

STRATEGY > DEFINITION > DELIVERY > TRANSITION

Hornsby Ku-Ring-Gai Hospital Stage 2 – State Significant Development Project (SSD 8647)



Response to Submissions Report
NSW Health Infrastructure
26 February 2018

Response to Submissions Report – SSD 8647 – HKH Stage 2 Redevelopment

In respect of SSD 17_8647

Applicant name Health Infrastructure

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Site Description: Hornsby Ku-Ring-Gai Hospital Campus
Palmerston Road, Hornsby

Prepared by APP Corporation Pty Ltd on behalf of Health
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26/02/2018

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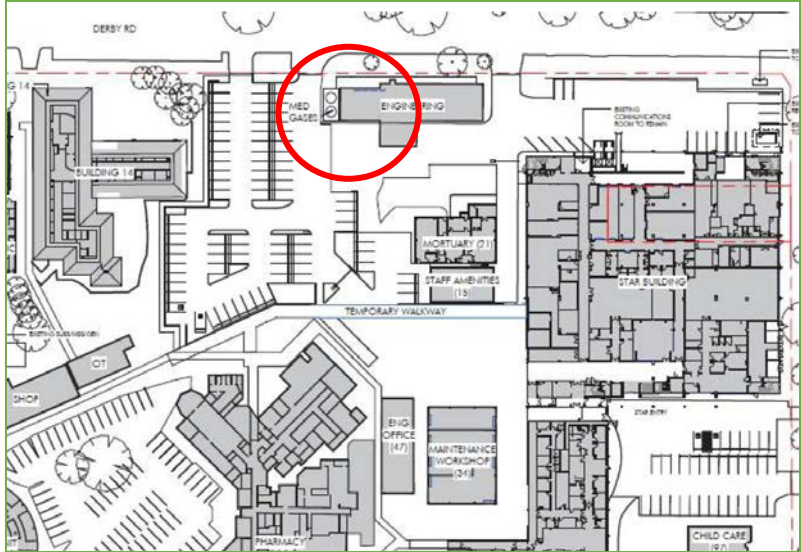
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Executive Summary

This Response to Submissions (RTS) report provides a tabulated response to all matters raised following the public exhibition of the Environmental Impact Statement (EIS) submitted for the Hornsby Ku-Ring-Gai Hospital Stage 2 Redevelopment (SSD 8647). Submissions were made by:

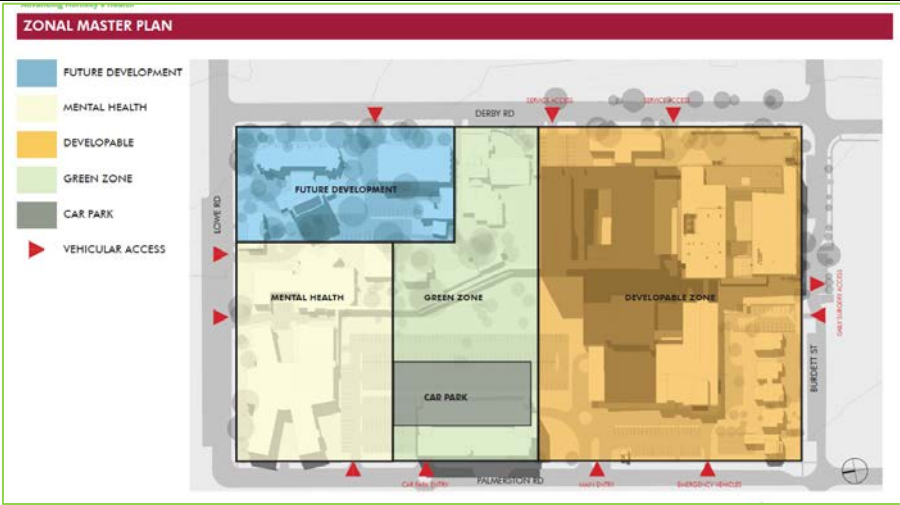
- The Department of Planning and Environment (DPE);
- Environment Protection Authority (EPA);
- Transport for NSW (TfNSW);
- The Government Architect (GA);
- Roads and Maritime Services (RMS);
- Hornsby Shire Council (HSC);
- Public Submissions

This report is supplemented by additional technical reports and plans which have taken into account any concerns raised by the agencies and the public. In addition an updated list of project commitments is provided at **Appendix I** which provides further commitments made by the proponent to mitigate impacts during the construction and operational phases of the project.

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
1.0	NSW Planning & Environment			
1.1	NSW Planning & Environment	Additional information be provided regarding the capacity of oxygen storage tanks on site and prepare a risk assessment as required by State Environmental Planning Policy No 33 - Hazardous and Offensive Development to address the potential hazard, if required.	The existing HKH Campus is supplied oxygen from two on-site bulk liquid oxygen tanks, of 15000 litres and 1500 litres capacity respectively. These tanks are situated adjacent to the exiting engineering building fronting Derby Road. Access is provided from existing gate 7. Figure 1 details the location of the existing / upgraded bulk oxygen store. Figure 1 – Medical Gas Storage 	Appendix B Preliminary Hazard Analysis.

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			It is proposed to replace the existing bulk tanks with new tanks. The capacity of the new tanks will be 30,000 litres and 3000 litres respectively. The new tanks will be situated in the existing compound. The suitability of the proposed location and alternates considered is provided in the Preliminary Hazards Analysis (PHA) provided at Appendix B. In concluding that the existing compound stands as the preferred location within the Campus the PHA makes an assessment of the increased capacity against: - • <i>State Environmental Planning Policy No. 33 Hazardous and Offensive Development;</i> • <i>Applying SEPP 33;</i> • <i>HIPAP No. 4 – Risk Criteria for Land Use Safety Planning; and</i> • <i>Australian Standard 1894 – 1997 The storage and handling of non-flammable cryogenic and refrigerated liquids</i> The report also assesses the storage of other dangerous goods and materials on the Campus. The PHA finds that the proposed development should be deemed to be not potentially hazardous and recommends approval subject to compliance with AS1894. Based on this recommendation, the proposed management and mitigation measures have been updated to ensure the design and construction of medical gas compound is undertaken in accordance with the requirements of AS1894.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
2.0	Government Architect NSW			
2.1	Government Architect NSW	• Demonstrate how the proposal responds to Better Placed in a brief Design Report.	In August 2017, <i>Better Placed – an integrated design policy for the built environment in NSW</i> was adopted. This policy seeks to set a bench mark for delivering the places where the people of NSW work, live and play. The master planning of the HKH Campus and design of the Stage 2 SSD project commenced well before the adoption of this policy. This is reflected in the project specific Secretary’s Environmental Assessment Requirements, which do not reference this document. As such, it is felt that the policy should have only limited application to the proposal. Notwithstanding, it is generally considered that the design development of Stage 2 SSD project embodies the design objectives of <i>Better Placed</i>, while ensuring that the functional objectives of the HKH Campus redevelopment take precedent. A design report prepared by Principle Design Consultants Nettleton Tribe Architecture is provided at Appendix C. This report considers and rationalises the objectives of <i>Better Placed</i> against the design fundamentals for creating a functional and integrated health services facility.	Appendix C – Project Architect Design Response
2.2	Government Architect NSW	• Provide the masterplan referred to in the documents as part of the supporting information.	The concept master plan for the HKH Campus is provided in Figure 2 and in Appendix C. The zonal master plan provided below provides a high level spatial representation on how the HKH Campus will be redeveloped. Figure 2 – Extract from Zonal Masterplan	Appendix C – Project Architect Design Response

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
				
2.3	Government Architect NSW	Clarify information that is provided in response to the SEAR clause 6 Ecologically Sustainable Development. It is the opinion of the GA that this clause has not been satisfactorily addressed.	The Stage 2 SSD project incorporates Environmentally Sustainable Development (ESD) strategies and principles as defined in clause 7(4) of Schedule 2 of the EP&A Regulations, into the scope of the development. In the planning and design of the Hornsby Ku-Ring-Gai Hospital Stage 2 there has been several key guiding documents which inform the implementation of ESD principals within the facility. These include: 1. National Construction Code (NCC) – Section J; 2. Australasian Health Facilities Guidelines (AHFGs), Part E – Building Services	Appendix E – ESD Design Response

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			and Environmental Design; 3. NSW Government Efficiency Resource Policy; and 4. Environmental Planning and Assessment Regulations – Schedule 2. Each of these industry guidelines inform the NSW Health Engineering Services Guidelines which forms the basis for Health Infrastructures approach to design and delivery of ESD initiative in all health facilities. A comprehensive overview of how each of the relevant guidelines have been incorporated into Stage 2 SSD project is provided in Appendix E.	
2.4	Government Architect NSW	Reconfigure the entry to provide increased space for waiting, circulation and for the prioritisation of pedestrian entry (from car park or train station).	The design, as currently submitted, is considered to have sufficient space for waiting, circulation and appropriate connectivity for pedestrians. A detailed response is provided in the Nettleton Tribe Design Advice (Appendix C).	Appendix C - Project Architect Design Response

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
2.5	Government Architect NSW	• Separate pedestrian and vehicle circulation. Remove the car park access road from the southern end of the multi storey car park.	The design of this road is necessary to remain as it provides a direct link inside the site from the Main Entry and ED Entry drop off zones. Once carers have dropped off patients at either entry drop off zones they will need to access the multi storey parking structure, which is done via this link driveway. Not having this linked driveway would force people back out onto Palmerston Road and the re-enter the site at the norther driveway crossing. This would have a negative impact on the traffic flow and also cause confusion and the potential for disorientation. The carpark access road to the southern end of the multi-storey carpark provides for circulation within the Hospital, rather than requiring vehicles to exit the site onto Palmerston Road and re-enter. The circulation within the site allows for efficiency in drop off movements, as drivers are able to drop off passengers and then circulate to the main parking areas (such as the multi-storey carpark).	Appendix C - Project Architect Design Response
2.6	Government Architect NSW	• Improve the quality of the landscape, tree canopy and open space provision and design. Remove or reduce hardstand car parking areas directly adjacent to the foyer and café.	This hard stand car parking area adjacent the café and entry (and ED entry) is largely existing and not proposed to be removed. Removal of these areas will significantly reduce the available car spaces on the site. The available areas have been landscaped have been indicated on the landscape plans prepared. Planting heights along the edges between entry driveways, pedestrian path connecting the multi storey parking structure and outdoor seating area have been designed to create a visual buffer and some separation. The carparking located adjacent to the foyer and café is largely an existing carpark. Removal of this hardstand parking area could result in a loss of approximately 90 parking spaces. This would represent a significant	Appendix C - Project Architect Design Response Appendix F – Landscape Concept Plans

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			decrease in carparking available on site and would result in an overflow of this parking demand into local streets. Through consultation with Hospital users and Hornsby Shire Council, parking is a significant issue in the Hospital's current operation which was why the multi-storey carpark was proposed. Any decrease in available parking on the HKH Campus would negatively impact the users of the Campus and the amenity of local residents. The proposal provides a central core of high quality landscaping through the Campus which will improve connectivity and amenity. The rationalisation of landscaped area within the HKH Campus offers an improved outcome through an improved treatment of open space.	

