSW High Street stop	Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at this stop and at the intersection of Wansey Road and High Street. Clarity is required on integration of the existing share bike path along Wansey Road. It is unclear how the Park typology will apply at the UNSW High Street stop, given that grass tracks will not be implemented. The loss of the mature fig tree on the corner of Wansey Road and High Street is not shown. No tree replacement strategy is provided. Both figures show a 2-way traffic flow in Wansey Road that conflicts with the statement on page 5.44 that the narrowing of Wansey Road around the stop "would require the reduction of existing traffic along Wansey Road into a one-way configuration."

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
Part B: The proposal & its development. Chapter 5 Proposed infrastructure & operations	5-52 & 5-53	Figure 5.39 Indicative section - UNSW Anzac Parade stop & Figure 5.40 Indicative plan - UNSW Anzac Parade stop	The side running track on UNSW land is not supported and it should be changed to a centre running track with an island platform so as to avoid loss of UNSW land, relocation of underground services, removal of significant trees and landscaping along the campus frontage. The preservation and maintenance of all significant fig trees along Anzac Parade in the vicinity of the UNSW campus is considered essential to preserve the amenity and character of the campus. No tree replacement strategy is provided. Further discussion with UNSW is required as to how pedestrians, cyclists and buses will be managed at this stop. UNSW trade waste, water supply bores and associated reticulation and stormwater will be affected. More specifically, existing underground services include: * Location of two of the three large water production bores and associated services for the city of Kensington Campus which draws some 200kL / day of groundwater for 'commercial' uses, * UNSW main stormwater pipeline runs within part of this strip of land, * Bore water reticulation drain point lies immediately beneath the platform. * Irrigation pipelines run the length of the proposed land acquision. * Trade waste grease arrester and associated sewer drainage. * Bore water mains exist across Anzac Parade to provide supply to Western Campus and to L5 site. Substantial relocation of stormwater services will be required to remove them from the acquired land.
	5-65	5.2.6 Associated light rail infrastructure and services - security and services	The security systems at the UNSW Anzac Parade stop and the UNSW High Street stop will need to integrate with 24/7 on UNSW on-campus security systems. UNSW will require access to CCTV footage at these stops and at the Chalmers Street stop.
	5-67 & 5-68	5.2.7 Road configuration changes	The provision of an indented bus bay within UNSW for westbound buses on High Street is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. Clarity is required as to whether this land is to be acquired from UNSW as it is not shown in Table 5.2 on page 5-74. The temporary westbound bus stop west of Wansey Road during construction should become the permanent westbound bus stop in High Street. Consultation with UNSW is required on any restrictions to right hand turns from Anzac Parade into Barker Street and from Anzac Parade into High Street. These streets are used to access the campus vehicle entrances.
	5-69	5.2.9 Street trees	This section does does not address the existing significant trees on Anzac Pde between High Street and Barker Street along the campus frontage.
	5-74	Table 5.2 Permanent land acquisitions	Permanent land acquistion of UNSW land at the UNSW Anzac Parade stop is not supported because the side running track on UNSW land is not supported (see comments above re pages 4-23 and 5-52).
	5-75	Table 5.3 Temporary leases for construction	The temporary lease of UNSW land off Anzac Parade is not supported because the need for a construction compound in on the UNSW campus is not supported. The location of a compound on the lower campus will require the relocation of UNSW underground services, removal of trees, landscaping and lawn and adversely affect pedestrian routes and teaching. The underground services will be inaccessable for repairs and maintenance and may also be damaged during construction due to ground settlement and compaction. The UNSW overland stormwater flood path drains onto Anzac Parade across the proposed construction compound.
	5-82	5.4.7 Ticketing system and passenger information	Ticketing machines and PIDS need to be installed at the Chalmers Street stop and the UNSW Anzac Parade and UNSW High Street stops.
	5-84	5.4.10 Communications system	The proposed communications system should not interrupt UNSW campus activities in terms of public address announcements or electro-magnetic radiatin interference to sensitive research equipment. The EIS does not address the issue of possible electro-magnetic radiation interference.
Part B: The proposal & its development. Chapter 6 Proposed construction	6-22	Figure 6.2h Construction compounds and footprint for the CSELR proposal	The provision of a construction compound in on the UNSW campus is not supported. The location of a compound on the lower campus will require the relocation of UNSW underground services, removal of trees, landscaping and lawn and adversely affect pedestrian routes and teaching. The underground services will be inaccessable for repairs and maintenance and may also be damaged during construction due to ground settlement and compaction. The UNSW overland stormwater flood path drains onto Anzac Parade across the proposed construction compound and the UNSW Anzac Parade stop. Furthermore, noise and light interference will adversely affect nearby student accommodation on the campus, particularly during exam study periods.
