Prepared for
Health Infrastructure

Date: 13 January 2023

Appendix C – Mitigation Measures

RPA Hospital Redevelopment Redevelopment

architectus™

Acknowledgement of Country

Architectus acknowledges the Australian Aboriginal and Torres Strait Islander peoples of this nation as the Traditional Custodians of the lands on which we live and work.

We pay our respects to Elders, past and present and emerging.

Architectus is committed to honouring Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to the land, waters, and seas and their rich contribution to society.

Architectus Australia Pty Ltd
ABN 90 131 245 684

Adelaide
Level 1, 15 Leigh Street
57 Wyatt Street
Adelaide SA 5000
T +61 8 8427 7300
adelaide@architectus.com.au

Brisbane
Level 2, 79 Adelaide Street
Brisbane QLD 4000
T +61 7 3221 6077
brisbane@architectus.com.au

Melbourne
Level 25, 385 Bourke Street
Melbourne VIC 3000
T +61 3 9429 5733
melbourne@architectus.com.au

Perth
QV1 Upper Plaza West
250 St Georges Terrace
Perth WA 6000
T +61 8 9412 8355
perth@architectus.com.au

Sydney
Level 18, 25 Martin Place
Sydney NSW 2000
T +61 2 8252 8400
sydney@architectus.com.au

architectus.com.au

Report Contact

Jane Fielding
Senior Associate, Planning
Jane.Fielding@architectus.com.au

13 January 2023

Revision history

Issue Reference	Issue Date	Issue Status
A	11 October 2022	First Draft to Client
B	18 October 2022	TOA
C	8 November 2022	Final lodgment
D	13 January 2023	Final

File Ref: appendix c_mitigation measures_updated draft

Contents

1. Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed development are detailed in **Table 1** below.

Table 1 Recommendations and Mitigation Measures

Item	Mitigation Measures	Timing
Design Excellence and Design Integrity		
	The development shall continue to be subject to a design integrity process with the Design Integrity Panel (DIP)(comprising for the former Design Jury established for the Architectural Design Competition) reconvened at key milestones where necessary during the design development and construction documentation processes, to certify that design excellence and design integrity is achieved.	Prior to construction
Traffic		
Operational Traffic		
Green Travel	The Green Travel Plan within the Traffic and Accessibility Impact Assessment (TIA) prepared by SCT Consulting at **Appendix AG** includes several measures aimed at increasing the mode share of sustainable modes and decreasing car usage. These initiatives would improve parking outcomes overall: – Provision of end of trip facilities and bicycle parking for staff; – Increasing the visual presence of bicycle and end of trip facilities through wayfinding signage and dedicated access; – Additional Redfern station shuttle buses; – Reinstate parking fees as soon as permitted by the Ministry of Health (who suspended parking fees during the COVID-19 pandemic); – Improved lighting on common pedestrian routes; – Provision of wayfinding and local area walking maps; and – Annual travel survey of staff to understand trends in travel patterns and opinions of staff on cycling to work to determine effectiveness of the above measures during and after implementation. A Detailed Green Travel Plan will be developed for the project as a condition of consent for implementation during operation of the development.	Throughout operation of the hospital
Parking	Precinct parking will be able to meet the expected hospital demand once the development is operational, with an occupancy rate of 92%. This occupancy rate highlights a few key things for parking at RPA: – Parking facilities on site will need to be utilised efficiently: For example, there is currently a large difference in the occupancy rate between the two multi-storey carparks on site. The staff only carpark has a much lower occupancy rate (68%) compared to the publicly accessible Staff and Visitor carpark (96%). Underutilisation of some facilities may result in other facilities reaching capacity and changes to the way carpark access is provided to staff may need to be considered. – Green travel plan initiatives are critical to manage parking: Increasing uptake of sustainable modes of transport and reducing dependency on car trips will be key to avoiding the need for more parking spaces. This is in line with the City of Sydney's vision of reduced car mode share. – Parking on site should be considered as constrained: A surplus of parking will induce driving demand. Therefore parking will need to managed in a way that allows users who need to drive, such as patients or shift working staff to find parking, while encouraging those who can use alternative modes of transport to do so instead of driving.	

