



Response to Submissions Report

State Significant Development Application SSD 9113
Randwick Hospitals Campus Redevelopment - Stage 1

6 November 2018

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Australia

301015-03835

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Project No: 301015-03835 – Response to Submissions Report: State Significant Development Application SSD 9113 Randwick Hospitals Campus Redevelopment - Stage 1

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Enstruct
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HI



Acronyms and Terms

Acronym/Term	Definition
ACHA	Aboriginal Cultural Heritage Assessment
ASB	Acute Services Building
BDAR	Biodiversity development assessment report
Campus	Randwick Hospitals Campus
CASA	Civil Aviation Safety Authority
Council	Randwick City Council
CNVMP	Construction Noise and Vibration Management Plan
CPTMP	Construction Pedestrian and Traffic Management Plan
CSELR	CBD and South East Light Rail
CSSD	Central Sterile Services Department
DA	Development Application
DP&E	Department of Planning and Environment (NSW)
ED	Emergency Department
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning & Assessment Act 1979</i> (NSW)
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i> (NSW)
EPA	Environment Protection Authority (NSW)
ESD	Ecologically sustainable development
GA NSW	Government Architect NSW
GTP	Green Travel Plan
HI	NSW Health Infrastructure
HLS	Helicopter Landing Site
ICU	Intensive Care Unit
IPU	Inpatient Unit
MCDA	Mary Dallas Consulting Archaeologists
OEH	Office of Environment and Heritage (NSW)
Precinct	Randwick Health and Education Precinct
Project	Randwick Hospitals Campus Redevelopment
Proposed development	Stage 1 of the Project comprising the construction and operation of the ASB
RAHSCM	Randwick Academic Health Science Centre Masterplan
REF	Review of Environmental Factors
RMS	Roads and Maritime Services
RTS	Response to Submissions
SCO	Sydney Coordination Office
SEARs	Secretary's Environmental Assessment Requirements
SESLHD	South Eastern Sydney Local Health District
SSDA	State Significant Development Application
TfNSW	Transport for NSW
TMC	Transport Management Centre
UNSW	University of New South Wales



1 Introduction

Advisian has been commissioned by NSW Health Infrastructure (HI) (the Applicant) to prepare the Response to Submissions (RTS) Report for State Significant Development Application (SSDA) Number SSD 9113.

1.1 Background

Advisian was commissioned by HI to prepare an Environmental Impact Statement (EIS) to accompany SSDA Number SSD 9113 pursuant to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The EIS was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning and Environment (DP&E) under covering letter dated 12 March 2018 (Appendix A) and pursuant to Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

The SSDA seeks development consent for the construction and operation of a 13 level Acute Services Building (ASB) (the proposed development) which represents Stage 1 of a multi-stage redevelopment program, known as the Randwick Hospitals Campus Redevelopment (the Project). The proposed development will provide facilities including: An Adults' Emergency Department (ED); Operating Theatres; Central Sterilising Service Department; Intensive Care Unit (ICU), Inpatient Units (IPU); Ambulance Bays, patient drop-off and short stay facility; and a Helipad.

On 15 June 2018, the EIS was submitted to DP&E for adequacy review with a re-submission on 9 August 2018. On 15 August 2018, DP&E advised that the EIS was adequate for public exhibition. The EIS was placed on public exhibition from 31 August 2018 to 26 September 2018. DP&E received eight (8) submissions from Agencies and one (1) submission from a member of the public. DP&E advised that it had "undertaken a preliminary assessment and (identified) the key issue related to the traffic and associated amenity impacts from locating the emergency access on Magill Street.

1.1 Report Purpose

The RTS Report has been prepared under the provisions of Clause 85A of the EP&A Regulation to respond to the comments raised in submissions received by the DP&E during the public exhibition period and to DP&E's preliminary assessment of the SSDA.

1.2 Report Structure

The RTS Report is structured as follows:

- Section 2 provides a summary of the submissions received and by whom they were made, and issues raised in the DP&E preliminary assessment.
- Section 3 provides a comprehensive response to the preliminary assessment made by DP&E.
- Section 4 provides comprehensive responses to each of the comments raised by regulatory agencies and private stakeholders
- Section 5 identifies whether any amended or new mitigation measures are proposed in this RTS Report.

Technical specialists have provided additional expert advice during the preparation of this RTS Report and these are included in the Appendices.



2 Submissions

2.1 DP&E Preliminary Assessment

DP&E undertook a preliminary assessment of the EIS and by letter dated 5 October 2018, advised that:

- The key issue relates to the traffic and associated amenity impacts from locating emergency access on Magill Street. Please reconsider the location of the vehicle access off Magill Street or demonstrate that the amenity impacts can be adequately mitigated.
- The Department requests the following be provided:
 - Aboriginal Cultural Heritage Assessment.
 - Green Travel Plan.
 - Detailed site investigation and confirmation that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No 55–Remediation of Land.
 - Detailed landscape plan clearly identifying all existing trees on the site, trees to be removed, trees to be retained and trees to be planted on the site.

