ETHOS URBAN

Appendix A – Response to Agency Submissions (SSD 9670) Western Sydney University Innovation Hub – 2-6 Hassall Street, Parramatta

The following table includes a response to the full text of submissions provided by or on behalf of State and local government agencies. For completeness, the full text of each submission is provided in the left-hand column, accompanied by the proponent's corresponding response in the right-hand column. The proponent's responses have been informed by input by the expert consultant team and should be read in conjunction with the publicly exhibited Environmental Impact Statement and accompanying technical reports, as well as the Response to Submissions Cover Letter to which this document is appended.

Item Rai	sed				Proponent's Response
City of P	City of Parramatta Council				
CoP	Setbacks/Draft DCF	P Requirements:			Refer to Section 1.1 of the RTS Letter.
1a	The draft DCP for this site allows a for a 3 storey podium with a 19 storey tower above. This proposal is inconsistent with the draft DCP as it proposes a 12 storey podium and 6 storey high-rise tower above. An increased podium of this scale is likely to have more adverse impacts on the surrounding area in terms of heritage and scale. It is also noted that the setbacks in the current scheme differ from those endorsed by Council on the 11 March 2019. It is also noted that the setbacks in the current scheme differ from those endorsed by Council on the 11 March 2019. The setbacks proposed are non-compliant in the following manner: Boundary setbacks (3 storey podium)			orey podium and 6 storey to have more adverse is also noted that the uncil on the 11 March those endorsed by	
		DCP (min)	Proposed	Compliance	
	North	6m	1.89m – 3.3m	No	
	South	6m	2.9m	No	
	East	3m	0m	Yes	
	West	6m	3.3m – 5.5m	No (but control relevant to 3 storey podium)	
	Boundary setbacks	(above 3 storey)	·		

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		1	T	ı	
		DCP (min)	Proposed	Compliance	
	North	6m	2.3m – 6.9m	No	
	South	6m	2.9m	No	
	East	3m	0m	No	
	West	6m	3.3m min (podium levels 4-12) 10m – 13.5m (tower only)	No Yes	
	· · · · · · · · · · · · · · · · · · ·	surrounding developme	•	red to be unsatisfactory urracks heritage precinct	
CoP	Urban Design (Public	Domain):			Refer to Section 1.2.1 of the RtS Letter.
2a		ow the future through-s design options and leve		eeds to be	
CoP 2b		ade presents little activa nd a substation. The ap			Refer to Section 1.2.1 of the RtS Letter.
CoP 2c	a continuous line o required to provide shoreline does not explore and presen	long the footpath on Ha f travel and fail to provio a legible shoreline alor need to be a continuou at textures in paving, wh ning principles should fo	de a consistent shorelin ng the public domain alc s line of TGSIs. The ap nile keeping the material	e. The applicant is ong Hassall Street. The plicant is encouraged to	The proposal's expressive structural system, with columns along the Hassall Street frontage within the site, is a key feature that contributed to the awarding of the design competition. Specifically, the Design Competition Jury Report requires the proposal to maintain a "structural system that is expressive and demonstrates the sense of engineering in architecture". Any requirement to remove or redesign the building columns would be a direct contravention of key design integrity feature as nominated by the Design Competition Jury. In this regard, the column location and form has been retained.
					Notwithstanding this, a shoreline strategy has been developed around the columns as illustrated on the Landscape Plans and Public Domain Plan in Appendix C . This shoreline strategy includes a change in floor finish texture to provide shoreline contrast for vision impaired persons. This solution has been developed in consultation with an accessibility consultant.
CoP 2d	Ensure the bicycle	stands sit outside the s	horeline.		The bicycle racks have been relocated to the public domain along the Hassall Street frontage and are no longer located within the shoreline, as shown in the updated landscape drawings and public domain plan in Appendix C .