Construction Traffic		
General	The TIA prepared by SCT Consulting at **Appendix AG** includes the following mitigation measures: – HRV access is provided during construction on Gloucester House Drive to allow the main loading dock to remain operational during the construction period by diverting freight and courier traffic to the south of the main hospital building. – Traffic controllers will be present at delivery zones and key conflict locations, to ensure safety of all user groups during construction.	Prior to commencement of work / During construction
Parking	The following mitigations are recommended to be implemented to mitigate impacts to parking: – Construction - Construction workers will be discouraged from driving and to this end no parking will be provided on site for construction workers. Construction workers will be provided with information in relation to the public transport services available for transit to and from the site. Operation: – Divert some users to the Staff only Multistorey car park, which has significant spare capacity. – Reinstate staff parking fees (which were temporarily suspended during the COVID-19 pandemic) to discourage car usage – Increasing the price of parking at the Staff and Visitor car park for non-hospital users. This could be implemented through a "ticket validation" method. Visitors to the hospital will be able to "validate" their ticket with hospital security for the existing rates, whereas non-validated tickets would be charged at a higher rate, in line with typical city parking. This would discourage non-hospital users from using this car park. – Encourage use of non-car travel options, through the measures detailed in the Green Travel Plan. – Increase the frequency of the Redfern station shuttle bus.	
CTMP	A Detailed Construction Traffic Management Plan (CTMP) will be developed by the Principal Contractor and include the following information: – Description of construction activities and duration; – Work hours; – Detailed assessment of construction traffic impacts including any cumulative impacts from surrounding developments; – Details regarding one-off activities such as crane installation and other equipment; – Swept path analysis of heavy vehicle access to the site; – Detailed assessment of on-street parking impacts; – Detailed strategy for pedestrian diversion; – Emergency vehicle access; – Traffic Guidance Schemes; and – Contact details of key project personnel.	
Temporary HLS and Grose Street Circulation	The ambulance bays servicing the temporary HLS will necessitate two-way traffic flow on a portion of Grose Street. This will be a change to Grose Street which is currently a one-way movement westbound, from Hospital Road to Church Street. Adequate signage and road markings will be required to ensure that drivers and pedestrians are aware of these changes.	
Noise and Vibration		
Construction Noise	The Noise and Vibration Impact Assessment prepared by Arup at **Appendix T** includes the following mitigation measures for construction noise: – For all construction works, the contractor would be expected to prepare a detailed Construction Noise and Vibration Management Plan (CNVMP). This plan should include but not be limited to the following: – Roles and responsibilities – Noise and vibration sensitive receiver locations – Areas of potential impact – Mitigation strategy – Monitoring methodology – Community engagement strategy. – Minimum 2 m high solid hoarding/barrier is recommended along construction site boundary. The fence should be constructed of minimum 18 mm thick plywood or an alternate material equivalent surface mass (>10 kg/m²). – The smallest/quietest equipment for the works should be used where practicable. For example: – Hand tools instead of mechanised plant.	During construction