	6-25	Table 6.4 Proposed primary construction compounds - UNSW	
	6-27	Table 6.5 Proposed environmental management measures for primary construction compounds - UNSW	
	6-32 to 6-36	Figures 6.3 to 6.7 Proposed construction haulage routes	The indication of a construction compound at UNSW in these Figures is not supported for the reasons given in the comment above.
	6-43	6.10.5 Road changes	The changes to Anzac Parade, High Street and Wansey Road are noted. It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
	6-44	6.10.6 Bus operations	It is essential that Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
Part B: The proposal & its development. Chapter 6 Proposed construction	6-46	6.10.13 Property and utility access	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians.
Part B: The proposal & its development. Chapter 7 Proposed sustainability	7-23	Table 7.6 Medium and high climate change risks identified for the operational phase of the CSELR proposal - flooding of CSELR infrastructure	The existing local stormwater flooding along Anzac Pde from High Street to Day Street adjacent to UNSW is not addressed. The UNSW overland stormwater flood path drains onto Anzac Parade across the proposed construction compound and the UNSW Anzac Parade stop.
Part C: Regional environmental impact assessment. Chapter 9 Regional planning, transport & socio-economic impacts	9-18	Table 9.6 Key road network changes proposed as part of the CSELR - Wansey Road, High Street	No statement is made with regard to the introduction of traffic signals at the intersection of High Street and Wansey Road at the UNSW High Street stop. Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at this stop and at the intersection of Wansey Road and High Street. The provision of an indented bus bay within UNSW for westbound buses on High Street between Botany Street and Wansey Road is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. The temporary westbound bus stop west of Wansey Road during construction should become the permanent westbound bus stop in High Street.
	9-29	9.2.2 Impacts during operation - Traffic flow changes - performance of intersections within the CSELR corridor - South East corridors - Anzac Parade/ High Street	It is noted that the Anzac Parade/High Street intersection will suffer a loss of service as a result of the proposed switch in the track alignment from centre running to enter UNSW land on the eastern side of Anzac Parade. Under the Randwick Urban Activation Precinct proposals substantial redevelopment for mixed use and residential will occur at this intersection and along High Street on Racecourse land. Therefore any loss of service at the intersection will have adverse effects on traffic flow and access to the UNSW campus via Gate 2 High Street. The side running track on UNSW land is not supported and it should be changed to a centre running track with an island platform for reasons previously explained in the comments above, and to return the Anzac Parade/High Street intersection to its current level of service as a minimum.
	9-36	Figure 9.7 2021 morning peak CSELR boarding and mode of access by light rail stop	The bar graph for Central Station appears incorrect as no transfers from the rail network are shown and the number of passengers appears unrealistically low. The numbers do not corrolate with UNSW arrivals and departure data at the two UNSW stops.
	9-45	9.2.3 Impacts during construction - impacts on bus services	It is essential that Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	9-67 & 9-68	9.4.4 Impacts during construction	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians. The statement is noted that "A noticable level of noise is likely to be generated during the construction phase of the CSELR proposal, with particular concentrations likely to be experienced around construction compounds". The current proposed location for a compound on the UNSW campus is not supported for the reasons already given in the comments above.
Part C: Regional environmental impact assessment. Chapter 10 Other regional impacts	10-26	Table 10.9 Depth of groundwater in the Sydney Central Basin and Botany Sands aquifers	UNSW's use of a significant daily volume of borewater for its commercial building services has not been mentioned. It is not evident from the Table that any effect on borewater quality, static levels or availablilty will bring significant cost penalty to UNSW. UNSW should be added as a Precinct/Area with Purpose of Bore being "commercial water harvesting for building services" UNSW usage of borewater or ownership of several bores has not been considered anywhere in the EIS.