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CoP 2e	The public domain through the future through-site link requires a shoreline to ensure all pedestrians are able to traverse through it.	An updated shoreline strategy has been prepared to address this comment. Refer to the Landscape Plans and Public Domain Plan in Appendix C . Similar to the proposed Hassall Street shoreline strategy, the updated Landscape and Public Domain Plans show changes in the finished floor surrounding the columns within the proposed plaza.
CoP 2d	The bollards shown at the driveway crossover of Hassall street footpath are not recommended. These should be replaced with warning TGSIs.	These bollards have been provided to ensure the required sight splays are achieved for appropriate driver visibility of pedestrians walking across the driveway, in compliance with Figure 3.3 of AS2890.1. It is necessary to ensure that pedestrians do not occupy this area, therefore it is deemed appropriate to provide a physical barrier in this location to prioritise pedestrian safety.
CoP 2e	Street tree soil volumes and planting details should be as per the Parramatta Public Domain Guidelines 2017.	The proposal complies with the Parramatta Public Domain Guidelines 2017. Refer to Landscape Drawing L01.07, detail 11 "Typical CoP Tree Detail" (Appendix C of the RTS), which includes the extent of Structural soil for street trees and the typical planting details. Please refer to Landscape Drawing L01.04 for the extent with dimensions and L01.07 for the typical planting details. For further details please refer to Landscape Specification.
CoP 2f	Street lighting seems to be missing from the public domain plan.	The ground floor drawing has been amended to show existing streetlight poles.
CoP 2g	Explore relocating the substation to next to the retail at the boundary with the Commercial Hotel or in another area. Any required vehicular access to the substation needs to be demonstrated.	The Design Competition Jury and Endeavour Energy have endorsed the proposed location of the substation on the ground floor. The proposed substation location ensures that the standalone retail building adjoining Commercial Hotel can maintain an appropriate heritage transition whilst maximising activation to the through site link. Any requirement to relocate the substation within this building would compromise these benefits of the design. The location as proposed meets the requirements of Endeavour Energy.
CoP 2h	Ensure slabs within apparent public domain are separate along the property boundary and that the property line is demarcated within the public domain in some manner.	Expansion joints along property line added on Architectural Drawing 10.01.
CoP 2i	Ensure water positively drains away from the building edge and property line. Detailed levels are required to demonstrate this.	Plaza finish floor levels (FFL) added to Architectural Drawing 10.01.
CoP 3a	Universal Access Requirements Ground Floor: All doorways from the retail areas leading to the plaza must provide low level thresholds with a construction tolerance of no more than 3mm.	Retail FFL and Plaza FFL added on Architectural Drawing 10.01 showing flush thresholds.
CoP 3b	Ensure the doors from the retail areas leading to the plaza provide a clear opening of 850mm including the active leaf of any set of double doors.	Dimension added to retail entry doors on Architectural Drawing 10.01.
CoP 3c	Ensure there is the correct latch side clearances for the doors leading to the amenities.	Required DDA clearance for latch side clearance added to Ground Floor DDA bathroom. See Architectural Drawing 10.01.
CoP 3d	Ensure the bleachers also provide an area of accessible seating including compliant arm and back rests.	Refer to Landscape Drawing L01.08, detail 5 "Timber Deck / Back Rest and Arm Rest".

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CoP 3e	To reduce the risk of a person with vision impairment colliding with the columns, ensure provision of a minimum luminous contrast of 30% to the paving.	Material schedule added to clarify required luminous contrast between column and paving. See Architectural drawing 10.01.
CoP 4a	Universal Access Requirements Terrace (level 10 & 12): All doorways from the level 10 and 12 areas leading to the terrace must provide low level thresholds with a construction tolerance of no more than 3mm.	See Architectural drawing 52.05, Detail 1 typical terrace door sill showing flush threshold.
CoP 4b	Ensure the doors from both floors leading to terraces provide a clear opening of 850mm including the active leaf of any set of double doors. This should also apply to the doors providing access to amenities.	Dimension added to doors to terrace. See Architectural Drawings 10.07 and 10.09
CoP 5a	Drawing requirements: Amended documentation is to include the following: Public Domain Alignment Drawings showing existing and proposed levels for roads, kerb and gutter, footways, forecourts and through-site links. The drawings should clearly show positive drainage away from the building and interfaces of the public domain and new building entries via a series of engineering cross and long sections, along with a preliminary public domain plan showing proposed general layout of elements, services and finishes. All drawings to be prepared in accordance with the requirements outlined in Chapter 2 of the Public Domain Guidelines. Landscape drawings for internal site areas showing all proposed boundary treatments and compliant private and communal open space areas including levels.	
CoP 6a	 ESD: A review of the SSDA against the ESD related Design Excellence requirements has been conducted and the following comments are provided: The jury report mandates that a minimum 30% of the northern façade is shaded at 1pm, December 21st and this has been satisfied. This detail should be retained in any approved scheme. 	Noted.
CoP 6b	 ESD Performance has not been adequately addressed in the ESD report or other documents provided. The following shortfalls should either be addressed in a revised report or dealt with via conditions of consent: The office components of the building will be designed and constructed to operate at a minimum NABERS Energy rating of 5.0 stars without accounting for any Green Power used in the building and a NABERS Waters rating of 4 stars. A commitment agreement for the NABERS ratings is to be entered into with the NSW Office of Environment and Heritage. 	The energy and water consumption design targets are set to be the equivalent of NABERS Office Energy (5-star) and Water (4-star) base building rating. The targets will be met in the base building design based on an assumed full lettable area commercial office use. However, it is not appropriate to require a commitment agreement in consideration of the large educational use occupying a significant portion of the lettable area. The building has more than 25% of educational facilities which adversely affects its ability to achieve NABERS Energy and Water performance in operation. This is recognised by the Commercial Building Disclosure scheme which excludes buildings with >25% non-office use from requiring a NABERS rating. Refer to pages 7 and 8, Sections 4.3.5 and 4.4.2 of the revised ESD Report in Appendix F .