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2.7	Government Architect NSW	Introduce spatial design strategies to introduce more natural light and where appropriate, natural ventilation.	In considering the GA request, Nettleton Tribe note that: <i>Hospitals (generally) do not employ natural ventilation solutions from an infection control point of view.</i> <i>Where possible natural light has been introduced into patient care areas and patient centric areas, as well as staff amenity areas such as staff/lunch rooms. The design recognises the significant health benefits of access to natural light.</i> <i>The considerations of access to natural light in the design are considerable despite the necessary large deep floor plates that come with health buildings.</i> <i>Where possible, the user journey has access to natural light ... In addition to natural light considerations in the design, there have been a number of courtyards and outdoor spaces provided. Whilst the building cannot be naturally ventilated, it is recognised best practice that patients who get direct access to outside air have better health outcomes and faster recovery times.</i> The design response provided at Appendix C includes a detailed overview of the key elements of the Stage 2 SSD building with respect to access to natural light and ventilation.	Appendix C - Project Architect Design Response

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
2.8	Government Architect NSW	Provide safe, accessible and pleasant through-site links.	As reflected in the Project Architect Design Response (Appendix C) and landscape concept plans provided below and in detail at Appendix F, external flow diagrams provided show the landscape design and link way (North/South) maintain the existing through site links from the mental health building and also through from Building 14 on Derby Road. These new paths and links have a visual connection to the landscape, are covered and provide well lit, safe access. Figure 3 – Landscape Concept Plan  Access to the south of building 14 for public/through site links is not considered safe as this is a necessary service zone for delivery, maintenance staff, gas truck and mortuary pick up.	Appendix C - Project Architect Design Response Appendix F – Landscape Concept Plans
2.9	Government Architect NSW	Reconsider the approach to the public domain at all streets, but specifically Derby Rd.	Derby Road currently performs as a back of house entrance. The portion of the Stage 2 project interfacing with Derby Road is very much serviced based and aligns with the existing operations situated on Derby Street	Appendix F – Landscape

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			(Engineering Services). Screening and landscaping has been implemented along this frontage to assist in the separate of the residential area from this part of the hospital. This detail is reflected in the landscape concept plans provided at Appendix F .	Concept Plans
2.10	Government Architect NSW	• Provide a public domain strategy overlay to the site planning of the campus as a whole. Show how the public hospital will provide public amenity and community support that aligns with and supports the primary function of health care.	The Stage 2 SSD project will provide for the delivery of a central landscaped core throughout the campus. This core will provide connectivity though the campus while improving amenity. Importantly it will integrate with the main hospital entry and street entry. There is sufficient space to provide opportunity for patients, staff and visitors for informal uses such as lunch, reading, and relaxation away from the confines of the hospital building.	Appendix F – Landscape Concept Plans
2.11	Government Architect NSW	• Show how the overshadowing to Stage 1 building will be mitigated or removed.	Principle Design Consultant Nettleton Tribe offer the below advice with respect to overshadowing and solar access: <i>It was a consideration at the master planning phase and also with the DA for Stage 1 that the southern portion of the site have a building mass that reduced in scale to minimise the overshadowing (of Stage 1) to Burdett Street residences to the south. This is shown in the Stage 1 building form. Stage 2 also houses a significant increased number of services and is therefore another storey higher than the norther wing of Stage 1. It should be noted that the level 1 and level 2 functions of Stage 1 building which have this greater overshadowing impact are the kitchen and Operating theatres. Level 3 and 4 house the inpatient units and are less impacted be overshadowing. Additionally, the courtyard proposed between the Stage 1 and Stage 2 is 16.5m wide providing an appropriate building separation. This is reflected in the updated shadow diagrams provided in Appendix C.</i>	Appendix C - Project Architect Design Response

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2.13	Government Architect NSW	Provide landscape plans for the open courtyard spaces within the Stage 2 building. Provide access from internal spaces to this courtyard and the rooftop at Level 3.	Updated landscape plans are provided at Appendix F which detail the proposed treatment of the open courtyard areas.	Appendix F – Landscape Concept Plans
2.14	Government Architect NSW	The location of the main entry should be reconsidered or additional entries provided that respond to the needs of visitors and staff arriving from the north and the east (from a future through site link). More space should be given around the main entry both inside and outside the building.	The Nettleton Tribe Design Report offers the below advice concerning the design rationale relating to the main hospital entry: <i>The main entry and emergency entry are both clearly identifiable from Palmerston Road from both a car and pedestrian approach. The priority at the entry has to be balanced between pedestrian and car, the requirement to get the car drop off point as close to the main entry doors as possible is to minimise distance of travel for less mobile people; many of the patients/outpatients are significantly less mobile.</i> <i>The main pedestrian approach from Palmerston Road is via a landscape area located between the main vehicle entry and the multi storey car park. This landscape zone has sufficient width (up to 20m) to provide separation from vehicles. There is a crossing on this pedestrian entry pathway across a one-way link driveway.</i> <i>There are 2 existing pedestrian entry points on Palmerston Road that are maintained, one at the emergency entry and the other at the mental health building at the northern end of the site.</i> <i>Vehicles access the site from Palmerston Road and drop off at either the main entry or emergency entry. Once carers have dropped off patients at either entry they will access the multi storey parking structure, which is done via the one-way link driveway. Once the car has dropped off the patient it is expected that the carer will park the car and return to then assist the patient. The link driveway means vehicles do not go back out</i>	Appendix C - Project Architect Design Response

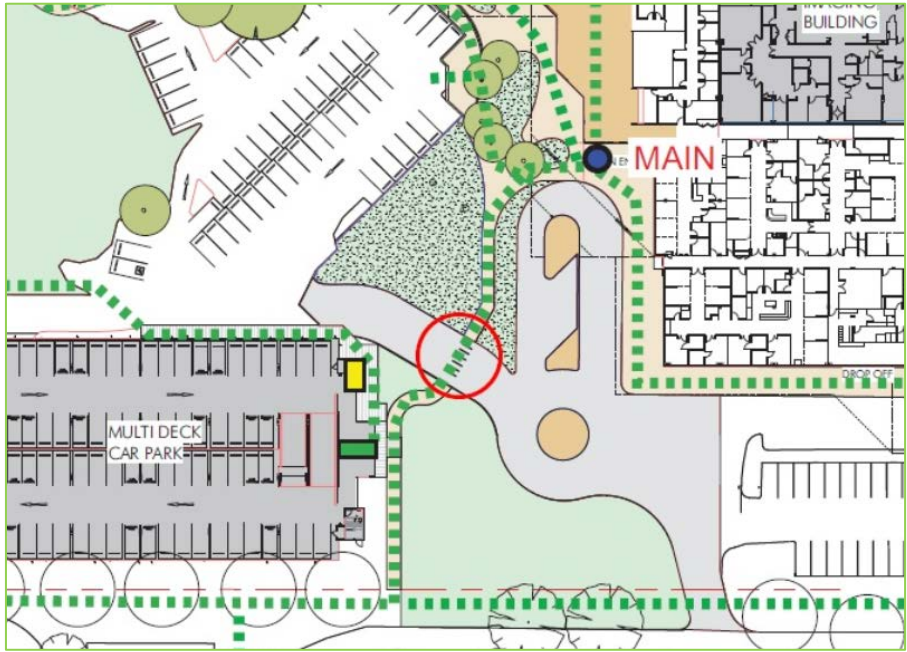
ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			<i>onto Palmerston Road and the re-enter the site at the norther driveway crossing. This would have a negative impact on the traffic flow and also cause confusion and the potential for disorientation.</i> Having regard to the above, it is considered that the proposed main entry stands as being an appropriate response to the needs of the HKH Campus.	
2.15	Government Architect NSW	State which of the Green Travel Plan recommendations the HKH project will adopt as firm commitments. Remove wording such as 'could be encouraged' and replace with 'are committed to'.	The Green Travel Plan submitted intends to provide realistic mode share targets with these issues. It is not intended to be a static document, but the actions and targets listed are intended to be periodically updated and adjusted. Commitment to the actions detailed within the Green Travel Plan will require further consultation with the NS LHD and the Hospital user groups and will be further developed once the redevelopment is in operation.	
2.16	Government Architect NSW	1. Better Fit The Hornsby Ku-ring-gai Hospital is located within a low density suburban context. The proposal should sensitively address this context and the challenges presented by the differences in scale and usage. It is understood that some decisions regarding massing and height have been made to reduce the amount of overshadowing of single dwelling houses to the south on Burdett St. The height and scale in relation to Derby Rd has not been sensitively considered, despite a set back from that street and will create a shadow across the Derby Rd Houses in the afternoons. In general, the Derby Rd street frontage is treated as a	As outlined in the EIS, the proposal stands as an appropriate response to its surrounds. The scale of the Stage 2 building steps up from Stage 1 in an established benchmark whereby the Stage 1 building is reduced in height to the southern boundary along Burdett Street. Stage 1 was designed this way in height and scale to reduce the overshadowing of the properties to the south across Burdett Street. Stage 2 sits higher but does not contribute to any further overshadowing to the Burdett Street properties. This is detailed in the shadow diagrams provided in Appendix C.	Appendix C - Project Architect Design Response

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		service entrance and provides no transparency, through site links or positive contribution to the public domain as should be expected from a public institution. The Palmerston Rd street frontage provides the main entry to the campus. This frontage appears to be dominated by driveways and car parking, including a 6 storey car park. The primary entry to the site does not relate to the likely arrival patterns by bus or by walking. Pedestrian access is shown adjacent to the approved multi-storey car park.		
2.17	Government Architect NSW	2. Better Performance The Green Travel Plan as summarized in the EIS is unambitious. The hospital has very low number of people arriving by any other mode than private car. The opportunity exists to improve this to a much higher degree than the Green Travel Plan proposes, especially for staff. The hospital should commit to the actions and recommendations within the Green Travel Plan as a minimum. The Green Travel Plan suggests on that the recommendations be considered. There is little information regarding the ESD strategy for the campus. The EIS states that on-site energy generation forms part of the	Refer to response in Item 2.15 (Green Travel Plan) and Item 2.3 (Energy Efficiency) .	