	– Slab demolition using alternate methods (avoiding hydraulic/pneumatic hammering wherever possible). These may include shear, pulveriser and ripper attachments fitted onto the excavators to progressively demolish the slab panels for later removal. – Where hydraulic/pneumatic hammers need to be used, acoustic barriers should be applied to the scaffolding between the works and the receivers, on the level where the works are occurring, and also the two levels below. This barrier should have minimum 4 kg/m2 surface mass – e.g. mass loaded vinyl. – Saw cut and ripping are recommended for excavation in rock work close to areas of concern, instead of breaking/jackhammering/etc. *Note: A 'safety distance' should be determined on-site, based on site noise measurement results to ensure the noise levels do not exceed the Management Levels where practicable.* – Use of lower noise construction equipment such as bored piling instead of driven piling. General mitigation measures to reduce construction noise impacts will be required, and may include: – Adherence to the standard approved working hours as outlined in the Project; – Approval, i.e. only approved out-of-hours activities should occur outside of standard working hours; – Manage noise from construction work that might be undertaken outside the recommended standard hours; – The location of stationary plant (concrete pumps, air-compressors, generators, etc.) as far away as possible from sensitive receivers; – Using site sheds and other temporary structures or screens/hoarding to limit noise exposure where possible; – Sealing of openings in the building (temporary or permanent) prior to commencement of internal works to limit noise emission; – The appropriate choice of low-noise construction equipment and/or methods; – Modifications to construction equipment or the construction methodology or programme. This may entail programming activities to occur concurrently where a noisy activity will mask a less noisy activity, or, at different times where more than one noisy activity will significantly increase the noise. The programming should also consider the location of the activities due to occur concurrently; – Carry out consultation with the community during construction including, but not limited to; advance notification of planned activities and expected disruption/ effects, construction noise complaints handling procedures/ Note that while community consultation may be included in the Contractor's CNVMP; it is not required.	
Construction Vibration	During development of the detailed CNVMP an investigation of vibration impact upon existing buildings on the subject site and on all nearby sensitive receivers should take place, including an assessment of any vibration sensitive equipment that could possibly be impacted by the works. Where the risk of disturbance due to vibration is predicted to be high, the following methods are recommended to control of mitigate impacts: – Use of alternative lower vibration construction methods, such as using bored piles over driven piles. – Use of lower vibration equipment. In general equipment that operates higher frequency will result in lower vibrations for instance 40Hz compactor will generate lower vibration levels at a distance from the activity than a 12Hz compactor. – Arranging a programme of designated times when construction work may exceed the specified criteria. – In some instances, site planning can be used to keep vibration sources away from more sensitive receivers, for instance truck movements, unloading zones, demolition drop zones etc. – Provide cushioning in demolition drop zones.	
Construction Staging & Activities	The detailed CMP (which will be prepared by the appointed contractor post-SSDA) will need to be reviewed by an acoustic consultant, especially in relation to potential impacts on highly noise and vibration sensitive receivers (including imaging equipment); alternative construction equipment with lower noise or vibration emissions may be necessary.	
Control of Noise following Exceedance	If noise management levels are exceeded, *feasible and reasonable* noise mitigation measures should be undertaken to minimise noise impacts are far as practicable. Preliminary feasible and reasonable work practices by project component are detailed in Table 39 in the Noise and Vibration Impact Assessment.	
Control of Vibration following Exceedance	If measured vibration levels exceed the appropriate criteria, the following measures shall be taken by the Contractor: – Modifications to construction equipment used – Modifications to methods of construction – Changes to hours of activities generating excessive vibration levels In the short term, relocating construction activity to a location further from the sensitive receivers may allow construction activity to continue minimising delays.	