A response to the key issue raised by DP&E is provided in Section 3.

2.2 Submissions Summary

During the public exhibition of the EIS, DP&E received a total of 9 submissions including:

- Eight Government Agencies:
 - Randwick City Council (Council) – dated 26 September 2018 with recommended conditions received from DP&E on 17 October.
 - NSW Environment Protection Authority (EPA) – dated 28 September 2018.
 - NSW Office of Environment and Heritage (OEH) – dated 27 September 2018.
 - Transport for NSW (TfNSW) – dated 28 September 2018.
 - Roads and Maritime Services – dated 26 September 2018.
 - Government Architect NSW (GA NSW) – dated 18 October 2018.
 - Airservices – dated 26 September 2018.
 - Civil Aviation Safety Authority (CASA) – dated 20 September 2018.
- One private stakeholder:
 - Name withheld – undated.

It is noted that no submissions objected to the SSDA.

A response to each of the matters raised in the abovementioned submissions is provided in Section 4.



3 Response to DP&E Preliminary Assessment

Responses to the preliminary assessment undertaken by DP&E are provided in Table 3-1.

Table 3-1 Response to DP&E Preliminary Assessment

Issue	Response
1. The key issue relates to the traffic and associated amenity impacts from locating emergency access on Magill Street. Please reconsider the location of the vehicle access off Magill Street or demonstrate that the amenity impacts can be adequately mitigated.	Vehicle Access Location In developing the composition of the ED in the ASB, several vehicle access locations were considered during the Concept Design Stage. This was refined to three possible, practical access location options: Botany Street, Hospital Road and Magill Street. <u>Botany Street:</u> Vehicle access off Botany Street was discounted as it congested the single point of entry for all vehicles along Botany Street and provided a less intuitive point of arrival with no visibility of the ED entrance. Further, vehicle access required an extensive ramp down to the ambulance bay at Level -02. This significantly compromised the landscaping area along the Botany Street interface. <u>Hospital Road:</u> Vehicle access off Hospital Road was discounted due to the critical need to separate the emergency access away from the loading dock. If not separated, loading vehicles may cause unacceptable access restrictions in emergency situations. Space allocation for an ambulance bay on Hospital Road would distance and compromise the close collaboration between the ASB Core and Randwick Hospitals' Campus. Further, the steepness of Hospital Road presents difficulties negotiating levels of the vehicle access. <u>Magill Street:</u> Vehicle access off Magill Street was chosen as the preferred access point because it included the following advantages: (a) maximises the number of possible routes for ambulances to arrive and leave from the ASB via Botany Street or Hospital Road. (b) provided ambulances, patients and visitors intuitive wayfinding with clear visibility of the ED lobby from the access; (c) The lobby facilitates "minimum hassle" connectivity to "support facilities" on Levels -01 and 00 such as the Front of House, Patient/Staff Lifts, Amenities, and Café; (d) Configuration of the ASB building supports flow between support facilities and "medical facilities" on higher levels such as the Operating Theatres, IPUs, ICUs and so forth; and (e) provides a direct path to the carpark. Amenity The key matters likely to be impacting amenity for residents on Magill Street are considered to be: (i) Traffic, and the accompanying (ii) Noise and (iii) Light issues, potentially causing "Sleep Disturbance" between the hours 10:00pm and 6:00am. Traffic movements in Magill Street contained in the Arup Transport Assessment (Appendix I to the EIS) were reviewed. The



Issue	Response
	results proposed that opening Magill Street during night hours (10:00pm – 6:00am) would see an average of 2 vehicles every 5 minutes (25 vehicles per hour (vph)). Based on the assessed traffic movements, noise and sleep disturbance assessments concluded that the utilisation of the vehicle access and ED will satisfy all relevant noise criteria during day, evening and night periods. Thus, the Magill Street vehicle access was found to be a reasonable and feasible environmental assessment outcome. Intermittent noise events generated by “through traffic” (on an open Magill Street) option, which do not utilise the ED, were found to potentially exceed sleep awakening levels. However, given the low traffic volume through night periods, the infrequency of acute noise events would be unlikely to affect the amenity of residents. In this regard, it is noted that the Hospital Road carpark accesses are closed during the “evening and night” periods from 6:00pm to 6:00am. Notwithstanding the assessed “satisfy all relevant noise criteria” (which included the “evening and night” periods and noting the hours of access to the carpark from Hospital Road), special consideration has been given to identifying reasonable and feasible measures to mitigate noise and light issues, if any, which may cause sleep disturbance. The following measures are being considered: • Opening Magill Street (24 hours) for a trial period of 6 months to test and report on the level and nature of amenity impacts on residents and the planning merits of the street remaining open; • Noise-reducing surfaces on Magill Street to reduce “squeal” from tyres; • Road and site signage to alert users of the need to minimise traffic/people noise impacts to neighbouring areas; • Appropriate sound-proofing barriers and surfaces in the drop-off/Short stay area to reduce people noise which includes closing doors; • At receiver treatments such as acoustic glazing and treatments to ventilation openings/air vents; and • Buffer planting along landscaped areas to obscure headlights, where possible.
2. The Department requests the following be provided:	
a. Aboriginal Cultural Heritage Assessment.	The Aboriginal Cultural Heritage Assessment (ACHA) Report has been finalised by MDCA incorporating comments from the Registered Aboriginal Parties. The final ACHA Report is contained in Appendix A.