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		proposal. Detail should be provided for this element. There is little information regarding the ESD strategy for the campus. The EIS states that on-site energy generation forms part of the proposal. Detail should be provided for this element. The proposal shows extremely large floor plates with a great number of rooms and corridors having no access to natural light. In some cases, within the hospital context this may be appropriate however the long-term effects on energy use and staff and patient health and wellbeing is well documented and should be considered. As a whole, campus issues relating to energy use and production, heat island effects, embodied energy, longevity and other issues of ecologically sustainable development are minimally addressed. The approach to Water Sensitive Urban Design is inadequate. No strategy has been identified in this review which talks about 'minimisation of hard structures to control stormwater and improve aesthetic and environmental appeal'. (definition of WSUD from EIS appendix I: Integrated Water Management Plan)		

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2.18	Government Architect NSW	3. Better for Community Hornsby Ku-ring-gai Hospital is a public facility that supports the health needs of the community. Given that it is a large campus located within a residential zone there is the potential for a more co-operative role to be played between the hospital and the local community in the provision of open space, retail facilities, through site links and other shared uses. The HKH campus is not within walking distance of a train station although three stations are relatively proximate (Hornsby 1.5km, Waitara 1.8km and Asquith 2 km). The challenges of this location should be addressed within the masterplan and Staged proposals in relation to pedestrian access, future and current bus stops, bicycle facilities and placement of entrances as proximate to the stations as is possible within the site. The hospital campus appears to take an inconsiderate approach to the streets and public domain around it. There are many opportunities for improving the public domain at the boundaries and within the campus. Through site links should be provided. Hardstand car parking should be removed from opposite the main entrance and replaced with	The proposal will successfully integrate with available modes of public transport, and will be developed in conjunction with the approved multi – storey car park. The landscape response, as provided in Appendix F, and the Zonal Master Plan (Appendix C) details the provision of clear pedestrian links throughout the campus which integrate well with the network external to the site.	

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		landscaped area that is publicly accessible. Retail facilities that will benefit both the hospital and the local residents should be considered and located in publicly accessible parts of the site.		
2.19	Government Architect NSW	4. Better for People The HKH offers little opportunity for passive surveillance of spaces in the public domain, either on the street or within the campus. Circulation is unresolved and confusing which will contribute to safety issues around the campus. Pedestrian pathways and vehicle access are forced to cross over each other. The vehicle entry to the car park should be removed from the south side.	From the multi storey car park to the main entry there is a designated pedestrian flow which is largely separated from cars. There is the need to cross a single way drive aisle. This is detailed in the below figures:	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			Figure 4 – Pedestrian Circulation 	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			Figure 4a – Connecting Pathway and Covered Drop Off Point  The priority at the entry has to be balanced between pedestrian and car, and it is a valid requirement to get the car drop off point as close to the main entry doors as possible. This is valid as many of the patients/outpatients are significantly less mobile. Once the car has dropped off the patient it is expected that the carer will park the car and return to then assist the patient. It is unclear what the requested increase space for waiting is serving, and if this is referring to internal or external waiting. Hospitals have planned arrivals and unplanned arrivals. Unplanned admissions occur through the ED, which has a designated waiting area. This entry is deliberately and specifically separated from the main entry; this fact is following good hospital design practice.	

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			The main entry 'waiting' area requested would not meet the operational objectives for the Hospital. There are seats at the main entry door overlooking the drop off zone to facilitate people waiting whilst a carer brings the vehicle to pick up. There are also some waiting chairs located directly outside the liaison office, also located only a few metres from the front doors and reception desk. Otherwise it is the overwhelming requirement of the hospital users that patients and relatives do not wait directly in the entry to the hospital. There is a large café and seating zone within sight of the main entry and located in between the main entry and the main public lifts/stair. This provides a significant amenity to the hospital and the users. It should be noted that the design has separated the café use from the seating; whilst belong to the same space and visually connected it is the case that patients, visitors and staff do not have to be a customer of the café to sit in the seating area. This seating area also has a direct connection to the outside with more seating. The outside spaces also face north with large roof overhangs to provide significant shading during summer. The hospital design will employ wayfinding to direct visitors to their destination. The largest cohort arriving to the hospital in a planned manor will be the outpatients, who are directed to the outpatients' area. This is located in direct line of sight of the main entry doors deliberately for ease of getting people to this point. There is a large waiting area here, however with the use of "Q Flow" outpatients will be directed with their individual patient journey flow, and are able to wait in the waiting area, hospital street or café. Additional information has been provided in Appendix C to better describe all of the amenity that will be available in the hospital from the main entry	

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			doors, café, ambulatory care waiting area and the main street seating linking back to the STAR entry. Within the design there is already significant seating quantities to cover the future needs of the hospital.	
2.20	Government Architect NSW	5. Better Working It is understood that the functioning of a hospital is highly complex and specialized and that within a hospital there are spaces that function best with no natural light, ventilation or views to the outside. However, as a working environment it is clear that the staff of this hospital will experience many long windowless corridors, workstations with no natural light or view to the outside and complex circulation. These issues are in some places the result of the decision to surround existing built form with new buildings. This offers efficiencies of construction but creates extremely large building footprints. This is not supported. The drop off and pick up areas appear to have insufficient space outside the building for waiting and for circulation in to the main entry. The location of this entry does not respond to the needs of visitors and staff arriving from the north and the east (from a future through site link).	Refer to Item 2.7 and 2.14.	

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		The courtyard type proposed for the Stage 2 Main Building is supported as a strategy for providing light to internal spaces however no information has been provided on how this area will be designed to provide a pleasant aspect for the rooms adjacent and looking down into this space. It is not clear how these outdoor spaces will be accessed or used. This should be addressed.		
2.21	Government Architect NSW	6. Better Value The building of this hospital should provide many opportunities for creating value. A new hospital should be a significant piece of public architecture that supports the community in multiple ways for many decades into the future. For public buildings, it is of particular importance that cost concerns are balanced carefully with the requirement of delivering good design outcomes and the provision of long term value. Please refer to the section on Better for Community and Better Working for areas in which we feel this building has potential for improvement.	Refer to Items 2.14 and 2.20.	
2.22	Government Architect NSW	7. Better Look and Feel The stated aesthetic strategy, being the interpretation of the bark of the angophora tree is not convincingly delivered. The look and feel of this building should carefully respond to the	The aesthetic of the bark of the angophora tree was a design feature of the car park (approved under separate DA and under construction). The art screen motif is tree like in the forms that Jade Oakley, the Artist, has developed. This screen forms part of the Stage 2 proposal. The	Appendix C – Project Architect

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		issues created by the differences in scale and in usage that are produced by having a large hospital campus within a predominantly single story residential area. It is accepted that the height and mass will be significantly different from the surrounding area so therefore its status as a landmark should be acknowledged and designed for. The entry and areas adjacent to the foyer spaces are protected by large upward sloping roofs. These roofs provide wayfinding and shelter and their general style and form is supported. Some further development of these elements could resolve the intersection or overlap between the two roofs. These roofs also obscure the art wall. It is recommended that the wall be re-located or the roofs redesigned so that this element is more visible.	connection of this art screen form and the angophora screen of the car park is not intended to be a direct correlation, rather that both have drawn references from natural forms and those natural forms both reference the angophora trees that once stood on the site albeit in different ways. The screen also has the effect of reducing the bulk and scale through providing a central break in the façade. This causes the building to appear as having three levels rather than five.  Figure 5 – Main Hospital Entry	Design Response

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			The location of the art screen is wrapping the main circulation stair. The location of this stair and public lift is directly on the main north/south corridor. The screen is visible from the ground plane on approach to the hospital on foot/by car. When the users pass under the main entry roof forms, it is true that the screen will not be seen, however as you enter the building the screen is again visible as it comes down to the ground plane. Every user of either the public lifts or stair will experience the screen from the inside.  Figure 6 – Art Screen Wrapping This sequence is deliberate of seeing the screen from a distance, at the entry and again as the users travel up the main public vertical circulation.	