Construction Hours	In addition to the ICNG [3] recommended standard construction hours, approval is being sought to extend Saturday construction hours in line with "Category 1" working hours as per the CoS Construction Code: – Monday to Friday: 7am to 6pm; – Saturday: 8am to 1pm; – Saturday: 1pm to 7pm – excluding "high" impact noise works (demolition, excavation and piling) and excluding Temporary HLS works. – Sunday and public holidays: No work. Ad hoc out of hours works will be sought on a case-by-case basis where necessary to minimize impacts to the hospital. Refurbishment works would be conducted out-of-hours, only where the works are being conducted indoors, with base building works completed and there are no openings in the façade near where the works are being conducted.	
Operation – Building Services	– Acoustic assessment of building services equipment should be undertaken during the detailed design phase of the development to ensure that the cumulative noise of all equipment does not exceed the Project Specific Noise Levels (Table 6). – Building services noise emissions can be controlled by appropriate system design and implementation of common engineering methods, which may include: – Procurement of 'quiet' plant. – Acoustic louvres. – Commercially available acoustic attenuators for air discharge and air – intakes of plant. – Acoustically lined and lagged ductwork. – Acoustic barriers between plant and sensitive neighbouring premises. – Partial or complete acoustic enclosures over plant.	
Operation – Helicopter Noise – Temporary HLS	SLHD to prioritise helicopter arrivals and departures during daytime hours where feasible.	
European Heritage		
	The Statement of Heritage Impact (SOHI) prepared by Heritage 21 at **Appendix P** includes the following mitigation measures for site specific buildings and the general subject site, heritage items, conservation area: – **Photographic Archival Recording (PAR)**: A PAR should be undertaken by a suitably qualified Heritage Consultant prior to any development being carried out on site The recording shall be undertaken in accordance with the guidelines for Photographic Recording of Heritage Items Using Film or Digital Capture (2006) prepared by the NSW Office of Environment and Heritage and copies should be retained in Council's Archives and Local Studies collection. – **Detailed Architectural Drawings**: In order to more accurately record the Tissue Pathology and Diagnostic Oncology and RPA Chapel should be salvaged and stored following the demolition activities. The potential reuse of these materials should form part of the interpretation strategy, – **Salvage Strategy**: Significant fabric of the Tissue Pathology and Diagnostic Oncology (Building 94) and RPA Chapel (Building 95) should be savaged and stored following the demolition activities. The potential reuse of these materials should form part of the interpretation strategy. – **Interpretation Strategy:** A detailed Interpretation Strategy should be prepared and implemented that expands on the Preliminary Heritage Interpretation Framework included in this application. – **Conservation Management Plan**: The Royal Prince Alfred Hospital Conservation Management Plan should be updated to reflect the recent development and the changed needs of the site. The updated CMP should generate policies to manage the ongoing conservation of the site. – **Replantation Strategy:** Under the guidance of a qualified arborist and heritage consultant, it was recommended to develop a replantation strategy to mitigate the loss of mature trees which form part of the Rear Gardens (Precinct 4). – **Temporary Protection Measures:** Prior to the commencement of any work, consideration shall be given to the development of temporary protection measures that would identify potential risks and outline methodologies to negate any physical impact on significant fabric located in the vicinity of the area of works on the subject sites. – **Heritage Architect Monitoring**: A Heritage Architect should be engaged to periodically monitor the works on site, give necessary advice, and sign off upon conclusion. – **Heritage Tradesmen**: Any works onto the heritage fabric of the subject site should be carried out by suitably qualified heritage professionals and tradesman. – **Archaeological Monitoring**: An archaeologist may be required to monitor the subterranean works. This would involve periodically examining the area by hand during excavation work in	Prior to commencement of work / During construction