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CoP 6c	A dual reticulation (dual pipe) system is to be installed, with the dual reticulation system being of sufficient size to supply all non-potable water uses of the building and suitable for future connection to a recycled water main.	The hydraulic design will incorporate a rainwater harvesting system to reticulate non-potable water via a dedicated pipework system. The system can be easily modified for the future connection of authority non-potable water supply if it is available. Refer to page 8, Section 4.4.3 of the ESD report.
CoP 6d	Capture all rainwater on site and provide sufficient storage for reuse of 95% of all annual rainfall to offset potable water uses.	The hydraulic design will incorporate a rainwater harvesting system capable of capturing all rainwater on site and storage for re-use of at least 95% of annual rainfall to offset potable water uses (predicted, based on past typical rainfall patterns).
CoP 6e	LED lighting to be provided throughout.	LED lighting will be provided. This is described on page 7, Section 4.3.3 Lighting System, 4th paragraph, of the ESD report.
CoP 6f	Outdoor air ventilation rates to exceed the relevant Australian Standard by no less than 50%.	The Green Star credit "Provision of Outside Air" is targeted. Refer to page 6, Section 4.3.2 of the ESD report.
CoP 6g	Limit the use of PVC with minimum replacement of 60% (by cost) compared to standard practice.	The Green Star credit "Responsible Building Materials" is targeted which requires that 90% by cost of all PVC products be specified to be PVC-free or comply with "Best Practice Guidelines for PVC" which is significantly more stringent than 60%. Refer to page 9, Section 4.7 of the ESD Report.
CoP 6h	95% of all timber used on the project is to be FSC Certified under the Forest Stewardship Council certification system.	The Green Star credit "Responsible Building Materials" is targeted which requires 95% by cost of timber used to be (1) FSC certified timber; (2) PEFC certified timber; or (3) Reused. Refer to page 9, Section 4.7 of the ESD Report.
CoP 6i	All lifts to be gearless with regenerative drives. Passenger lifts to have destination control.	Lifts will be energy efficient and incorporate destination control system. Refer to page 7, Section 4.3.7 of the ESD Report.
CoP 6j	The development is to maximise the renewable energy produced by PVs installed on the roof to be demonstrated through the provision of maximised area and optimum orientation and efficiency of PV panels. Installed area of PVs on the roof is to be no less than 600m2.	Provisions will be made for the future connection of not less than 600m2 of PV panels on the roof. Refer to page 7, Section 4.3.8 of the ESD report.
CoP 6k	 The ESD report also fails to address the following ESD requirements of the SEARS (Part 7): Include a framework for how the future development will be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design and technology and use of renewable energy. 	Green Star, emission intensity and water consumption based on NABERS are targeted. The project is registered with GBCA with a Green Star project number of GS-4370DA. Refer to page 6, Section 4.2 of the ESD report. Energy performance metrics will use "emission intensity". Refer to page 7, Section 4.3.5 of the ESD report. Water performance metrics will use "water consumption". Refer to page 8, Section 4.4.2 of the ESD report. A climate adaptation plan will be provided. Refer to page 9, Section 4.9 of the ESD report.
CoP 6l	Include preliminary consideration of building performance and mitigation of climate change, including consideration of Green Star Performance.	A climate adaptation plan will be provided, as discussed above. The building will target a Green Star Design & As Built rating of 5 stars. This will enable the facility management to register and apply for a Green Star Performance rating.