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			Visual studies have been done to ensure that this artwork is seen from as many points and aspects as possible. It is done this way to provide an identifiable wayfinding anchor point in the users experience and journey through the hospital, from entry into the site, parking the car, approaching the building on foot, entering the building and circulating through the building. And then in reverse as they leave they have this reference point. The design of the roof forms kicking up provides an opening up and welcoming gesture at the entry. Whilst the kicking up does obscure the artwork from some points, it is not necessary that the artwork is always seen.	
3.0	NSW EPA			
3.1	NSW EPA	Additional detailed assessment of potential site contamination, including information about groundwater.	Supplementary advice is provided by Douglas Partners (Appendix G), who confirm that progressive targeted contamination assessments of the soils underlying the building footprints are proposed to be undertaken as buildings are demolished and areas become accessible for investigation. The project commitments have been updated specifically to include this recommendation. With respect to groundwater, Douglas Partners have undertaken a review of previous investigations, notably DP report '<i>Report on Preliminary Geotechnical Investigation, Proposed Hornsby Hospital Stage 1 Redevelopment, 109 Burdett Street, Hornsby</i>', dated August 2013 (DP ref: 73224.02.R.001.Rev0). A copy of this report is provided at Appendix G. These investigations note the absence of groundwater within the soil profile and seepage through the bedrock is consistent with the hospital	Appendix G – Supplementary Groundwater Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
			sites local topographic high at around RL 182 m. Viz. the presence of a groundwater table (if present) would be at depth well within the bedrock. Douglas Partners note that : <i>Given the generally low concentrations of chemical contaminants previously recorded on the site, coupled with the low permeable clays and groundwater table being at depth within the rock profile, the potential impact on groundwater from contamination in the fill and site activities is considered to be low.</i> Douglas Partners conclude that further assessment of groundwater for contamination purposes is not considered warranted at this time. Notwithstanding, recommend that should contamination issues be identified during the already proposed targeted contamination investigations that may suggest a potential for impact on groundwater, then groundwater quality would be investigated as part of these investigations. Similarly, should any changes to the project occur which would involve dewatering or intersection of the regional groundwater table, groundwater quality investigations would also be undertaken. The project commitments and mitigation measures have been updated to include these recommendations.	
3.2	NSW EPA	The proponent be required to undertake a hazardous materials survey of buildings and infrastructure prior to commencing any demolition or construction work.	Health Infrastructure will undertake a hazardous materials survey of buildings and infrastructure prior to undertaking demolition works. This is reflected in the updated project commitments and mitigation measures.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.3	NSW EPA	The proponent be required prior to commencing any demolition or construction work, to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including – (i) asbestos containing materials, (ii) lead-based paint, and (iii) PCBs	A draft Construction Environmental Management Plan (CEMP) has been prepared which includes measures to identify and appropriately manage hazardous building materials during construction (e.g. unexpected finds) The appointed contractor will develop a final CEMP which will include protocols for identifying, managing and handling unexpected finds.	
3.4	NSW EPA	The proponent be required to ensure that following demolition of any existing structures and in ground utilities further investigation be undertaken of soil contamination within the footprint of those structures and utilities prior to undertaking any construction.	Progressive targeted contamination assessments of the soils underlying the building footprints shall be undertaken as buildings are demolished and areas become accessible for investigation. The project commitments and mitigation measures have been updated to reflect this requirement.	
3.5	NSW EPA	The proponent be required to satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 ‘asbestos wastes’.	A draft Construction Environmental Management Plan (CEMP) has been prepared which includes measures to identify and appropriately manage hazardous building materials during construction including asbestos. The appointed contractor will develop a final CEMP which will include protocols for identifying, managing and handling asbestos in accordance with the POEO (Waste) Regulations.	
3.6	NSW EPA	The proponent be required to consult with Safework NSW concerning the handling of any asbestos waste that may be encountered during the course of the project.	The final CEMP will include requirements to consult with Safework NSW. The project commitments and mitigation measures have been updated to incorporate this requirement.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.7	NSW EPA	The proponent be required to provide a copy of the validation report prepared in accordance with the requirements of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 following removal of a de-commissioned Underground Petroleum Storage System during Stage 1.	A copy of the validation report prepared in association with the removal of the UPSS as part of the Stage 1 development is provided at Appendix H .	Appendix H - UST Removal and Validation Report
	NSW EPA	Noise and Vibration		
3.8	NSW EPA	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 sensitivereceivers such as surrounding residences and child care centres are only undertaken during thestandard 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.	The proponent wishes undertake construction works from: - 7am – 6pm Monday to Friday; and - 7am – 3:30pm Saturday. No work is proposed on Sundays or Public Holidays. These hours generally align with the approved hours of operation prescribed for the Multi-Storey Car Park project. The proposed construction hours are consistent with the Noise Impact Assessment and do not require any additional mitigation measures when compared to operating under the EPA standard construction hours. . This should be reflected in the conditions of consent. The standard construction hours would be documented in the final CEMP prepared prior to the commencement of construction.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.9	NSW EPA	The proponent be required to schedule intra-day 'respite periods' for all demolition, site preparation, bulk earthworks, construction and construction-related activities identified in section 4.5 of the Interim Construction Noise Guideline as being particularly annoying to noise sensitive receivers, including surrounding residents.	Consulting acoustic consultants (Acoustic Logic) do not support the blanket adoption of respite periods based on equipment selection however recommend that in the event that construction noise is expected to exceed the Highly Noise Affected noise threshold, respite periods should be adopted for those work activities.	Appendix J – Revised Noise Impact Assessment
3.10	NSW EPA	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.	The final CEMP will adopt this recommendation.	
3.11	NSW EPA	The proponent be required to consider undertaking a safety risk assessment of demolition, 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.	The final CEMP will adopt this recommendation.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
	NSW EPA	Dust Control and management		
3.12	NSW EPA	The proponent be required to: (a) minimise dust emissions on the site, and (b) prevent dust emissions from the site.	The final CEMP will include measures to manage dust emissions during construction.	
	NSW EPA	Waste control and management (general)		
3.13	NSW EPA	The proponent be required to ensure that : (1) all waste generated during the project is assessed, classified and managed in accordance with the “Waste Classification Guidelines Part 1: Classifying Waste” (Department of Environment Climate Change and Water, December 2009); (2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and (3) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.	All waste generated from the project will be assessed, classified and managed in accordance with the ‘Waste Classification Guidelines Part 1: Classifying Waste’. The requirements for all vehicles transporting waste are to be covered before leaving the premises, and for all debris cast off by vehicles leaving the site is to be removed before leaving the premises, can be imposed as conditions of consent on the SSDA.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
	NSW EPA	Waste control and management (concrete and concrete rinse water)		
3.14	NSW EPA	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.	The contractor will be required by their tender contract to remove all construction waste from the site. The Construction Waste Management Plan shall specify any excess concrete that cannot be reused on site will generally be arranged for disposal to a recycling facility or disposal offsite.	
	NSW EPA	Noise and vibration impacts		
3.15	NSW EPA	EPA comment:- The EPA raises concerns about the noise monitors being located on the hospital premise rather than at the residential receivers, and that the measured noise levels are not representative of the existing acoustic environment at the residential receivers.- In addition, the EPA has requested details of the attended noise monitoring conducted at site.	An updated Noise Impact Assessment has been prepared by Acoustic Logic to take into account the feedback provided by the NSW EPA and the outcome of additional attended noise monitoring undertaken in January 2018. Specifically the NIA has been updated to include: • Amending measured background noise levels and consequently the amenity criterion for receivers on Burnett Street, Derby Road and Palmerston Road; • Amending the report to incorporate data from the Terry Hills station; • Confirmation that unattended monitoring for an appropriate period (1 week) has been undertaken, taking into account periods of unacceptable meteorological conditions; • Clarification on provision of meteorological data; and • Provision of calibration certificates for noise monitoring equipment;	Appendix J – Revised Noise Impact Assessment

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.16	NSW EPA	The EPA expresses concerns that one week of valid data has not been provided given that the data from the Burdett Street monitor on the evening of the 6th June and all the 7th June are affected by adverse weather. In addition, the EPA also questions why weather data from the Observatory Hills weather station has been used instead of from the Terrey Hills station, which is closer to the site.	As per Item 3.15 .	Appendix J – Revised Noise Impact Assessment
3.17	NSW EPA	A potential error in Appendix 2 (titled Noise Monitoring Along Derby Street) of the SSD Acoustic Assessment was noted by the EPA where the Burdett Street noise monitoring data had been inserted rather than the Derby Street data.	As per Item 3.15 .	Appendix J – Revised Noise Impact Assessment
3.18	NSW EPA	The EPA has raised the following concerns with respect to the noise monitoring graphs in Appendices 1-3 of the Acoustic Assessment: (a) the legends to some monitoring graphs appear to be misaligned (e.g. wind speed, rain period), (b) the legends to monitoring graphs includes a blue marker for 'rain period' and although rain was observed on several days during the various monitoring periods (i.e. 24 May to 7 June 2017), no rain periods are represented in the graphs, and	As per Item 3.15 .	Appendix J – Revised Noise Impact Assessment

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		(c) some of the monitoring graphs include sections of red highlight, but there is no red marker in the legend to those graphs to identify the meaning of those red highlighted periods, and (d) Appendix Q does not appear to identify when noise monitoring loggers were last laboratory calibrated which brings into question reliability of the recorded data.		
3.19	NSW EPA	The proponent be required to undertake noise background noise monitoring and report the results of that noise monitoring in accordance with the guidance material provided in the New South Wales Industrial Noise Policy and the EPA's application notes thereto, including inter alia: (a) the equivalent of a week's worth of valid data, measured at the potentially most affected noise sensitive receiver locations in Burdett Street, Derby Street and Palmerston Road; and (b) the results of attended monitoring, graphical results of unattended monitoring with a complete and accurate legend together with a table of assessment background and daily ambient levels.	As per item 3.15.	Appendix J – Revised Noise Impact Assessment