	order to test for features such as footings, artefact scatters and post holes. Note, that in the event that significant deposits are identified the plan for the proposed works may require modification.	
Historical Archaeology	An Archaeological Report was prepared by Biosis and is appended at **Appendix R**, and includes the following mitigation measures for the proposed redevelopment; – Continued consultation with Metropolitan Land Aboriginal Land Council (LALC) should be continued by the RPA Project team. The Metropolitan LALC have requested that a smoking ceremony is completed prior to ground disturbing works and that a cultural sites officer is present during ground disturbing works; – The proponent provides a company of this report to the Aboriginal stakeholders and considers all comments received. The proponent should continue to inform these groups about the management of Aboriginal cultural heritage sites within the study area throughout the life of the project; – Consultation with Kamilaroi Yankuntajara Working Group has also recommended that cultural interpretation plan be implemented for the project. Can be achieved through native landscaping, Aboriginal art, digital displays, signage, edible and medicinal gardens and apps educating about the history and use of the land by Aboriginal people; – Heritage inductions for all site workers and contractors should be undertaken in order to prevent any unintentional harm to Aboriginal sites located within the study area and its surrounds; – All Aboriginal objects and places are protected under the NPW Act. It is an offence to disturb an Aboriginal site without a consent permit issued by Heritage NSW; – Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act; – If any suspected human remains are discovered during any activity works would immediately cease and the NSW Police and Heritage NSW Environmental Line would be notified. Works would cease pending advice in writing by Heritage NSW that works could resume.	Prior to commencement of work/ During construction
Aboriginal Cultural Heritage	The Aboriginal Cultural Heritage Report (ACHAR) by Biosis (**Appendix S**) includes the following mitigation measures: – Continued consultation with Metropolitan LALC; – Continued consultation with the registered Aboriginal stakeholders; – Interpretation plan to be incorporated into the Public Art Strategy and the Connecting with Country Strategy; – Heritage Induction for all site workers and contractors should be undertaken; – Discovery of unanticipated Aboriginal objects; – Discovery of unanticipated historical relics; – Discovery of human remains.	Prior to commencement of work/ During construction
Detailed Heritage Interpretation	The Preliminary Heritage Interpretation Framework shall be further developed into a Detailed Heritage Interpretation Strategy that covers strategies and specific design measures to incorporate European heritage, aboriginal heritage and Connecting with Country in the proposed design.	Prior to commencement of relevant work
Contamination	– The Remediation Action Plan (RAP) is to be updated to incorporate AECOM advice provided in the Preliminary Site Audit Statement (**Appendix AN**). – Remediation of contaminated areas is to be undertaken in accordance with the Remediation Action Plan (**Appendix AK**), as amended in response to AECOM advice, prepared for the East Campus by Cardno.	Prior to commencement of relevant work
Contamination	– The Site Auditor notes that adequate documentation demonstrating that the RAP has been implemented and the site successfully validated must be provided following remediation activities. It is also recommended that periodic updates are provided during remediation activities. – A long-term environmental management plan (LTEMP) would be prepared for remaining fill material, if deemed required subsequent to site remediation.	Subsequent to relevant work and prior to operation
Hazardous Materials	– Asbestos found in Buildings 64, 75, 89, 94, 95 and the multi-storey carpark will be removed by a licensed asbestos removalist prior to refurbishment or demolition works. – Lead Containing Paint found in Building 94 will be removed prior to demolition of this building.	Prior to commencement of work
Aviation & Downwash	An Aviation Report has been prepared by AviPro at **Appendix AA**.	-
<u>New Permanent HLS</u>	– As the RPA Redevelopment is located within controlled airspace and there is “prescribed airspace” as defined in the Airports (Protection of Airspace) Regulations 1996 above the site, approvals will be required from relevant Commonwealth aviation/airspace authorities. The RPA Redevelopment, its HLS, and the cranes used to construct it will enter “prescribed airspace”, namely the Obstacle Limitation Surface (OLS).	Prior to commencement of work