	10-29	10.4.2 Impacts during operation	The proposed UNSW Anzac Parade stop will result in the destruction of water supply production bore water and another bore alienated from service vehicles. The UNSW overland stormwater flood path will be disrupted because it drains onto Anzac Parade across the proposed construction compound and the UNSW Anzac Parade stop.This results in the requirement for: at least one new production bore to be constructed along with all associated controls and connecting pipelines, power and controls; new borewater connecting water mains; new drain valve and pipeline connection to the stormwater pipework system; and new stormwater pipeline and pits with connection to the stormwater pipework system. Substantial design work will be required to investigate suitable sites for new production bore water and to design the bore construction, including pumping and controls, etc. Costs for bore relocation and all associated services infrastructure are very significant. Pumps need to be chosen to suit the hydraulic properties of the new bores. All such work must be done to meet strict UNSW requirements for production bore water.
	10-30 to 10-32	10.4.3 Impacts during construction	
	10-32 to 10-33	10.4.4 Management and mitigation	
	10-52	10.8.1 Existing utilities	To those utilities already listed, add "borewater" and "UNSW borewater system and underground utilities".

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
Part C: Regional environmental impact assessment. Chapter 10 Other regional impacts	10-56	Figure 10.8 Typical treatment zones for utilities under the propose CSELR alignment	The impact zones along the UNSW campus boundary adjacent to Anzac Pde between High Street and Barker Street contains underground potable water pipework and valves serving UNSW buildings. UNSW has a significant amount of large stormwater pipework, drains and pits serving the immediate buildings as well as the wider campus. UNSW also has several hydrant booster points including both underground services and surface installations for fire fighting, plus trade waste infrastructure serving the Square House consisting of pipework, pits and control and monitoring equipment. This infrastructure is critical to UNSW's ongoing operations and maintaining service. Relocating the infrastructure outside the impact zones is critical.
	10-56	10.8 Consultation with utility owners and service providers	The list of utility owners consulted to date does not include AARnet. As AARnet is a major service provider to UNSW it is recommended that they are included on all lists of affected utility providers and consulted throughout the project.
	10-64 to 10.66	10.10.2 Hazards and risks during construction	There is no mention of the risk of services interruptions to UNSW's infrastructure during construction or the impact on UNSW operations if this occures. It is essential that teaching and research projects on the campus are able to continue uninterupted during the construction phase.
Part D: Local environmental impact assessment. Chapter 15 Local impacts - Randwick precinct	15-14	15.3.2 Impacts during operation	It is noted that the High Street/Wansey Road intersection will be signalised to accommodate pedestrians and light rail turning movements between Wansey Road and High Street. Also that pedestrian crossings will be provided at this intersection. Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street. Clarity is required on integration of the existing share bike path along Wansey Road. The provision of an indented bus bay within UNSW for westbound buses on High Street between Botany Street and Wansey Road is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street.
	15-17	Table 15.8 Impacts on property access during operation of the CSELR proposal	Access arrangements for UNSW Gate 9 in High Street are unclear given the statement that most property access arrangements in High Street will be restricted to left-in-left-out operation with the exception of right turn access into the hospital. Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street.
	15-18	Table 15.9 Impacts on cyclists during operation of the CSELR proposal	Integration of the existing share bike path along Wansey Road is unclear. Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street. The statement that that Arthur Street will be designated as an alternative route for cyclists requires further discussion with TfNSW, UNSW and Randwick City Council.
	15-19	Table 15.10 Impacts on pedestrians during operation of the CSELR proposal	Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street. The impact on the kerb both sides of High Street will reduce the width of the verges and may also have an impact on existing trees and services within the verge. The section of High Street between Wansey Road and Botany Street is highly pedestrianised on both sides. Any loss of verge width should not reduce the exiting footpath widths.
	15-19	Table 15.11 Impacts on bus operations during operation of the CSELR proposal	The provision of an indented bus bay within UNSW for westbound buses on High Street between Botany Street and Wansey Road is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street.
	15-20	Operational impacts on buses - High Street bus stops	
	15-23 & 15-24	15.3.3 Impacts during construction and Table 15.13 Proposed traffic management for key roads directly impacted by construction of the CSELR proposal	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians.
	15-25 &15.26	15.3.3 Impacts during construction. Construction impacts on existing bus services. University express bus services 890,891 and 892	It is essential that Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	15-26 & 15-27	University bus service 890, 891 and 892 and Figure 15.9 UNSW High Street bus relocation.	The existing westbound bus stop between Botany Street and Wansey Road will be relocated west of Wansey Road near Gate 8 during construction. This should be the premanent location following construction. This will alleviate the need for an indented bus bay on UNSW land between Botany Street and Wansey Road as is currently proposed and which is not supported by UNSW.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
	15-31	15.3.4 Management and mitigation - operation	Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street. Clarity is sought on what access arrangements are proposed for UNSW Gate 9 in High Street given that most property access arrangements in High Street will be restricted to left-in-left-out operation with the exception of right turn access into the hospital. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street.