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.20	NSW EPA	The proponent be required to: (a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially surrounding residences, child care centres and places of public worship; (b) ensure mechanical plant and equipment installed on the development site does not generate noise that – (i) exceeds 5 dBA above the rating background noise level (day, evening and night) measured at the western boundary of the development site, and (ii) exhibits tonal or other annoying characteristics; (c) undertake compliance noise monitoring during commissioning of stage 2 to confirm that the operation of mechanical plant and equipment, including emergency back-up generators, does not emit noise in excess of the criteria referred to in preceding paragraph (b); (d) undertake compliance noise monitoring during commissioning of stage 2 to confirm that the reversing of ambulances and other emergency vehicles within the hospital campus	With respect to the EPA request, Acoustic Logic advise that: Recommendation A <i>“is an unreasonable request as this requires that comprehensive mechanical design to be conducted prior to it being even possible to commence a comprehensive acoustic assessment of that design.- For a project of this scale (or almost any project in our experience), a comprehensive mechanical services design is never undertaken at project approval stage.- It is typical practice that a condition of consent be imposed on a development (such as that outlined in part (b) of the recommendation) to control noise emissions from mechanical plant and equipment.- There is nothing about the subject site that indicates that compliance with these requirements is not achievable. The site area is large, and there are typically moderate separations between the site buildings and nearby residences.</i> Acoustic logic note that this process is routinely undertaken after approval and given the circumstances of the project would be an acceptable outcome. The project commitments and mitigation measures have been updated to include commitments for compliance noise monitoring during and after construction.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		does not emit noise that would interfere unreasonably with the comfort or repose of – (i) residents of Burdett Street and Palmerston Road, or (ii) worshippers at Waitara Anglican church; and (e) implement all such feasible and reasonable noise mitigation and management measures as may be necessary to minimise the impact of noise on surrounding residences, child care centres and places of public worship.		
3.21	NSW EPA	The proponent be required to ensure waste collection services are not undertaken outside the hours of 7.30 am to 6.00 pm Monday to Saturday.	The Operational Management Plan adopted for the HKH Campus shall be updated to include protocols to require the collection of waste during the hours of 7.30 am to 6.00 pm Monday to Saturday.	
3.22	NSW EPA	The proponent be required ensure grounds maintenance involving the use of powered equipment is not undertaken outside the hours of 7.30 am to 6.00 pm Monday to Friday.	The Operational Management Plan adopted for the HKH Campus shall be updated to include protocols to limit the use of powered ground maintenance equipment during the hours of 7.30 am to 6.00 pm Monday to Saturday.	
	NSW EPA	Waste Management		
3.23	NSW EPA	The proponent be required to identify and implement feasible and reasonable opportunities for the reuse and recycling of waste, including food waste.	Noted and Accepted.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.24	NSW EPA	The proponent be required to properly classify and manage clinical and related waste in accordance with the EPA's Waste Classification Guidelines.	Noted and Accepted.	
3.25	NSW EPA	The proponent be required to ensure that the occupier of the hospital prepares and implements a revised waste management plan, in respect of clinical and related waste generated at the development site in accordance with the publication entitled Waste Management Guidelines for Health Care \Facilities (ISBN 0 7313 4060 4), issued by NSW Health in August 1998.	Noted and Accepted.	
3.26	NSW EPA	The proponent be required to apply for and obtain any necessary amendment to the 'radiation management licence' currently held under the name of the Northern Sydney Local Health District in respect of regulated material at the new facilities and the management and handling of any waste containing radioactive material.	Northern LHD have an existing radiation management licence and will apply for an extension to comply with these requirements. The project commitments and mitigation measures have been updated to include this requirement.	
	NSW EPA	Back-up Generator and Underground Petroleum Storage System		

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
3.27	NSW EPA	The proponent be required to clarify – (a) whether it designed, installed and operates any underground petroleum storage system to fuel the back-up emergency power generator proposed to serve stage 2 of the hospital redevelopment, and (b) provide details of the location, design and installation of any such underground petroleum storage system.	No underground petroleum storage system is provided or proposed to be installed to serve Stage 2, or any other part of the HKH Campus.	
	NSW EPA	Water Cycle Management		
3.28	NSW EPA	The proponent be required to provide a detailed assessment of the range of practical measures proposed to be adopted to minimise the consumption of potable water.	Consulting Engineers TTW advise that: <i>The current civil engineering drawings do comply with this recommendation. However, Health Infrastructure guidelines do not allow water reuse and therefore none is proposed.</i> Notwithstanding, it is proposed for all fittings and fixtures will be WELS star rated, the installation of water saving taps and outlets to reduce water consumption. The following ratings will be adopted: • 4 WELS stars rated dual flush toilets • 4 WELS stars rated tapware • 3 WELS stars rated shower	Appendix L – Supplement ary Traffic and Transportati on Advice
	NSW EPA	Energy Conservation and efficiency		
3.29	NSW EPA	The proponent be required to provide a detailed assessment of the range of passive and	Refer to Item 4.	Appendix E – ESD Design Response

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		active measures proposed to maximise energy efficiency and minimise energy consumption.		
4.0	TFNSW	Capacity of intersection		
4.1	TfNSW	- On pg 45 of the Transport and Accessibility Assessment report, it stated that “the intersection of Palmerston Road/Northcote Road will operate at capacity post development”. However, Table 15 indicates the intersection operates at Level of Service A for both AM and PM Weekday Peak post development. - Edgeworth David Avenue is a classified regional road. The Transport and Accessibility Assessment report indicates the intersection of Edgeworth David Avenue/Myra Street/Palmerston Road operates unsatisfactorily pre and post development, due to the fact that it is a major route in the road system that largely used by locals and through traffic. Council and Roads and Maritime Services should be consulted in this regard.	Consulting Traffic Engineers TTW provide the following advice to clarify the concerns of TfNSW: <i>The intersection of Palmerston Road and Northcote Road will operate at a Level of Service A post development. The intersection of Northcote Road and Sherbrook Road is expected to operate at capacity post development.</i> <i>While it is noted that the traffic modelling indicates that the eastern leg of the intersection will operate at a Level of Service E post development, given the nature of the development a number of assumptions have been employed during the traffic modelling process. It is important to note that the modelling represents a conservative scenario where the peak hour of the Hospital coincides with the peak hour of the surrounding road network. This does not account for shift work common at the Hospital (where the peak demand occurs off peak at 1:30 to 3:30pm).</i> <i>Council has provided their comments with regards to the intersection of Edgeworth David Avenue/Myra Street/Palmerston Road which have been further discussed elsewhere within this letter (See Appendix L). RMS has stated that there is unlikely to be a significant traffic impact by the redevelopment on the classified road network.</i> On this basis no further consultation with Council or RMS is proposed concerning the operation of this intersection.	Appendix L – Civil Engineering Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Preliminary Green Travel Plan		
4.2	TfNSW	TfNSW acknowledges that the submitted Green Travel Plan for the proposed development is considered preliminary in nature. The subject application should be conditioned to provide and implement a comprehensive Green Travel Plan that includes, but not limited to, the actions and recommendations identified in the preliminary Green Travel Plan and to be updated on a regular basis as part of the ongoing operation of the hospital.	Health Infrastructure raises no objection to the continual updating of the Green Travel Plan to meet the changing needs of the HKH Campus.	
		Construction Vehicle Access Routes		
4.3	TfNSW	- The Preliminary Construction Traffic Management Plan appreciates the potential hazards and avoids the construction routes from high pedestrian activity at the nearby medical centre and childcare facilities, and also the school zone near the intersection of Edgeworth David Avenue, Myra Street and Palmerston Road. - As an alternative, the construction route passes through Lowe Road which runs along the frontage of James Park. It should be noted that James Park is a sportsground site that is used by Hornsby Ku-ring-gai and Hills District Cricket Association and Northern Suburbs Football	TTW make the following recommendations which should be incorporated into the final CTMP. This plan shall be adopted by the contractor: <i>To avoid the nearby medical centre and childcare facilities, it will be necessary for construction vehicle traffic to travel along Lowe Road during weekdays. It is noted that the Stage 1 Redevelopment of the Hospital utilised the same access route. During the preparation of the final Construction Traffic Management Plan, it is recommended that the contractor consult with Council to take into account the use of adjacent sport fields on Saturdays and determine the most appropriate vehicle route at this time.</i> This plan would be submitted to the relevant certifying authority prior to the commencement of works.	Appendix L – Supplement ary Traffic and Transportati on Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Association for cricket and soccer for junior and lower grade teams. • The Preliminary Construction Traffic Management Plan indicates site works will be undertaken on weekdays (7am to 5pm) and Saturdays morning (8am to 12pm) which might potentially coincide with typical weekend sports activities. • It is requested that the detailed Construction Traffic Management Plan, to be prepared in consultation with Council and submitted for their approval prior to any construction activities on-site, should address the aforementioned matter.		
		Road Safety Audit		
4.4	TfNSW	Prior to issue of construction certificate, an independent Detailed Design Road Safety Audit (RSA, refer to NSW Centre for Road Safety Guidelines for Road Safety Audit Practices) shall be undertaken of the proposed modification, notably the access points on Palmerton Road. The proposed design shall address any deficiencies identified within the RSA.	No objection to the provision of a Detailed Design Road Safety Audit of the site. The project commitments and mitigation measures have been updated to incorporate this requirement.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Green Travel Plan		
4.5	TfNSW	As part of the ongoing operation of the hospital, the actions and recommendations identified in the Green Travel Plan at Appendix N of the Environmental Impact Statement for Hornsby Ku-ring-gai Hospital Campus Stage 2, prepared by Taylor Thomson Whitting (NSW) Pty Ltd (24 October 2017), must be implemented accordingly and updated on a regular basis.	Refer to Item 4.2 .	
		Detailed Construction Pedestrian and Traffic Management Plan		
4.6	TfNSW	Prior to the commencement of any construction works, a Construction Pedestrian Traffic Management Plan (CPTMP) shall be prepared in consultation and approved by Council and submitted to the satisfaction of the Certifying Authority. The CPTMP must specify, but not be limited to, the following: (a) assessment of cumulative impacts associated with other construction activities (if any); (b) assessment of road safety at key intersections and locations subject to heavy vehicle movements and high pedestrian activity; (c) details of construction program, the anticipated construction duration and	Health Infrastructure raises no objection to this recommendation forming part of the project approval. It is likely that the CPTMP would form part of the overarching CTMP. The project commitments and mitigation measures have been updated to incorporate this recommendation.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		milestones and events during the construction process; (d) details of anticipated peak hour and daily truck movements to and from the site; (e) details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements; (f) details of temporary cycling and pedestrian access during construction; (g) details of proposed construction vehicle access arrangements at all stages; and (h) traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities.		
5.0	Hornsby Shire Council			
5.1	Hornsby Shire Council	Clause 5.9 of the HLEP preserves the amenity of the area through the preservation of trees and vegetation as administered under Hornsby Development Control Plan 2013.	Clause 5.9 of the HLEP has been repealed. Provisions relating to the preservation of trees in Local Environmental Plans have been replaced by State Environmental Planning Policy (Vegetation in Non Rural Areas) 2017 (The Vegetation SEPP) which applies to development involving the clearing vegetation on land in urban areas and on land in environmental zones.	