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CoP 6m	Provide a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change, specifically: Hotter days and more frequent heatwave events Extended drought periods More extreme rainfall events Gustier wind conditions	A climate adaptation plan will be provided. Refer to page 9, Section 4.9 of the ESD report.
CoP 6n	Additionally, the ESD report relies on some initiatives that are not evident in the proposed design such as a naturally ventilated atrium.	The walk-through plaza utilises natural ventilation as an ESD initiative. Refer to page 4, Section 4.1.3 of the ESD report.
CoP 60	We recommend that the ESD report is not relied upon and is either amended or appropriate conditions of consent be written to address the short comings.	See points above. The ESD report has been revised to clarify the sustainability measures targeted.
CoP 7a	Wind: The wind study recommends the addition of a canopy, to be detailed at a later stage, which protects pedestrians from downdraft from the tower façade. Also recommended are interventions within the plaza. These are important design requirements and material to the SSD assessment. Council recommends all the wind impacts are adequately resolved prior to consent.	It is considered that wind impacts have been adequately assessed and resolved. A Wind Impact Assessment (WIA) was prepared by Windtech and was provided in Appendix V of the EIS. This assessment studied the existing wind conditions in the locality and the potential effect of the proposed building on wind conditions. In particular, the assessment considered the likely effect of wind on the various trafficable pedestrian outdoor areas within and surrounding the site. The assessment concluded that wind conditions for the majority of trafficable pedestrian outdoor locations within and around the development would be suitable for their intended uses. In relation to the ground plane, the assessment concluded that the majority of wind conditions at ground level surrounding the development and through the plaza would be acceptable for their intended use and the wind comfort in these areas will be enhanced with the inclusion of the following mitigation measures: Inclusion of horizontal screening, such as a canopy or artwork, elevated above ground level through the plaza. Inclusion of planting or localised screening, such as an artwork, signage or baffle screens, throughout the plaza. Inclusion of 1.5m impermeable balustrades surrounding the Level 12 terraces. The detailed design of the mitigation measures described above can be resolved post-consent through appropriate consent conditions.
CoP 8a	Stormwater: Stormwater disposal must be in accordance the Council's DCP 2011 including provision of On Site Detention and Water Sensitive Urban Design.	The OSD design submitted with the EIS complies with this requirement (refer to Appendix L of the EIS).
CoP 8b	The development shall include construction of a piped drainage line with kerb inlet pits along the kerb line of Hassall St from the site eastwards, then crossing Hassall St to the point of connection near 13-15 Hassall St. This must be a minimum of a 375mm diameter.	The provision of additional stormwater drainage in Hassall Street is not justified by the development proposal for the following reasons:

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	concrete spigot and socket pipe in accordance with Council standards. Engineering details must be submitted to Council for construction approval prior to commencement of works.	The proposal does not alter the road drainage conditions or introduce additional stormwater flow, The proposal includes OSD which will reduce the flow rate from the existing site addresses in storm events The site discharge rate will be limited to 30L/s so that it is in accordance with Council's DCP requirements to discharge direct to the kerb/gutter. It is therefore proposed that the site stormwater is disposed to the existing kerb/gutter (as per the documentation submitted for with the EIS).
CoP 8c	OSD tank location should be reconsidered to ensure surcharges do not cause property damage. Reliance on a piped overflow is adequate as part of the mitigation measure but should not be the only solution.	 No alternative locations are available, with the street frontage occupied by substation access requirements and fire services access requirements. Notwithstanding this, the following measures have been incorporated in the design to mitigate against surcharges: Plaza levels have been designed to provide an over land flow path for stormwater surcharges from both rainwater outlets and from the tank. The piped tank overflow has been sized at the full 1-in-100 year peak tank inflow rate - well in excess of the minimum overflow sizing required being the PSD flow rate. The piped tank overflow has been split between two independent pipes to reduce the risk of blockages. The tank is provided with a backup overflow path via grated drains in the top of the tank which can surcharge to the retail pavilion roof, overflow into the plaza and then drain to the street via the over land flow path provided.
CoP 8d	OSD tank design shall consider provisions for regular and unobstructed access, maintenance and natural ventilation of the system.	Unobstructed access has been provided. Access to the tank is provided via an access ladder to the retail plaza roof, then via top access hatches to the tank. Space is available on the retail plaza roof for cleaning of storm filters.
CoP 8e	Alternative measures shall be considered for the overflow discharge that does not have the potential to cause unwanted hazard and nuisance to passing pedestrians.	Stormwater overflow discharge will only occur in storm events where the rainfall significantly exceeds the 1-in-100 year event. Under such extreme conditions, the overflow discharge is unlikely to significantly increase the risk to pedestrians in an already untenable unprotected external environment.
CoP 8f	The stormwater drainage design is to consider any flows from the upstream property and ensure that they are not impeded or concentrated onto neighbouring properties. An allowance can be made for these to be conveyed to the point of discharge separate to the OSD system or accepted into the OSD tank provided additional OSD storage volume is provided in accordance with Section 4.1.3 of UPRCT OSC Handbook (4th edition).	Upstream properties are required to manage their own stormwater to eliminate regular surface flows onto downstream properties. Notwithstanding, the plaza has been designed to provide an overland flow path for conveying upstream flows to Hassall Street without concentrating them onto neighbouring properties. This is a significant improvement over the prior condition.
CoP 8g	 Stormwater drainage design is to consider the effects of wind driven rain being intercepted by the vertical faces of the building in the sizing of the drainage infrastructure provided. 	The vertical surface areas have been considered in the design in accordance with AS3500 requirements.