	15-32	15.3.4 Management and mitigation - construction	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians. Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) must remain operable for UNSW express bus services set downs and pick ups during light rail construction.
Part D: Local environmental impact assessment. Chapter 15 Local impacts - Randwick precinct	15-45	15.4.4 Management and mitigation	Consultation with UNSW is essential during study and exam periods, for both the UNSW campus and for exam venues on the Randwick Racecourse.
	15-45	15.5 Noise and vibration.	It is unclear how existing noise and vibration adjacent to the UNSW campus at High Street has been measured and what the differences will be with the operation of the UNSW High Street stop. There is no reference to electro-magnetic impacts eminating from operation of the light rail tracks or from communications equipment at the UNSW High Street stop or on the light rail carriages. There are UNSW buildings on High Street containing equipment highly sensitive to vibration and electro-magnetic interference. Further discussion is required with UNSW on mitigation measures for noise, vibration and electro-magnetic impacts during both construction and operation.
	15-65	15.6.2 Direct impact to planted trees	The provision of an indented bus bay within UNSW for westbound buses on High Street is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street, leaving the trees unaffected. The section of High Street between Wansey Road and Botany Street is highly pedestrianised and concern is expressed at the potential loss of street trees in this location given that this part of High Street provides an important frontage to the upper campus. There is no statement regarding the loss of the mature fig tree on the corner of Wansey Road and High Street. No tree replacement strategy is provided for this location.
	15-68	15.7.2 Visual sensitivity	The statement that "High Street from UNSW to the Prince of Wales Hospital is part of the institutional setting of Randwick and is considered to be of regional sensitivity" is noted. It is therefore unclear how the Park typology will apply at the UNSW High Street stop, given that grass tracks will not be implemented, the track treatment will be Park/Concrete and there will be loss of street trees in High Street between Botany Street and Wansey Road.
	15-77	15.7.7	No mitigation strategies are proposed with regards to the loss of trees referred to in the comment above relative to page 15-65. Given the regional sensitivity referred to on page 15-68, UNSW requests that tree planting strategies be put in place for High Street.
Part D: Local environmental impact assessment. Chapter 16 Kensington/Kingsford precinct	16-18 & 16-20	16.3.2 Impacts during operation - UNSW Anzac Parade stop. Figure 16.9b Functional changes to the road network	The side running track on UNSW land is not supported and it should be changed to a centre running track with an island platform so as to avoid loss of UNSW land, removal of significant trees and landscaping along the campus frontage. The preservation and maintenance of all significant fig trees along Anzac Parade in the vicinity of the UNSW campus is considered essential to preserve the amenity and character of the campus. No tree replacement strategy is provided. It is unclear how the Boulevard typology will apply at the UNSW Anzac Parade stop, given that grass tracks will not be implemented and the track treatment will be Boulevard/Concrete. Further discussion with UNSW is required as to how pedestrians, cyclists and buses will be managed at this stop.
	16-26 & 16-27	16.3.3 Impacts during construction - construction impacts on property access. Table 16.9 Proposed traffic management for key roads impacted by the construction of the CSELR proposal.	For the Anzac Parade/High Street intersection, concern is expressed at the statement in the Table that "vehicles exceeding 12.5 metres long would be prohibited from turning at this intersection". Barker Street as an alternative access route to the UNSW campus via Gate 14 is not possible for liquid gas deliveries that can only access the northern half of the campus via High Street and Gate 2. It is unclear if vehicles greater than 12.5 metres long are prohibited from this intersection only during weekend contruction works, or during operation of the light rail as well. Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) must remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	16-30	16.3.4 Management and mitigation	Clarity is required around the statement that "The staging of the intersection of Anzac Parade and High Street would maintain all existing movements at this intersection". This does not relate to the statement in Table 16.9 that vehicles exceeding 12.5 metres long would be prohibited from this intersection - see comment above.
	16-34	Figure 16.10b Kensington/Kingsford Precinct - land use and property	The temporary and permanent acquisition of land on the UNSW campus for a construction compound and side running track at the UNSW Anzac Parade stop is not supported for the reasons previously given above.