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			The provisions of the Vegetation SEPP have been addressed in Section 5.3.11 of the EIS.	
5.2	Hornsby Shire Council	Clause 5.10 of the HLEP sets out heritage conservation provisions for Hornsby Shire.	Refer to Item 5.3 .	
		Heritage		
5.3	Hornsby Shire Council	Council's heritage assessment raises concerns over complete demolition of the Original Hospital Buildings (Building 1, 2 and 3) which are historically and aesthetically significant at a moderate level. Although they are not listed heritage items, they are landmark buildings within the Hornsby Hospital site and a visual representation of the history and foundation of the place. Council would recommend an option be considered to incorporate some of the historic 1933 buildings to be retained within the new design to preserve the social history and aesthetic significance of the place.	Whilst the proposal will result in the loss of original hospital buildings. The heritage values of these buildings have been taken into account and documented in the Statement of Heritage Impact provided at Appendix P of the EIS. The project commitments and mitigation measures allow for an archival recording of these structures. This commitment is consistent with the recommendations provided in the Statement of Heritage Impact and thus satisfies Council's concerns.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Traffic and Safety		
5.4	Hornsby Shire Council	The Transport and Accessibility Assessment (TAA) has mentioned 14m long gas trucks and Heavy Rigid Vehicles (HRV) to service the hospital with swept paths to show these vehicles can access the site. Council's Traffic Branch requires clarification regarding what type of heavy vehicle is a 14m long gas trucks? Council is unaware of this size HRV. Council's Traffic Branch also requires a swept path analysis of the 14m long gas truck accessing the gas storage facility with the proper road geometry (showing full width of road with parking occupancy).	TTW provide the below response to Council's concerns relating to the swept path of HRV delivery vehicles: <i>Council has stated concerns with regards to the 14 metre long gas vehicle. Discussions have been held with the gas supplier (BOC) as part of the Stage 1 Redevelopment with regards to the required vehicle size to service the gas enclosure. We have been advised that BOC use a 14 metre semi-trailer to access the enclosure as a vehicle this size is able to negotiate local roads more easily. In addition to this information, Figure 1 shows the 14 metre long gas truck accessing the existing gas enclosure on Derby Road. Swept paths with this size vehicle have been appended to this letter in Appendix A.</i>	Appendix L – Supplement ary Traffic and Transportati on Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
5.5	Hornsby Shire Council	The intersection of Edgeworth David Avenue/Palmerston Road/Myra Street is identified to be operating at a Level of Service (LOS) F. Traffic Branch has concerns with how the additional traffic will access Edgeworth David Ave via Palmerston Rd. There is an alternative route for motorists heading east/south from the hospital via Balmoral Street to access Edgeworth David Avenue and this is likely to be the preferred route when Palmerston Rd is delayed. However, there are existing traffic facilities on Balmoral Street which need to be removed in order to make Balmoral Street an attractive alternative route. Traffic Branch requests the existing traffic facilities on Balmoral Street to be removed as a condition with the hospital redevelopment proposal. The TAA has identified that the roundabout intersection of Sherbrook Road/Northcote Road is currently operating at LOS A and predicting to operate at LOS E post development in the PM weekday peak. As a result Traffic Branch requests an upgrade of the existing roundabout intersection of Sherbrook Road/Northcote to a traffic controlled signalised intersection.	TTW provide the below response to Council's concerns relating to traffic modelling and traffic controls in Balmoral Road. <i>Council has requested that a condition be made to remove pinch points located on Balmoral Street. The removal of these pinch points was discussed with Council during the development application for the multi-storey carpark (DA/129/2017).</i> <i>It was concluded that as there have been no modelling or traffic counts conducted in this location, there is no justification to remove these thresholds. As part of the consent for the multi-storey carpark, Health Infrastructure has made a commitment to monitor the traffic flow behaviours after the development has been completed and is fully operational.</i> <i>While it is noted that the traffic modelling indicates that the intersection will operate at a Level of Service E post development, given the nature of the development a number of assumptions have been employed during the traffic modelling process. It is important to note that the modelling represents a conservative scenario where the peak hour of the Hospital coincides with the peak hour of the surrounding road network. This does not account for shift work common at the Hospital (where the peak demand occurs off peak at 1:30 to 3:30pm). Given these assumptions, the installation of traffic signals is not considered appropriate.</i> Based on the conclusions made by TTW, it is evident that no upgrades to the local road network are required to accommodate the Stage 2 SSD project.	Appendix L – Supplementary Traffic and Transportation Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Approved Plans and Supporting Documentation		
5.6	Hornsby Shire Council	The development must be carried out in accordance with the plans and documentation.	The project will be subject to crown certification pursuant to Section 109R of the EP&A Act 1979. This requirement will ensure that the project is constructed in accordance with the approved plans.	
		Building Code of Australia		
5.7	Hornsby Shire Council	All approved building work must be carried out in accordance with the relevant requirements of the Building Code of Australia.	Refer to Item 5.6 .	
		Sydney Water – Approval		
5.8	Hornsby Shire Council	This application must be submitted to Sydney Water for approval to determine whether the development would affect any Sydney Water infrastructure, and whether further requirements are to be met.	The proponent will apply for a Section 73 Compliance Certificate from Sydney Water. It is expected this will be applied as a condition of consent.	
		Stormwater Drainage - General		

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
5.9	Hornsby Shire Council	The stormwater drainage system for the development must be designed in accordance with Council's Civil Works – Design and Construction Specification 2005 and the following requirements:- a) Connected to an existing Council piped drainage system with the following requirements ;- i) A separate Application must be made to Council for 'Approval To Connect Stormwater Drainage Outlet To Council's System' with all fees paid, prior to connecting to Council's drainage system; ii) The connection to Council's drainage pit or pipeline in accordance with Councils Design Standard Drawing No. 6 must be inspected by a Council Engineer from Council's Planning Division; Note: An inspection booking can be made by calling Council on 9847 6760 quoting the Application reference number commencing SD iii) Connection to Council's drainage system shall include design and construction of Council's standard kerb inlet pit in accordance with Council's Design and Construction Specification 2005. The Applicant's Engineer must prepare the design of system including location of proposed work	Consulting engineers TTW advise that the current civil engineering drawings comply with Council's design guidelines.	Appendix K – Civil Engineering Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		in the plan. Three (3) copies of the plan shall be submitted with lodgement and payment of the Application; iv) A Traffic Control Plan (TCP) must be prepared by a qualified traffic controller in accordance with the Roads & Traffic Authority's Traffic Control at Worksites Manual 1998 and Australian Standard 1742.3 for all work on a public road. Three (3) copies of the Traffic Control Plan shall be submitted for Council's approval. The TCP must detail the following:- a. Arrangements for public notification of the works; b. Where a drainage connection is proposed within a Classified Road, a copy of the relevant Road Occupation License approved by the Traffic Management Centre with dates and times of proposed Occupations; c. Temporary construction signage; d. Vehicle movement plans; e. Traffic management plans; and f. Pedestrian and cyclist access/safety. v) Where public assets and utilities are impacted by proposed works, the Applicant shall relocate or reconstruct the asset or utility in accordance with the relevant standard at the Applicant's cost;		

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		vi) A Compliance Certificate must be obtained from Council for the connection to Council's drainage system prior to occupation of the development.		
		On Site Stormwater Detention and Water Quality		
5.10	Hornsby Shire Council	An on-site stormwater detention system must be designed by a chartered civil engineer and constructed in accordance with the following requirements:-a) The developing area of the site shall ensure its 5 year average recurrence interval (ARI) runoff reduced to the pre-development site cover rate. The volume of the on-site detention system shall ensure its capable of detaining the 20 year ARI post-development site cover storm;b) The water quality treatment system shall be designed and constructed to provide water quality outcomes as per Council's HDCP2013 Section 1C.1.2.i requirements;c) Have a surcharge/inspection grate located directly above the outlet;d) Discharge from the detention system must be controlled via 1 metre length of pipe, not less	Consulting engineers TTW advise that the current civil engineering drawings comply with Council's recommendation.	Appendix K – Engineering Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		than 50 millimetres diameter or via a stainless plate with sharply drilled orifice bolted over the face of the outlet discharging into a larger diameter pipe capable of carrying the design flow to an approved Council system;e) Where above ground and the average depth is greater than 0.3 metres, a 'pool type' safety fence and warning signs must be installed; andf) Not be constructed in a location that would impact upon the visual or recreational amenity of residents.		
		Footpath		
5.11	Hornsby Shire Council	A concrete footpath must be designed across the area impacted of the subject site in accordance Council's Civil Works Design and Construction Specification 2005 and the following requirements: a) The existing footpath being removed. b) Pouring of the concrete footpath to the full frontage of the subject site. c) Segmental block paving to be constructed along the full width of the footway over the full frontage to the site, including the planting of street trees in suitable grates or bays in the footway area. d) Any public utility adjustments to be carried	Consulting engineers TTW advise that the current civil engineering drawings comply with Council's recommendation. The current design plans do not provide for block paving as required by Council. Prior to the construction of any replacement footpaths in Council's Road Reserve, a compliant design shall be submitted to Council or a suitable alternate design provided to Council for endorsement. The design will be submitted to Council by the appointed contractor prior to the commencement of works.	Appendix K – Civil Engineering Advice

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		out at the cost of the applicant and to the requirements of the relevant public authority.		
		Construction Traffic Management Plan		
5.12	Hornsby Shire Council	In order to enable unencumbered movement of traffic in the public road during construction works, a Construction Management Plan, including a Traffic Management Plan and scaled construction plans prepared by a suitably Chartered and Qualified Chartered Civil Engineer and Qualified Worksite Traffic Controller shall be prepared according to the following requirements:- a) The plans shall detail the order of construction works and arrangement of all construction machines and vehicles being used at the same time during all stages. b) The CTMP plans shall be in accordance with the approved Development Application plans	A draft Construction Traffic Management Plan (CTMP) accompanied the EIS at Appendix M. This CTMP will be updated by the appointed contractor by a suitably qualified traffic engineer. This plan will include details relating to construction staging and will satisfy all relevant conditions of consent. The CTMP will include legible plans of an appropriate scale. The CTMP would be prepared to address the RMS <i>Road and Traffic Authority's "Traffic Control at Worksites Manual 1998"</i> as applicable to the project.	