	– A development in the vicinity of RPAH could be built to a maximum height of approximately RL80 before it enters the Sydney Aerodrome OLS. The design exceeds this elevation, therefore approval for airspace intrusion will be required. – Development in the vicinity of RPAH could be built to a maximum height of approximately RL140 before it enters the Sydney Aerodrome Procedures for Air Navigation – Aircraft Operations (PANS-OPS) surface lower limit. Approval for (temporary) airspace intrusion would be required above this elevation. – During the construction phase of the RPA Redevelopment, cranes are to be lit in accordance with NSW Health GL2020_014 Guidelines for NSW Hospital HLS. These lighting standards also enhance safety for civil aviation operators within Sydney's airspace. – Prior to acceptance by NSW Ambulance, a VFR Approach and Departure Surface (Performance Class 1) survey combined with a Design Development Overlay (DDO) survey will need to be completed.	During construction Prior to operation
<u>Temporary HLS</u>	– Helicopter arrivals/departures will be prioritized during the day unless it is an emergency that occurs during nighttime hours. – It will be necessary to develop strong local procedures for the arrival and departure of helicopters. – Detailed procedures will be developed to clear hazardous areas of people when a helicopter is planned to arrive or depart. – An operational brief will be prepared for the Helicopter Emergency Medical Service (HEMS) operators to provide all available detail on approach and departure angles and preferred directions assessed as part of the design of the temporary HLS.	Prior to operation
<u>Downwash – Temporary HLS</u>	Mitigation measures to be implemented include: – Actively controlling pedestrian access in the affected areas during helicopter operations, – Any loose items, stones, or rubbish on the roof of the carpark should be removed prior to helicopter operations. It would be recommended to block the gap below the porous balustrade on this level to catch displaced objects; – Advice would be provided to residents along Church Street, and in the Queen Mary building warning of the potential for rotor wash and to secure loose items of furniture and bins. An Operational Management Plan is to be developed for the Temporary HLS that includes, but is not limited to, those mitigation measures referred above under "Temporary HLS" and "Downwash – temporary HLS".	During operation of the temporary HLS, which overlaps with some construction works.
Dangerous Goods	– A hazardous area assessment is to be undertaken for areas containing flammable gases. – Fire and Rescue NSW be informed if appropriate thresholds are exceeded of the volumes of dangerous goods being stored on the campus.	Prior to construction / during operation.
Flooding	A Flood Emergency Response Plan is to be incorporated into an overall Emergency Management Plan for the hospital. It would include procedures such as: – Education via staff awareness training, briefings and signage for visitors – Designation of staff roles during an event, including a chief warden, safety manager / first aid officer and flood / building wardens – Evacuation drills to be completed at a minimum every 12 months. – A flood emergency kit to be available prior to a flood event taking place and regularly checked to ensure that supplies within the kit are sufficient and in working condition. The Kit would include two-way radios, torches, batteries, waterproof bags, a first aid kit and other items.	Prior to construction / during operation.
Ecology	A Construction Environmental Management Plan (CEMP) to be prepared prior to commencement of works. This to include the following mitigation measures: – Project construction is to be carried out under the NSW EMP standards, managing environmental impacts. – The head contractor is required to have ISO 14001 certification. – Appropriate erosion and sediment control must be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. These measures are to comply with the relevant industry guidelines including 'the Blue Book' (Landcom 2004). – Temporary fencing is to be erected around retained native vegetation that may incur indirect impacts on biodiversity values due to the construction works. This includes all vegetation outside of the Subject Land that is in residential backyards. – All storage, stockpile and laydown sites are to be allocated away from any native vegetation that is planned to be retained. – Avoid importing any soil from outside the site as this can introduce weeds and pathogens to the site in order to avoid the potential of incurring indirect impacts on biodiversity values.	Prior to Construction