	16-42	16.4.3 Impacts during construction	The use of land on the UNSW campus for a construction compound and a side running track at the UNSW Anzac Parade stop is not supported for the reasons previously given above.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
	16-43 to 16-57	16.5 Noise and vibration	It is unclear how existing noise and vibration adjacent to the UNSW campus at Anzac Parade has been measured and what the differences will be with the operation of the UNSW Anzac Parade stop. There is no reference to electro-magnetic impacts eminating from operation of the light rail tracks or from communications equipment at the UNSW Anzac Parade stop or on the light rail carriages. There are UNSW buildings on Anzac Parade containing equipment highly sensitive to vibration and electro-magnetic interference. There are also a number of residential colleges on the campus fronting Anzac Parade. Further discussion is required with UNSW on mitigation measures for noise, vibration and electro-magnetic impacts during both construction and operation.
	16-58	Table 16.18	The statement that the trees on UNSW land "currently make a substantial contribution to the landscape amenity of the campus and the adjacent section of Anzac Parade", is supported. The preservation and maintenance of all significant fig trees along Anzac Parade in the vicinity of the UNSW campus is considered essential to preserve the amenity and character of the campus. It is unclear how the Boulevard typology will apply at the UNSW Anzac Parade stop, given that grass tracks will not be implemented and the track treatment will be Boulevard/Concrete.
Part D: Local environmental impact assessment. Chapter 16 Kensington/Kingsford precinct	16-60 & 16-61	Figure 16.19b Impacts to planted trees. 16.6.2 Direct impact to planted trees	The removal of planted trees on the UNSW campus is not supported because the construction compound, the side running track and UNSW Anzac Parade stop on UNSW land are not supported - for the reasons previously given above.
	16-61 & 16-62	16.6.3 Mitigation measures	The proposed mitigation measures are not supported because the construction compound, the side running track and UNSW Anzac Parade stop on UNSW land that requires the removal of the fig trees is not supported - for the reasons previously given above.
	16-63	16.7.2 Visual sensitivity	UNSW supports the statement that the "UNSW campus .... is a clearly defined precinct characterised by mature trees and green lawns, pedestrian plazas and modern institutional buildings. The landscape and visual character of this area is considered to be of regional sensitivity as this precinct is a feature of the locality". Therefore the removal of planted trees on the UNSW campus is not supported because the construction compound, the side running track and UNSW Anzac Parade stop on UNSW land are not supported - for the reasons previously given above.
	16-67	Table 16.20 Kensington/Kingsford precinct - assessment of representative viewpoints	For Anzac Parade at the UNSW campus the table is not supported because the construction compound, the side running track and UNSW Anzac Parade stop on UNSW land are not supported - for the reasons previously given above.
	16-79	16.8.2 Impacts on heritage items and Table 16.27 Summary of impacts on heritage listed items	It is noted that the trees along the western Anzac Parade boundary of UNSW near the main entrance are listed on the Randwick City Council Register of Significant Trees. The proposed CSELR construction and the UNSW Anzac Parade stop will necessitate the removal of a number of these trees. The trees are identified as a significant group of plantings as well as being individual mature plantings with historic significance. The statement that removal of these trees and extensive pruning would have a major adverse impact on the group and result in the loss of individual elements that demonstrate the pre-UNSW racecourse phase of the site is supported. The construction compound, side running track and UNSW Anzac Parade stop on UNSW land is not supported for the reasons previously given above.
	16-81 & 16-82	16.8.4 Management and mitigation	The statement that "Where UNSW significant trees must be removed, suitable replacements would be made where possible" is not supported because the construction compound, side running track and UNSW Anzac Parade stop on UNSW land is not supported - for the reasons previously given above.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
Part E: Environmental management & conclusions. Chapter 18 Environmental management & mitigation	18-6 to 18.40	Tabel 18.4 Environmental risk analysis for the CSELR proposal	The risk assessment fails to identify that UNSW is the service utility provider, owner and maintainer for the UNSW Kensington Campus and as a result has not been consulted on these issues. The risk matrix details that several of the risks identifed in the Utilities and Services category have a medium/low residual risk rating. UNSW does not agree with this assessment. The risks include: • Significant number of services and utilities requiring relocation or protection as part of the CSELR proposal, increasing the area of disturbance, • Disruption to asset owner access to services and utilities. • Damage to services and utilities during construction of the proposal (including associated safety risks, such as earth potential rise). • Additional draw of electrical power (and thus additional power supply required in the local area) to run the light rail vehicles and electrical equipment at each of the stops, maintenance facility and stabling yard. • Buried cables and stray leakage currents from the running rails into surrounding earth causing cause electrolysis corrosion of nearby buried metalwork. The risk matrix details that several of the risks identifed in the Hydrology, drainage and surface water quality category have a igh/medium/low residual risk rating. UNSW does not agree with this assessment. The risks include; • Potential stormwater ponding along the alignment affecting operation of the LRVs. • Potential for the proposal to result in exacerbation of existing localised stormwater flooding events during operation. The risk matrix details that several of the risks identifed in the Groundwater category have a medium/low residual risk rating. UNSW does not agree with this assessment. The risks include: • Localised drawdown of the water table, resulting in a change in groundwater flow direction due to groundwater intersection and dewatering • Ground settlement risks to existing buildings and infrastructure due to groundwater drawdown during construction. • Impacts to bores • Contamination of groundwater aquifers due to accidental chemical spills or leakage from construction and maintenance plant, vehicles, equipment and storage areas.