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		and the Development Consent conditions. c) In order to prevent injury, accident and loss of property, no building materials, work sheds, vehicles, machines or the like shall be allowed to remain in the road reserve area without the written consent of Hornsby Shire Council. d) The Plan shall be generally in compliance with the requirements of the Road and Traffic Authority's "Traffic Control at Worksites Manual 1998" and detailing:- i) Public notification of proposed works; ii) Long term signage requirements; iii) Short term (during actual works) signage; iv) Vehicle Movement Plans, where applicable; v) Traffic Management Plans; vi) Pedestrian and Cyclist access and safety; e) The plans shall indicate traffic controls including those used during non-working hours and shall provide pedestrian access and two-way traffic in the public road to be facilitated at all times. f) The plans shall include the proposed truck routes to and from the site including details of		

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		the frequency of truck movements at the different stages of the development. The plan shall also include details of parking arrangements for all employees and contractors. g) The Applicant and all employees of contractors on the site must obey any direction or notice from the Prescribed Certifying Authority or Hornsby Shire Council in order to ensure the above. h) If there is a requirement to obtain a Work Zone, partial Road Closure or Crane Permit an application to Hornsby Shire Council is to be made prior to the issue the Construction Certificate		
		Waste Management Plan		
5.13	Hornsby Shire Council	A minimum 80% reuse/recycling of the demolition waste except where the waste is deemed to be contaminated.	Refer to Items 3.23 and 3.24	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Erection of Construction Sign		
5.14	Hornsby Shire Council	a) A sign must be erected in a prominent position on any site on which any approved work is being carried out: i) Showing the name, address and telephone number of the principal certifying authority for the work; ii) Showing the name of the principal contractor (if any) for any demolition or building work and a telephone number on which that person may be contacted outside working hours; and iii) Stating that unauthorised entry to the work site is prohibited. b) The sign is to be maintained while the approved work is being carried out and must be removed when the work has been completed.	Appropriate construction signage will be in place prior to the commencement of and for the duration of the construction period.	
		Protection of Adjoining Areas		
5.15	Hornsby Shire Council	A temporary hoarding, fence or awning must be erected between the work site and adjoining lands before the works begin and must be kept in place until after the completion of the works if the works: a) Could cause a danger, obstruction or inconvenience to pedestrian or vehicular traffic; b) Could cause damage to adjoining lands by	The need for hoarding, temporary fencing and the like will be determined by the appointed contractor. Should such controls be required, the prior approval of Council will be sought where necessary.	

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		falling objects; and/or c) Involve the enclosure of a public place or part of a public place. Note: Notwithstanding the above, Council's separate written approval is required prior to the erection of any structure or other obstruction on public land.		
		Toilet Facilities		
5.16	Hornsby Shire Council	a) To provide a safe and hygienic workplace, toilet facilities must be available or be installed at the works site before works begin and must be maintained until the works are completed at a ratio of one toilet for every 20 persons employed at the site. b) Each toilet must: i) be a standard flushing toilet connected to a public sewer; or ii) be a temporary chemical closet approved under the Local Government Act 1993; or iii) have an on-site effluent disposal system approved under the Local Government Act 1993.	The appointed contractor will be responsible for the provision of amenities for all staff and contractors. An appropriate number of toilets will be provided for the duration of the construction program.	
		Erosion and Sediment Control		
5.17	Hornsby Shire Council	To protect the water quality of the downstream environment, erosion and sediment control measures must be provided and maintained throughout the construction period in	Consulting Engineers TTW advise that the current civil engineering drawing (C05) comply with Council's recommendation.	Appendix K – Civil

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		accordance with the manual 'Soils and Construction 2004 (Bluebook)', the approved plans, Council specifications and to the satisfaction of the principal certifying authority. The erosion and sediment control devices must remain in place until the site has been stabilised and revegetated.		Engineering Advice
		Appointment of a Project Arborist		
5.18	Hornsby Shire Council	A project arborist with AQF Level 5 qualifications must be appointed to provide monitoring and certification throughout the construction period.	Prior to the removal of any trees, a suitably qualified arborist will be engaged to oversee the works. The project commitments and mitigation measures have been updated to incorporate this recommendation.	
		Installation of Tree Protection		
5.19	Hornsby Shire Council	a) Tree protection fencing for the trees to be retained must be erected around trees to be retained at a minimum distance based on the trees structural root zone.	The project commitments and mitigation measures require that any trees identified for protection in the Consulting Arborists Report (October 2017) shall be protected in accordance with <i>AS 4970 - 2009 Protection of trees on development sites</i> . This commitment satisfies the intent of Council's recommendation.	
		Tree Protection Certification		
5.20	Hornsby Shire Council	To ensure that all tree protection measures are correctly installed, a certificate from the appointed project arborist must be submitted to the Principal Certifying Authority confirming	Refer to Item 5.18 and 5.19.	

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		compliance with the tree protection requirements of this consent.		
		Construction Vehicles		
5.21	Hornsby Shire Council	All construction vehicles associated with the proposed development are to be contained on site.	Refer to Item 4.3.	
		Construction Work Hours		
5.22	Hornsby Shire Council	All works on site, including demolition and earth works, must only occur between 7am and 5.30pm Monday to Friday and between 7.30am to 3.30pm Saturdays. No work is to be undertaken on Sundays or public holidays.	Refer to Item 3.8.	
		Demolition		
5.23	Hornsby Shire Council	To protect the surrounding environment, all demolition work must be carried out in accordance with “Australian Standard 2601-2001 – The Demolition of Structures” and the following requirements: a) Demolition material must be disposed of to an authorised recycling and/or waste disposal site and/or in accordance with an approved waste management plan;	Refer to Item 3.5.	

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		b) Demolition works, where asbestos material is being removed, must be undertaken by a contractor that holds an appropriate licence issued by WorkCover NSW in accordance with Chapter 10 of the Occupational Health and Safety Regulation 2001 and Clause 29 of the Protection of the Environment Operations (Waste) Regulation 2005 ;and c) On construction sites where any building contain asbestos material, a standard commercially manufactured sign containing the words 'DANGER ASBESTOS REMOVAL IN PROGRESS' and measuring not less than 400mm x 300mm must be displayed in a prominent position visible from the street.		
		Environmental Management		
5.24	Hornsby Shire Council	a) The site must be managed in accordance with the publication 'Managing Urban Stormwater – Landcom (March 2004) and the Protection of the Environment Operations Act 1997 by way of implementing appropriate measures to prevent sediment run-off, excessive dust, noise or odour emanating from the site during the construction of the development. b) The development is to be carried out in accordance with the Preliminary Construction Management Plan prepared by APP dated 19/09/17.	The proposal will be undertaken in a manner which meets the intent of this condition. The final CEMP prepared by the contractor will take into account Managing Urban Stormwater – Landcom (March 2004) and the Protection of the Environment Operations Act 1997 and include appropriate environmental controls to mitigate impacts on the receiving environment.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		c) The development is to be carried out in accordance with the Noise Impact Assessment prepared by Acoustic Logic dated 15/09/2017 in respect to mitigation of high noise activities.		
		Street Sweeping		
5.25	Hornsby Shire Council	To protect the surrounding environment, Street sweeping must be undertaken following sediment tracking from the site along surrounding roads during works and until the site is established. The street cleaning services must undertake a street 'scrub and dry' method of service and not a dry sweeping service that may cause sediment tracking to spread or cause a dust nuisance.	The final CEMP will include provisions to ensure no excessive quantities of sediment is tracked onto adjacent streets.	
		Building materials and Site Waste		
5.26	Hornsby Shire Council	The filling or stockpiling of building materials, the parking of vehicles or plant, the disposal of cement slurry, waste water or other contaminants must be located outside the tree protection zones as prescribed in the conditions of this consent.	Refer to Item 3.10 .	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Works Near Trees Certification		
5.27	Hornsby Shire Council	a) The project arborist must submit to the Principal Certifying Authority on a monthly a certificate that the works have been carried out in compliance with the approved plans and specifications for tree protection. b) Certification should include a statement of site attendance, the condition of the retained trees, details of any deviations from the approved tree protection measures and their impacts on trees. Note: Copies of monitoring documentation may be required by the PCA and/or Council.	A validation report from the appointed project arborist shall confirm that the recommendations provided in the arborists report submitted with the EIS (Appendix K of EIS). The report shall be provided to the certifying authority prior to the occupation of the Stage 2 SSD buildings. The project commitments and mitigation measures have been updated to incorporate the recommendations of Council.	
		Council Property		
5.28	Hornsby Shire Council	To ensure that the public reserve is kept in a clean, tidy and safe condition during construction works, no building materials, waste, machinery or related matter is to be stored on the road or footpath.	The CEMP will include provision to ensure material, waste, plant and machinery are kept within the confines of the HKH Campus and do not encroach on Council's public assets.	
		Landfill		
5.29	Hornsby Shire Council	Landfill must be constructed in accordance with Council's 'Construction Specification 2005' and the following requirements: a) All fill material imported to the site is to wholly consist of Virgin Excavated Natural	The CEMP will incorporate provision for the importation and validation of fill to the site. This would take into account relevant EPA Guidelines.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Material (VENM) as defined in Schedule 1 of the Protection of the Environment Operations Act, 1997 or a material approved under the Department of Environment and Climate Change's general resource recovery exemption.		
		Excavated Material		
5.30	Hornsby Shire Council	All excavated material removed from the site must be classified by a suitably qualified person in accordance with the Department of Environment, Climate Change and Water NSW Waste Classification Guidelines prior to disposal to an approved waste management facility and be reported to the principal certifying authority prior to the issue of an Occupation Certificate.	The CEMP will incorporate provision for the removal and validation of material from the site. This would take into account relevant EPA Guidelines.	
		Noise (Operational)		
5.31	Hornsby Shire Council	All noise generated by the proposed development must be attenuated to prevent levels of noise being emitted to adjacent premises which possess tonal, beating and similar characteristics or which exceeds background noise levels by more than 5dB(A).	Refer to Item 3.8 .	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Storage of Flammable and Combustible Goods		
5.32	Hornsby Shire Council	Flammable and combustible liquids must be stored in accordance with Australian Standard 1940 – The Storage and Handling of Flammable and Combustible Liquids. A bund wall must be constructed around all work and liquid storage areas to prevent any spillage entering into the stormwater system. The bunded area must provide a volume equal to 110% of the largest container stored and graded to a blind sump so as to facilitate emptying and cleansing.	Refer to Item 1.1 and the Preliminary Hazard Analysis (Appendix B).	
		Trade Waste		
5.33	Hornsby Shire Council	Liquid trade waste generated on the site must be discharged in accordance with a trade waste agreement with Sydney Water and by a licensed liquid trade waste contractor.	The trade waste agreement with Sydney Water will be updated to take into account trade waste generated from the Stage 2 SSD project.	
		Asbestos and Soil Contamination		
5.34	Hornsby Shire Council	Should the presence of asbestos or soil contamination, not recognised during the application process be identified during works, the applicant must immediately notify the Principal Certifying Authority (PCA) and the Appropriate Regulatory Authority (ARA).	Refer to Item 3.5 .	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Hazardous Materials Report		
5.35	Hornsby Shire Council	Provide a hazardous materials report prepared by a suitably qualified Occupational Hygienist that the site is clear of contamination and suitable for the intended use. The survey is to be undertaken in accordance with the Work Health and Safety Regulation 2011 (NSW) including laboratory analysis for asbestos and lead on the site and within the soil.	Refer to Item 3.2 .	
		Validation Report		
5.36	Hornsby Shire Council	A validation report must be prepared by a suitably qualified environmental consultant in accordance with the NSW Environment Protection Authority's Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites and Contaminated Sites – Sampling Design Guidelines validating that the proposed development site has been remediated and is suitable for its intended use.	Depending on the outcome of additional investigations as described in Item 3.1 , a Remediation Action Plan (RAP) prepared by a suitably qualified consultant shall be prepared. The RAP will take into account surface, sub surface and groundwater investigations and include provision for validation. Prior to the occupation a report shall be provided to the certifying authority validating that the site is suitable for its intended use.	
		Traffic Control Plan Compliance		
5.37	Hornsby Shire Council	The development must be carried out in accordance with the Construction Traffic Management Plan prepared under this consent.	Noted. An updated CTMP will be prepared by the appointed contractor and submitted to the certifying authority prior to the commencement of construction works.	