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CoP 8h	 Localised sumps shall be provided adjacent to the orifice plate in accordance with Section 6.6 of the EPRCT OSD Handbook (4th Edition) for hydraulic performance and to minimise ponding volumes. 	The sumps have been indicated on the submitted design.
CoP 8i	The orifice plate shall be constructed from stainless steel plate in accordance with the requirements of Section 4.2.3 of the UPRCT OSD Handbook (4th Edition).	The stainless steel orifice plates have been documented in the submitted design.
CoP 8j	 Any seepage discharged to Council's stormwater drainage system is to be treated to meet water quality standards specified in the DCP 2011 and any additional requirements set by the EPA. 	The stormwater quality treatment system meets these requirements as documented in the submitted design.
CoP 8k	Must ensure that adequate sight distance in accordance with AS2890.1-2004 is achieved at the basement entry driveway.	Noting that Hassall Street is a one-way street in a westbound direction, adequate sight distances can be achieved at the basement entry, in accordance with AS2890.1. This would be confirmed at Construction Certificate stage of development and is expected to form a Condition of Consent. It is also noted that the landscape documentation has addressed this (refer to drawing L01.04). Street trees are located next to the kerb as required by CoP Public Domain Design Guidelines. Tree species are selected to Council's requirement. 400L trees have been specified to ensure the crown is elevated enough for clear sightlines.
Office of	Environment and Heritage	
OEH 1a	Aboriginal Heritage: If DPE determines to grant approval, OEH recommends that any conditions recommended by the Aboriginal Cultural Heritage Assessment report be included as conditions of consent.	Noted.
OEH 2a	Biodiversity: Please be advised that a Biodiversity Development Assessment Report (BDAR) waiver has been submitted and approved on 13 February 2019.	Noted.
Office of	Environment and Heritage – Heritage Division	
OEHHD 1a	The site does not include any items listed on State Heritage Register (SHR) but is identified as Parramatta Archaeological Management Unit 3108, an archaeological site of local significance and moderate archaeological research potential in the Parramatta Archaeological Landscape Management plan by GML.	Noted.
OEHHD 1b	It is further noted that the site is in the immediate vicinity of two SHR items, namely: Parramatta Railway Station (SHR No. 00696); and 1st/ 15th Royal NSW Lancers Memorial Museum Collection (SHR No. 01824); it is also near various local heritage items.	Noted.
OEHHD 1c	The Heritage Council has granted a s140 permit for archaeological testing at the site (dated 21 December 2018).	Noted.

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OEHHD 1d	It is noted that the building form has evolved since the Heritage Division previously provided formal comments on the proposed development. SSDA Design Report (2019) adequately discusses the design details, materiality, heritage response and assesses the variations to the building setback including when they do not comply with the draft DCP.	Noted.
OEHHD 1e	Based on the information provided, the Heritage Division supports the conclusion of the Heritage Impact Statement that the proposal at 2B-6 Hassall Street Parramatta will have an acceptable impact on heritage items near the site.	Noted.
OEHHD 1f	It is acknowledged that the proposal includes several positive aspects that respond to its immediate heritage context, including the public view lines from the public spaces through to Lancer Barracks, potential future connection with the Lancer Barracks and the alignment of the tower soffit datum with the rooftop of the Commercial Hotel. Therefore, the Heritage Division does not raise objections to the proposed development on the subject site.	Noted.
OEHHD 1g	The subject site has the potential to contain archaeological information of local heritage significance relating to commercial and domestic uses of the site from the late nineteenth century. As part of the early works program a S140 application was made to the Heritage Council of NSW to excavate and record the archaeology at the subject site. This application was approved in 2018. These works will record and remove archaeological information at the site prior to the commencement of development. It is recommended an unexpected finds condition is created for the project to manage any additional archaeological discoveries during construction.	Noted.
Transpoi	t for New South Wales	
TfNSW 1a	Pedestrian impact assessment TfNSW requests that the Applicant undertake further assessment of the adequacy of pedestrian facilities including: - Fruin analysis of walkways and any pedestrian pinch points along desire lines to public transport nodes. - Measures to improve any constraints or pedestrian safety concerns. The analysis should have regard to the potential bunching of pedestrians due to nearby signalised pedestrian crossings and interaction of passengers alighting from public transport and the nearby railway station and interchange.	Refer to Section 1.3 of the RtS Letter.
TfNSW 2a	Freight & Servicing	Refer to Section 1.4 of the RtS Letter.