Appendix I. Proposed mitigation measures	I-5	Table I.1 Detailed design and preconstruction phase environmental management measures - hydrology, drainage and surface water	The current design finished levels along Anzac Pde will potentially dam the north west corner of the UNSW campus, causing medium level flooding to at least three buildings. The design needs to be revisited to reduce the rail levels to suit. A new land detailed level survey is required to ascertain an appropriate design level to provide the same protection as can be provided with the ground levels existing at present.
Appendix I. Proposed mitigation measures	I-5	Table I.1 Detailed design and preconstruction phase environmental management measures - groundwater	A field survey would be undertaken to confirm the existence, usage and condition of any bore located within the construction footprint of the CSELR proposal, or potentially affected by the CSELR proposal (e.g. those located in the vicinity of proposed excavations). This would cover an area appropriate to identify potential dewatering impacts. There is no evidence that the three production bores on UNSW land were included in this field survey.
	I-5	Table I.1 Detailed design and preconstruction phase environmental management measures - groundwater	UNSW Production Bores No3 and 4 are to be relocated to available sites within UNSW campus, to sites which will provide a long term pumping rate for each bore of 18L/sec. This will require the bores to be located in the NW corner of the site to a depth to rock of about 30m (identical to the existing bores). Full hydraulic / mechanical design is required for the bore, casing, pump, controls, power supply, new 150mm bore water connecting mains and a new system drain to stormwater, relocation of associated buried pipeline and valves away from the site to be acquired. All designs are to be as approved by UNSW. Lead time for this work is at least six months with design and construction costs estimated at some $1m.
Technical Paper 1. Traffic Operations	20 & 21	1.5.2 Project Definition	Special event platforms are to be installed at Chalmers, Randwick Racecourse and Moore Park to accommodate 45m and 90m (double length) light rail vehicles. UNSW Anzac Parade and UNSW High Street stops are listed as only having 45m platforms. The numbers of passengers listed for the other locations are below the numbers listed for UNSW an a daily basis.
	41	2.4 Special Events 2.4.1 Overview	Special events as listed have over 15,000 in attendence. UNSW has a daily attendence of more than 15,000 however an extended platform is not proposed for the two UNSW stops.
	93	Figure 2.30 Existing bicycle network within the Kingsford precinct	The figure shows both existing and planned bicycle paths, not just existing. The on road bike path shown through the Kensington campus is incorrect - it does not exist. The planned off road bike path along Anzac Parade in the vicincity of the campus is not supported - there will be insufficienct footpath widths as a consequence of the light rail construction.
	111	3.1.2.3 UNSW campus development	The numbers listed as arriving by public transport (25,000 to 30,000) supports the installation of special event platforms at UNSW/ Chalmers.
	117	Table 3.11: 2021 AM peak CSELR boardings and mode of access by light rail stop	The bar graph for Central Station appears incorrect as no transfers from the rail network are shown and the number of passengers appears unrealistically low. The numbers do not corrolate with UNSW arrivals and departure data for the two UNSW stops.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
	174 & 175	5.4.5.2 Wansey Road	Integration of the existing share bike path along Wansey Road is unclear. Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street.
	176 & 177	5.4.5.3 High Street	The provision of an indented bus bay within UNSW for westbound buses on High Street is not supported. No discussion with UNSW on this matter has taken place. Adverse impact on UNSW underground services and loss of large mature trees will result. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street, leaving the trees unaffected.
	314	Table 7.11 Central Station Precinct Access Plan	Boarding and alightings numbers in the table are below UNSW arrivals and departures data for the UNSW Anzac Parade and UNSW High Street stops. The numbers do not corrolate with UNSW arrivals and departure data for the two UNSW stops.