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		Sydney Water – s73 Certificate		
5.38	Hornsby Shire Council	A s73 Certificate must be obtained from Sydney Water and submitted to the PCA.	Refer to Item 5.8.	
		Certification of WSUD Facilities		
5.39	Hornsby Shire Council	Prior to occupation a certificate from a Civil Engineer is to be obtained stating that the WSUD facilities have been constructed and will meet the water quality targets as specified in the Hornsby Shire Councils DCP.	The appointed contractor will be required to provide certification that the stormwater management system has been constructed in accordance with the approved design. Consulting engineers TTW have verified that the concept design is capable of complying with the required water quality targets.	
		Works as Executed Plan		
5.40	Hornsby Shire Council	A works-as-executed plan(s) must be prepared by a registered surveyor and submitted to Council for completed pavements, kerb & gutter, drainage systems, driveways and on-site detention and water quality treatment systems.	The appointed contractor will be required to prepare a full suite of WAE plans. A copy of the WAE plans relating to civil and stormwater works can be provided to Council.	
		Damage to Council Assets		
5.41	Hornsby Shire Council	To protect public property and infrastructure, any damage caused to Council's assets as a result of the construction or demolition of the development must be rectified by the applicant in accordance with Council's Civil Works Specifications. Rectification works must be undertaken prior to the occupation of the building.	The appointed Contractor will be required to prepare dilapidation reports of Council assets on and adjacent to the site.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Completion of Landscaping		
5.42	Hornsby Shire Council	A certificate must be submitted to the PCA by a practicing landscape architect, horticulturalist or person with similar qualifications and experience certifying that all required landscaping works have been satisfactorily completed in accordance with the approved landscape plans.	The appointed Contractor will be required to prepare landscape certification and submit to the certifying authority. Certification would be prepared by a suitably qualified landscape architect.	
		Preservation of Survey Marks		
5.43	Hornsby Shire Council	A certificate by a Registered Surveyor must be submitted to the Principal Certifying Authority, certifying that there has been no removal, damage, destruction, displacement or defacing of the existing survey marks in the vicinity of the proposed development or otherwise the re-establishment of damaged, removed or displaced survey marks has been undertaken in accordance with the Surveyor General's Direction No.11 – "Preservation of Survey Infrastructure".	The appointed contractor will be required to engage a registered surveyor to identify any existing survey marks on or in the curtilage of the site prior to the commencement of works. The location of such marks will be included on any relevant construction plans to ensure they are protected. A verification report will be prepared by the registered surveyor to confirm there has been no damage to identified survey marks.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Creation of Restrictions and Positive Covenants		
5.44	Hornsby Shire Council	The following matter(s) must be nominated on title under s88E of the Conveyancing Act, 1919; Application to be made to Council for Execution of Legal Documents for the following; a) The creation of an appropriate "Positive Covenant" and "Restriction as to User" over the constructed on-site detention/retention/water quality treatment systems and outlet works, within the lots in favour of Council in accordance with terms available from Council. The position of the on-site detention system(s) is to be clearly indicated on the title with a Surveyor's Sketch to accompany Dealing documentation ; b) To register the on-site detention/retention/water quality treatment systems Positive Covenant and restriction on the use of land "works-as-executed" details of the on-site-detention system and water quality treatment system must be submitted verifying that the required storage and discharge rates have been constructed in accordance with the design requirements. The details must show the invert levels of the onsite system together with pipe sizes and grades. The details must be accompanied with electronic copies of all treatment systems' technical specifications and	A registered consulting surveyor shall be engaged to prepare an appropriate 88E Instruments taking into account any easements and associated terms including covenants and restrictions. The instrument shall be registered prior to the release of a final occupation certificate for the Stage 2 SSD project.	

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		maintenance manuals. Any variations to the approved plans must be shown in red on the “works-as-executed” plan and supported by calculations; Note: Council must be nominated as the authority to release, vary or modify any easement, restriction or covenant.		
		Car Parking		
5.45	Hornsby Shire Council	All car parking must be constructed and operated in accordance with Australian Standard AS/NZS 2890.1:2004 – Off-street car parking, and Australian Standard 2890.2 - 2002 – Off-street commercial vehicle facilities and the following requirement:a) All parking areas and driveways are to be sealed to an all weather standard, line marked and signposted.b) Car parking, loading and manoeuvring areas to be used solely for nominated purposes.c) Vehicles awaiting loading, unloading or servicing shall be parked on site and not on adjacent or nearby public roads;d) All vehicular entry on to the site and egress from the site shall be made in a forward direction.	Consulting engineers TTW advise that the current civil engineering drawings are capable of complying with Council’s recommendations.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		Traffic Report		
5.46	Hornsby Shire Council	Traffic report is to be provided by the applicant six months after the development is fully operational. The report is to include but not be limited to review of traffic conditions and level of service at key intersection identified in the original traffic assessment report.	A traffic validation report, prepared by a suitably qualified consultant shall be prepared six months after the release of the final occupation certificate for the Stage 2 SSD project. The project commitments and mitigation measures have been updated to include this recommendation.	
		Landscape Establishment		
5.47	Hornsby Shire Council	The landscape works must be maintained into the future to ensure the establishment and successful growth of plant material to meet the intent of the landscape design. This must include but not be limited to watering, weeding, replacement of failed plant material and promoting the growth of plants through standard industry practices.	The appointed contractor will be required to ensure that landscaping works are completed and maintained following practical completion. Rectification works will form part of the contractor's obligations.	
6.0	Sydney Water			
6.1	Sydney Water	Our initial strategic investigation shows that there is limited capacity in the trunk water system to supply drinking water to the proposed development. Sydney Water suggests that the proponent engages a Water Servicing Coordinator (WSC) and lodges a feasibility application to Sydney Water prior to Section 73 application.	The proponents's consultant has engaged a WSC to lodge a feasibility application. The outcome of these investigations will be taken into account in the detailed design phase.	

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6.2	Sydney Water	A section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water.	The proponent shall make application for a Section 73 certificate and take into account any notice of requirements issued by Sydney Water. These requirements will be taken into account during the detailed design and subsequent construction. A Section 73 Compliance Certificate shall be in place prior to the occupation of the Stage 2 SSD buildings.	
7.0	RMS			
7.1	RMS	Roads and Maritime has reviewed the submitted application and raises no objections to the proposed development as it is unlikely to have any significant traffic impact on the classified road network.	Noted. No further consultation with or consideration of impacts on the RMS road network or assets is considered necessary.	
8.0	Public Submissions			
8.1	Public Comment	hi...i am a local resident we received notification of the DA on 15/11/2017 WORK HAD ALREADY STARTED ON 7/11/2017 As at 24/11/2017...Trees have been cut down and buildings have been demolished. Large areas of car parking have been closed. Local traffic and parking is stretched to its limits, WHY BOTHER EVEN ASKING FOR SUBMISSIONS?????	Works have not commenced on the SSD project.	

ITEM	LETTER	MATTER RAISED	RESPONSE	REFERENCE
		shame		

Appendix A. Agency and Public Submissions

Appendix B. Preliminary Hazard Analysis

Appendix C. Project Architect Design Respons

Appendix D. Concept Campus Master Plan

Appendix E. ESD Design Response

Appendix F. Landscape Concept Plan

Appendix G. Supplementary Groundwater Advice

Appendix H. UST Removal and Validation Report

Appendix I. Updated Project Commitments

Appendix J. Revised Noise Impact Assessment

Appendix K. Civil Engineering Advice

Appendix L.

Supplementary Traffic and Transportation Advice



Property and Infrastructure Specialists