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	It is recommended that the Applicant provides an assessment of the projected freight and servicing movements (number and type by day) and a draft management plan to better understand the requirements for freight and how these movements would be managed.	
TfNSW 3a	 Suggested Conditions The Applicant must prepare a Travel Plan in consultation with the Sydney Coordination Office (SCO) at Transport for NSW and submitted to the Secretary for approval prior to the issuing of any Occupation Certificate. The Travel Plan is required to: identify strategies and mode share targets that encourage the use of public and active transport and reduce the proportion of single-occupant car journeys to the site; include a Transport Access Guide that provides information to students/employees/visitors about the range of travel modes, access arrangements and supporting facilities that service the site; identify relevant workplace policies such as flexible working and teleworking arrangements that enable travel outside peak periods or which reduce the need for work related travel (where applicable); and nominate the party/parties responsible for implementing the Travel Plan and its ongoing monitoring and review, including the delivery of actions and associated mode share targets. A final/revised Travel Plan is to be prepared for the Secretary's approval within 18 months of occupation. The final Travel Plan should include consideration of journey to work patterns and behaviours identified by a staff/students/visitor travel survey taken during the first 12 months of opening of the institution. 	Noted.
TfNSW 3b	The Applicant must prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with the Sydney Coordination Office (SCO) within TfNSW. The CPTMP should be endorsed by the SCO prior to any construction activity on the site and take into account the potential impacts of the proposed development on the Parramatta Light Rail (PLR) project and rail replacement services. The CPTMP must address the following matters: Traffic and public transport customer management in the vicinity of the development. Location of all proposed work zones; Construction vehicle access arrangements; Proposed construction hours; Estimated number and type of construction vehicle movements including volume, time of day and truck routes.	Noted.

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	 Construction program highlighting details of peak construction activities and proposed construction staging; 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; Cumulative construction impacts of projects in the Parramatta CBD precinct, and the duration of the impacts; Measures proposed to mitigate any associated general traffic, public transport, pedestrian and cyclist impacts should be clearly identified and included in the CPTMP. All construction vehicles are to enter and exit site in a forward direction. No reversing into site should be allowed for pedestrian safety reasons. Construction vehicle movements should be limited during peak periods, AM (7am-9.30am) and PM (4pm-6.30pm) to reduce impacts on any bus operations and traffic flow. These peak periods have the highest level of pedestrian activity in the CBD. Include measures to reduce the likelihood of construction workers driving into the CBD to park, placing further demand on kerbside parking and the road network during construction. 	
Roads a	nd Maritime Services	
RMS 1a	 Roads and Maritime has reviewed the submitted application and recommends that the following requirement is included in any determination issued by the Department: A Construction Pedestrian Traffic Management Plan (CPTMP) should be submitted in consultation with the TfNSW Sydney Coordination Office (SCO), Roads and Maritime, and City of Parramatta Council, prior to the issue of a Construction Certificate. The CPTMP needs to include, but not be limited to, the following: construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control, taking into consideration the cumulative traffic impacts of other developments in the area. 	Noted.
Environ	ment Protection Authority	
EPA 1a	Construction Impacts: Noting that some aspects of the development will be undertaken under the previously mentioned early works DA's, the EPA anticipates that site establishment, demolition, bulk earthworks, construction and construction-related activities will be undertaken in an environmentally responsible manner with emphasis on: • Any restrictions imposed by, or conditions included in the required Site Audit Statement,	Noted.