	– Additionally, the Tree Replantation Strategy will be implemented to mitigate any impact to canopy corridors. – Prior to construction, the applicant should commission the services of a qualified and experienced Ecologist Consultant (minimum 3 years' experience) with a minimum tertiary degree in Science, Conservation, Biology, Ecology, Natural Resource Management, Environmental Science or Environmental Management. The Ecologist must be licensed with a current Department of Primary Industries Animal Research Authority permit and New South Wales Scientific License issued under the BC Act. The Ecologist will be commissioned to: – Undertake an extensive pre-clearing survey, delineating habitat-bearing trees and shrubs to be retained/removed; – Undertake a pre-clearing survey within the roof cavity of existing buildings prior to demolition to determine the location of any microbat roost sites, and relocate microbats if required. If a breeding colony is present, microbat relocation and demolition should be undertaken outside of the breeding season; – Supervise the clearance of trees and shrubs (native and exotic) in order to capture, treat and/or relocate any displaced fauna. This extends to any vegetation to be impacted outside of the Subject Land (e.g. incursion of the structural root zone).	
	– Project construction is to be carried out under the NSW EMP standards, managing environmental impacts. – The head contractor is required to have ISO 14001 certification. – The proposed Tree Replacement Plan (Jacobs 2022a) comprises of a diverse range of native species across canopy and mid-stratum which will re-create canopy corridors that will be impacted by the works. – Appropriate erosion and sediment control must be erected and maintained at all times during construction in order to avoid the potential of incurring indirect impacts on biodiversity values. As a minimum, such measures should comply with the relevant industry guidelines such as 'the Blue Book' (Landcom 2004). – Temporary fencing should be erected around retained native vegetation that may incur indirect impacts on biodiversity values due to the construction works. This includes all vegetation outside of the Subject Land that is in residential backyards. – Allocate all storage, stockpile and laydown sites away from any native vegetation that is planned to be retained. Avoid importing any soil from outside the site as this can introduce weeds and pathogens to the site in order to avoid the potential of incurring indirect impacts on biodiversity values.	During construction
Geotechnical	The placement of all structural fill and footing excavations are to be inspected, tested and certified where necessary, by a suitably qualified geotechnical engineer to ensure works are being conducted in accordance with the construction methods recommended in the Geotechnical Investigative Report prepared by Cardno (**Appendix AH**). Should subsurface conditions other than those described in this report be encountered, Cardno should be consulted immediately and appropriate modifications developed and implemented if necessary.	During construction
Construction Waste	The Preliminary Waste Management Plan (**Appendix AT**) outlines the following mitigation measures: – The Principal Contractor will be responsible for developing a detailed waste management plan prior to commencement of the construction works. That plan must be consistent with the approach, principles and management methods outlined in this plan. The Contractor will also be responsible for: – Inducting all contractors and visitors about the relevant aspects of this plan. – Ensuring all waste management contractors have the necessary qualifications and licenses to remove waste from the site. – Carrying out periodic audits to check compliance with the waste management plan. – During construction, all site personnel and subcontractors will be inducted into the requirements of this plan in accordance to their level of responsibility. As such, the induction is expected to include the following components: – The waste hierarchy and associated waste management principles (avoid, reuse, and recycle). – NSW EPA Waste Classification Guidelines. – Procedures for handling and storage of wastes. – Location of waste disposal and storage facilities. – Actions to be undertaken in the event of a hazardous material spill. – Staff and contractors with specific responsibilities for waste management including for the handling and disposal of hazardous waste will be given additional training as required.	During construction
	A Detailed Waste Management Plan is to be prepared by the appointed construction contractor prior to construction.	Prior to commencement of works

Operational Waste	The existing SLHD Waste Management Policy for RPA Hospital will be updated to ensure ongoing improvements and compliance with policy and legislation in all aspects of waste management, including generation, handling, storage and disposal of all forms of waste.	During operation
Construction Management	The Preliminary Construction Management Plan (CMP) prepared by TSA (**Appendix AC**) includes the following mitigation measures: – The Contractor will develop their own Traffic Management Plans from first principles and in conjunction with their traffic management consultant prior to commencing each stage. The final Traffic Management Plan shall be presented to and agreed with HI and SLHD to ensure a collaborative solution is achieved for this critical component of the project. – Suitable temporary hoardings, site fencing and barriers are necessary to separate pedestrians and construction works and are to be constructed in a suitable location to prevent unauthorised access to the work zones. – Establish a robust Stakeholder Communication Plan; – Operational level Construction Interface Group (CIG) with an established meeting schedule; – Strict implementation of the Disruptive Works Notice (DWN) procedure: – It is proposed that a Construction Interface Group (CIG) be formed prior to commencement of works on site. The CIG will contain members from the project team, the Principal, Hospital management, Hospital engineering staff and the SLHD. The CIG will meet on a weekly basis to discuss short and medium interface works and be informed of the construction activities and progress. The CIG will also provide a forum to review and approve up and coming, and current Disruptive Works Method Statements (DWMS). – DWMS's are to be submitted on a regular basis for activities including but not limited to service diversions, traffic diversions, connections between new and existing, works within the operational hospital campus and works on public roads. DWMS's will also be submitted for all other activities that could have the potential to disrupt the operation of the hospital, such as possible fumes caused by paint and vinyl laying activities etc. – Prior to the establishment of any crane(s) the Contractor shall engage an Aviation Consultant to review the proposed crane selection and finalise the Crane and Helicopter Management Plan. – It is imperative that key building services are uninterrupted when constructing within a live hospital environment. No services affecting the project are to be shut down without the prior written permission of the Principal via the Disruptive Works Notice procedure. A Detailed CMP will be prepared by the appointed construction contractor prior to construction.	Prior to construction/ During Construction
Arboricultural	The Stage 1 Arboricultural Impact Assessment, prepared by Martin Peacock Tree Care (**Appendix X)** includes the following mitigation measures: – Trees approved for removal shall be identified and marked on site by the Project Arborist prior to removal. Tree removal and pruning works shall be undertaken by a qualified Arborist (minimum AQF level 3) covered by adequate third party, public liability insurance. Pruning works shall be undertaken in accordance with Australian Standard AS4373 Pruning of Amenity Trees. Arborists and ground staff shall comply with the Work Cover Code of Practice for the Amenity Tree Industry. – Further assessment of the proposal shall be undertaken by the Project Arborist as part of the detailed design stage, to determine the potential impact of development upon the trees proposed for retention. To minimise development impacts, tree sensitive design and construction methods shall be utilised within Tree Protection Zone (TPZ) areas. – Prior to the commencement of construction works establish TPZ areas for trees; groups – 22, 23, 30, 54-57, 127, 590, 597, 598, 1191, 1237-1239 and 2001 -2003. – TPZ areas shall be maintained and regularly inspected by the Project Arborist throughout the constructing stage of the project. The TPZ shall not be used for storage of waste or construction materials, vehicle parking or any other construction related activities. The Project Arborist shall be notified prior to the undertaking of any approved development works within a TPZ area. All works within a TPZ area shall supervised and document by the Project Arborist. – New trees shall be grown and supplied in accordance with AS2303 2018 Tree stock for landscape use. The planting and aftercare of the trees shall be undertaken by a qualified horticulturalist.	Prior to the commencement of work/ During construction
	A detailed Arboricultural Impact Assessment will be prepared following receipt of detailed development plans.	At Response to Submissions stage.
Wind	A Pedestrian Wind Environment Assessment has been prepared by Arup (**Appendix Z**) which includes the following mitigation measures: – Two small area in the undercrofts have a marginal exceedance of the pedestrian safety criterion. As this area is mainly used for maintenance access, it would be recommended to round the soffit of the undercroft area, and/or install strong wind warning signage in this area.	Prior to the commencement of work/ During construction