	327	7.3.15 UNSW Anzac Parade precinct access plan	The Precinct Plan as currently proposed is not supported because the side running track and UNSW Anzac Parade stop on UNSW is not supported - for the reasons previously given above. Boarding and alightings numbers in the table are below UNSW arrivals and departures data for this stop.
	328	Table 7.16 UNSW Anzac Parade precinct access plan	
	329	Figure 7-15 UNSW Anzac Parade precinct access plan	
	340	7.3.20 UNSW High Street precinct access plan	Further discussion with UNSW is required as to how pedestrians, bicycles, buses and other vehicular traffic will be managed at the UNSW High Street stop and at the intersection of Wansey Road and High Street. Clarity is required on integration of the existing share bike path along Wansey Road. The provision of an indented bus bay within UNSW for westbound buses on High Street between Botany Street and Wansey Road is not supported for the reasons given previously above. The temporary westbound stop west of Wansey Road during construction should become the permanent westbound stop in High Street. Boarding and alightings numbers in the table are below UNSW arrivals and departures data for this stop.
	340	Table 7.21 UNSW High Street precinct access plan	
	341	Figure 7-20 UNSW High Street precinct access plan	
Technical Paper 2. Construction Traffic & Transport Management Strategy	xvi	Executive Summary: Kingford Precinct - construction impacts and mitigation	UNSW notes and supports Kingsford mitigation options of tidal flow operation on Anzac Parade and staged construction activities in the Anzac Parade and Alison Road corridors. It is essential that Anzac Parade and Alison Road (during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	xvi & xvii	Executive Summary: Randwick Precinct - construction impacts and mitigation	UNSW notes there are no mitigation options identified. It is essential that High Street and Alison Road (during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	7	1.4 CSELR Project Overview	Special event sidings 90M long are proposed at Chalmers St and Moore Park but does not include UNSW. UNSW arrivals and departures equate to a special event every day during semester. Further discussion is required on platform lengths at the two UNSW stops.
Technical Paper 2. Construction Traffic & Transport Management Strategy	19 & 20	2.5 Intersection Works	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians. It is also essential that intersection works cease during exam study periods.
	26	2.10.5 Special Events	UNSW notes that TfNSW will seek agreement to ensure that Class 1 and 2 events do not occur concurrently and that known special events will be incorporated into the construction program with approval managed through the NCLG. UNSW express bus services should be identified as a special event.
	27	3.2.1 Bus Management	UNSW notes that a south east bus plan will be developed.
	30	3.2.1 Bus Management - Eddy Avenue	It is essential that Eddy Avenue remains operable for UNSW express bus services set downs and pick ups during light rail construction.
	44	4.4.1 Network Management Plan	UNSW notes that the Network Management Plan will have "… the high level objective of maintaining network journey times and congestion levels at acceptable levels." Acceptable levels are not defined in the document.
	53	3.9.2 Network Performance and Figure 3.10 Network performance statistics AM peak	Traffic outcomes for the south east corridors are worse than for the CBD cordon e.g. 11% increase in travel time in the CBD cordon versus 15% for the full model area.
	57	3.9.3.2 Intersection delays	UNSW notes that intersection delay diagrams are only shown for the CBD not for the south east.
	129	4.5.2.3 High Street	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians. It is also essential that intersection works cease during exam study periods.
	132	Table 4.5 Summary of proposed conditions for Anzac Parade intersection closures	UNSW notes only vehicles up to 12.5 metres long will be able to access High Street from Anzac Parade. It is essential that Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.
	152	4.6.6.5 University express bus services 890, 891 and 892	It is essential that Eddy Avenue, Anzac Parade and High Street (and Alison Road during exam periods) remain operable for UNSW express bus services set downs and pick ups during light rail construction.

UNSW RESPONSE TO THE CBD AND SOUTH EAST LIGHT RAIL (CSELR) ENVIRONMENTAL IMPACT STATEMENT

Refer also to the JBA 'Submission on CBD & south-East Light Rail Project' submitted on behalf of the Univeristy of NSW

EIS Document	Page # in EIS Document	Section #/Table #/Figure #	Comment
	176 & 177	Appendix B.2 Pitt Street / Eddy Avenue indicative staging	It appears from the diagrams there will be limited access to Eddy Ave from Pitt St. UNSW express buses use Pitt St as a staging area to provide the number of services required. It is essential that Eddy Avenue remains operable for UNSW express bus services set downs and pick ups during light rail construction.