ed	Proponent's Response
 compliance with recommended standard construction hours, intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting), feasible and reasonable noise and vibration minimisation and mitigation, effective dust control and management, erosion and sediment control, and waste handling and management, particularly concrete waste and rinse water. Site Contamination: The DSCI gave a cursory treatment to the potential for PFAS contamination. The development site adjoins a Defense Facility. The SAS should directly review the adequacy of the DSCI evaluation of the potential for PFAS contamination. Prior to the commencement of works the subject of this approval that a Site Audit Statement (SAS), within the meaning of the Contaminated Land Management Act 1997 and State Environmental Planning Policy No. 55 – Remediation of Land, be furnished to the Secretary confirming that the site is suitable for the proposed use. The EPA recommends that any conditions on the SAS shall be read to be a condition of the SSD Approval. The SAS should also directly address the adequacy of the assessment of the potential for PFAS contamination given the sites locality to a Defence Facility. 	A letter has been prepared by Douglas Partners which responds directly to this comment from the EPA (Appendix G). In summary, Douglas Partners Pty Ltd (DP) consider that there is only a low risk of PFAS contamination at the site, sourced from the adjoining army barracks, for the following reasons: Correspondence from Department of Defence (dated 2013) lists the site as having been a barracks since about 1820. As such, the activities likely to have occurred at the site are not those potentially resulting in PFAS contamination. The groundwater flow direction inferred at the site, and also in nearby sites investigated by DP (e.g. public school) is to the north-east, hence the site is at best cross hydraulic gradient from the barracks; and Testing of groundwater at a site to the north of the barracks recently found either non-detect PFAS, or PFAS at the laboratory detection limit. A condition of consent can be imposed requiring the issue of a Site Audit Statement. Upon completion of all early works on site (the subject of separate approved DAs), a Site Audit Statement will be prepared to confirm that the site is suitable in accordance with the findings of the DSI. As a result, all investigations and work related to contamination will be completed prior to the commencement of construction work on the proposed Engineering Innovation Hub.
Noise: The proponent be required to support the construction noise assessment criteria presented in Appendix T to the EIS with additional noise monitoring at a location consistent with the guidance in the Noise Policy for Industry (EPA, 2017) and the Interim Construction Noise Guideline (DECC, 2007).	 A supplementary acoustic response has been prepared by Floth in response to this comment from the EPA (refer to Appendix H). The response notes that the noise monitoring location was based on a range of factors, including: Site access and security; To obtain line of sight between the noise monitoring location and Hassall Street, as the remaining site frontage had been shielding by hoarding; To minimise extraneous noise contribution from the construction activities occurring on the opposite side of road at 9 Hassall Street.
	feasible and reasonable noise and vibration minimisation and mitigation, effective dust control and management, erosion and sediment control, and waste handling and management, particularly concrete waste and rinse water. Site Contamination: The DSCI gave a cursory treatment to the potential for PFAS contamination. The development site adjoins a Defense Facility. The SAS should directly review the adequacy of the DSCI evaluation of the potential for PFAS contamination. Prior to the commencement of works the subject of this approval that a Site Audit Statement (SAS), within the meaning of the Contaminated Land Management Act 1997 and State Environmental Planning Policy No. 55 – Remediation of Land, be furnished to the Secretary confirming that the site is suitable for the proposed use. The EPA recommends that any conditions on the SAS shall be read to be a condition of the SSD Approval. The SAS should also directly address the adequacy of the assessment of the potential for PFAS contamination given the sites locality to a Defence Facility. Noise: The proponent be required to support the construction noise assessment criteria presented in Appendix T to the EIS with additional noise monitoring at a location consistent with the quidance in the Noise Policy for Industry (EPA, 2017) and the Interim Construction Noise

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		conducted at these sites as suggested by the EPA, despite their preferred location being nearest to future sensitive receivers. The response concludes that the background noise levels presented in the noise impact assessment (submitted with the EIS) are representative of the noise levels experienced.
EPA 3b	The proponent be required to ensure that as far as practicable all demolition, site preparation, bulk earthworks, construction and construction-related activities likely to be audible at any noise sensitive receivers such as surrounding residences are only undertaken during the standard construction hours, being - (a) 7.00 am to 6.00 pm Monday to Friday, (b) 8.00 am to 1.00 pm Saturday, and (c) no work on Sundays or gazetted public holidays.	Noted.
EPA 3c	The proponent be required to ensure construction vehicles (including concrete agitator trucks) involved in demolition, site preparation, bulk earthworks, construction and construction-related activities do not arrive at the project site or in surrounding residential precincts outside approved construction hours.	Noted.
EPA 3d	The proponent be required to consider undertaking a safety risk assessment of site preparation, bulk earth works, construction and construction-related activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.	Noted.
EPA 4a	Dust Control and Management: The proponent be required to minimise dust emissions on the site and prevent dust emissions from the site.	Noted.
EPA 5a	Sediment Control: The proponent be required to ensure that: (a) demolition, site preparation, bulk earthworks, construction and construction-related activities do not commence on the development site until appropriate and effective sediment controls are in place, and	Noted.