Social Impact	A Social Impact Assessment has been prepared by Urbis (**Appendix V**) which includes the following recommendations are provided to further manage the potential impacts from the proposal: – As requested by Metropolitan Local Aboriginal Land Council (MLALC), provide a smoking ceremony onsite prior to ground disturbing works; – Further enhance representation of Indigenous culture in the design of buildings and spaces through art and storytelling. – Continued engagement with USYD on construction activities and timelines for proposed works of the SBA building, particularly alignment of noisy activities – Implementation of a detailed Construction, Noise and Vibration Management Plan and continued engagement with the community throughout the lifecycle of the RPAH redevelopment program. – Monitor the noise and vibration impacts on nearby residents while the temporary HLS is in operation at this location. This should include implementing a complaints process for residents to raise any issues. – Engage with the local Aboriginal community to discuss potential naming protocols for buildings and spaces within the redeveloped areas of the hospital. – Implement wayfinding signage that is accessible for people with disabilities, impairments and for culturally and linguistically diverse populations. – Continue working with USYD to enable better access between the hospital campus and University open space areas. – In accordance with the landscape design statement, appoint a landscape maintenance contractor to prepare a proposed maintenance works program. – Implementing a replantation strategy to mitigate the loss of mature trees with the aim to retain a similar aspect of the vegetated, green buffer. – Continue to engage with Indigenous groups throughout the detailed design of landscaped areas to ensure appropriate planting species and design decisions are aligned with Connecting with Country principles. – At the detailed design phase, provide end of trip facilities and additional bicycle parking in multiple locations across campus, or at a central easy to access location. – Ongoing monitoring of car park activity. – Implement management measures in the Heritage Impact Assessment including the: – – Photographic archival recording of sites and buildings – Undertaking detailed architectural drawings of the buildings for record – Salvaging fabric and material where possible – Preparing and implementing a detailed Interpretation Strategy and Conservation Management Plan.	Prior to the commencement of work/ During construction
Visual Impact	None	