	195 & 196	Appendix B.8 High Street indicative staging plan	It is essential that the UNSW campus remains accessible during construction of the light rail for retail and other delivery vehicles, construction vehicles for sites on the campus, staff and student parking, cyclists and pedestrians. It is also essential that intersection works cease during exam study periods.
Technical Paper 5. Heritage Impact Assessment	(ii)	Executive Summary	The statement that the proposed CSELR route would have an major adverse impact on significant trees on the western Anzac Parade boundary of UNSW is supported.
	(iii)	Executive Summary	It is noted that no mitigation measures with regard to these trees is mentioned in the Executive Summary, but are stated on page 363 of the report.
	176	4.1.1 - Historical Archaeology - Methodology	It is noted that for the works on UNSW land there is a low-moderate potential for historical archaeological remains to be present and that some open area excavation and archival recording during site works and post-excavation analysis may be required.
	322	5.6.3 - Kensington / Kingsford Precinct - Detailed Heritage Impact Assessment	It is noted that the trees along the western Anzac Parade boundary of UNSW near the main entrance are listed on the Randwick City Council Register of Significant Trees. The proposed CSELR construction and the UNSW Anzac Parade stop will necessitate the removal of a number of these trees. The trees are identified as a significant group of plantings as well as being individual mature plantings with historic significance. The statement that removal of these trees and extensive pruning would have a major adverse impact on the group and result in the loss of individual elements that demonstrate the pre-UNSW racecourse phase of the site is supported. The side running track on UNSW land is not supported and it should be moved to a centre running track with an island platform for the reasons previously given above.
	363	6.0 Mitigation Measures - 6.2.3 Built and Landcape Heritage	It is noted that the table identifies the impact on the significant trees on UNSW land as 'Major Adverse''. The proposed mitigation measures for detailed design of the CSELR and the UNSW stop to retain, if possible the two significant Moreton Bay fig trees and eight significant Port Jackson Figs along the Anzac Parade boundary of UNSW is supported and that where these significant trees must be removed then suitable replacements would be made. However, the side running track on UNSW land is not supported and it should be moved to a centre running track with an island platform for the reasons previously given above.
Technical Paper 6. Heritage Interpretation Strategy	45	4.2 Interpretive Concepts	The use of the UNSW Anzac Parade stop as a location for interpretive signage or evocative historical imagery is supported.
Technical Paper 8. Greenhouse Gas Assessment	3	2.2 Australian Policy	This section is now out of date and requires revision
Technical Paper 9. Preliminary Tree Assessment	C1	Appendix C	19 trees were assessed along the Anzac Parade fenceline on UNSW property. All trees were given a SULE rating of 2a. UNSW agrees with this except for trees numbered 744 and 745 on the assessment sheet. Both trees are Ficus macrophylla of significant size and are listed among a group of 10 trees under EIS Volume 5 - Technical Paper 5 - Heritage Impact Assessment , page 327, UNSW Significant Trees. Tees 744 and 745 should have a SULE rating of 1a.
Technical Paper 11. Noise and Vibration Assessment	All	All	It is unclear how existing noise and vibration adjacent to the UNSW campus at High Street has been measured and what the differences will be with the operation of the UNSW High Street stop. There is no reference to electro-magnetic impacts eminating from operation of the light rail tracks or from communications equipment at the UNSW High Street stop or on the light rail carriages. There are UNSW buildings on High Street containing equipment highly sensitive to vibration and electro-magnetic interference. Further discussion is required with UNSW on mitigation measures for noise, vibration and electro-magnetic impacts during both construction and operation.
	53 & 54	6.2.3 Vibration sensitive equipment criteria	UNSW notes that two precincts have been identified as criticially sensitive to vibration, since they contain precision research and/or imaging facilities. These are the the Lowy, Wallace Wurth and the Prince of Wales Hospital buildings at High Street; and the Tyree Energy Technology Building at Anzac Parade. UNSW confirms that both of these precincts will continue to be the focus of precision laboratories into the future so that their protection from excess vibraiton should be maintained. UNSW notes that the High Street precinct is identified in the Report as requiring the highest level of vibration protection, Treatment type S3. UNSW requests that the Anzac Parade section from NIDA past the Tyree building, which currently shows no vibraiton treatment, also be identified as requiring Treatment type S3.