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	(b) sediment controls are inspected at least daily to ensure timely maintenance and repair of those controls.	
EPA 6a	Fuel, Lubricants and Chemicals: The proponent be required to ensure that all deliveries to the development site are made under direct supervision by appropriately trained and equipped personnel: (a) to minimise the risk of any spill during a delivery, and (b) to expedite containment and clean up in the event of any spill.	Noted.
EPA 6b	The proponent be required to ensure that all fuel, lubricants and chemicals used on the development site are: (a) stored as far away as practicable from overland flow paths to stormwater, and (b) stored within a roofed and bunded storage compound secured against unauthorised entry.	Noted.
EPA 7a	Waste control and management (concrete and concrete rinse water) The proponent be required to ensure that concrete waste and rinse water are: (a) not disposed of on the development site, and (b) prevented from entering waters, including any natural or artificial watercourse.	Noted.
EPA 8a	 Waste control and management (general) The proponent be required to ensure that: all waste generated during the project is assessed, classified and managed in accordance with the EPA "Waste Classification Guidelines Part 1: Classifying Waste", November 2014 and the 2016 Addendum thereto; 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 	Noted.

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	mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.	
EPA 9a	Operational phase:	Noted.
	The EPA considers that environmental impacts that arise once the development is operational should be able to be largely averted by responsible environmental management practices, particularly with regard to:	
	(a) feasible and reasonable noise mitigation measures;	
	(b) waste management in accordance with the waste management hierarchy;	
	(c) water sensitive urban design; and	
	(d) energy conservation and efficiency.	
EPA 10a	Operational Phase Noise impacts: That the proponent be required to further support operational noise assessment criteria derived from the existing noise monitoring presented in Appendix T to the EIS with additional noise monitoring at a location consistent with the guidance in the Noise Policy for Industry (EPA, 2017) and the Interim Construction Noise Guideline (DECC, 2007).	A supplementary acoustic response has been prepared by Floth in response to this comment from the EPA (refer to Appendix H).
EPA 10b	The proponent should ensure that the building is constructed in a manner that satisfies the requirements of State Environmental Planning Policy (Infrastructure) 2007 Clauses 87 and 102 as relevant.	Noted.
EPA 10c	The proponent be required to: (a) ensure mechanical plant and equipment installed on the development, where feasible and reasonable, does not generate: (i) noise that exceeds the applicable project noise trigger level derived in accordance with the guidance in the Noise Policy for Industry (EPA, 2017) when measured or assessed at the most affected or potentially most affected noise-sensitive receivers (ii) noise that exhibits tonal or other annoying characteristics.	Noted.

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EPA 11a	Waste Management: The proponent be required to identify and implement feasible and reasonable opportunities for the reuse and recycling of waste, including food waste.	Noted.	
EPA 12a	Water Sensitive Urban Design That the proponent further evaluates: (a) the potential for beneficial reuse of harvested stormwater, including a risk assessment of impacts on human health and the environment from any proposed beneficial reuse; and, (b) the potential for groundwater to be captured in the stormwater system, or in a separate system that may ultimately require discharge from the site (e.g. lift well sumps etc), and an evaluation of potential contaminants of concern and required treatment measures prior to discharge. The Site Audit Statement required under Recommendation 2.1 of this advice should address the potential for groundwater to contain contaminants of concern; and, (c) all discharges to stormwater from the site to ensure that pollution of waters within the meaning of s.120 of the Protection of the Environment Operations Act 1997 does not occur.	Noted.	
EPA 13a	Underground storage tanks (UST) The proponent should be advised that the site is located within the Protection of the Environment (Underground Petroleum Storage Systems) Regulation 2014, Sensitive Zones Map and if any such UST is proposed to be installed on the site to support emergency electrical generation or the like, the system shall satisfy the requirements of the Regulation.	Noted.	
EPA 14a	Radiation Control Act 1990 The proponent should be advised that should research activities / occupancies involve the storage and use of 'regulated material' within the meaning of the Radiation Control Act 1990 that compliance with the requirements of the Act must be met.	Noted.	
Sydney	Sydney Water		

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SW 1a	Water: The property has a frontage to a 200mm watermain in Hassall Street that can provide for the needs of the proposed development.	Noted.		
SW 2a	Wastewater: The existing 150mm wastewater main traversing the development site will need to be deviated. Because the development requires adjustment/deviating of a "live" wastewater main, the applicant must engage a Water Service Coordinator (WSC) to manage the adjustment and deviation	Noted.		
Endeavour Energy				
	Various comments raised.	Noted.		