Issue	Response
b. Green Travel Plan.	A Green Travel Plan (GTP) has been developed by the South Eastern Sydney Local Health District (SESLHD) in partnership with HI, the Sydney Children's Hospital, Randwick, TfNSW and Arup. The partners are also working with the Council, University of New South Wales (UNSW), staff consultative committees, consumer and community reference groups and organisations and local schools. The GTP is contained in Appendix B.
c. Detailed site investigation and confirmation that the site is suitable for the proposed use in accordance with State Environmental Planning Policy No 55–Remediation of Land.	A Detailed Site Investigation has been prepared by Douglas Partners (2018) and is contained in Appendix C. Douglas Partners (2018) conclude that <i>'the site could be made suitable for the proposed development, subject to the recommendations outlined above'</i>. These recommendations are provided in Section 12 of the Detailed Site Investigation.
d. Detailed landscape plan clearly identifying all existing trees on the site, trees to be removed, trees to be retained and trees to be planted on the site.	An Indicative Tree Retention and Removal Plan has been prepared by Eco Logical Australia in Appendix D to identify all trees assessed in the Arboricultural Impact Assessments undertaken for the Project. Trees proposed to be planted are shown in the Landscape Plans in Appendix E to the EIS.

4 Response to Submissions

Responses to the issues raised in submissions are provided in Table 4-1.

Table 4-1 Response to issues raised in submissions

Issue	Response
Randwick City Council	
Bulk and scale It is recommended that: - In relation to the proposed southern buffer area to Magill Street, the landscape plan for this buffer area be reviewed to incorporate more deep soil planting and reduce hardstand areas to screen the visual impact of the overbearing south elevation. - In terms of the documents and plans submitted for the proposed development, HI should: - amend all elevations and sections to include the outline of adjoining and surrounding buildings, structure and roads for reference purposes; and - include details of where sections are taken from all floor plans.	Refer to Section 7.2 of the EIS regarding SEAR 3 Built Form and Urban Design. Southern Buffer Area Table 7-1 (p. 73) of the EIS describes the setback to Magill Street as follows: <i>'The public Emergency drop-off is set back from the street, allowing a landscaped buffer zone between Magill Street and vehicular area. The building footprint and coupled with its materials and finishes is designed to minimise overshadowing, visual privacy, lighting and reflectivity impacts to Magill Street residences.'</i> The height of the buffer planting is limited due to the area being designated as a services easement which requires suitable species to be installed to minimise any damage to services from root systems. Hardstand areas have been minimised while also accommodating safe access for ambulances, patients and visitors. The hardstand areas are screened by the landscaped buffer zone. Architectural Drawings Architectural drawings (floor plans, elevations and sections) have been revised by BVN incorporating Council's recommendations; outlining the relative elevations and sections between the proposed development, UNSW Campus, existing Randwick Hospitals' Campus (the Campus) and neighbouring residential areas and details of where sections are taken. Refer to Appendix E.
Airport Height Restriction The subject site is affected by the Obstacle Limitation Surface (OLS). The EIS states that the OLS varies from approximately RL 85.0 to RL95.0 and the proposed development will likely exceed these height datums. As such, approval of these exceedances will be required from the Sydney Airport Corporation (SAC). However, no details of compliance have been provided in the EIS.	DP&E provided a copy of the "controlled activity" approval, dated 16 October 2018 issued by the Department of Infrastructure, Regional Development and Cities for the proposed development to HI on 17 October 2018. A copy of the approval has also been supplied to the Council.



Issue	Response
Solar Access and Overshadowing Council recommends that appropriate design measures be applied to maximise solar access for those properties to the south of the ASB site.	Refer to Section 7.3 of the EIS regarding SEAR 4 Environmental Amenity and 'Solar Access and Overshadowing'. The EIS (p. 89) stated that: <i>'Various building siting and massing arrangements were evaluated during the Schematic Design phase to maximise solar access to properties on the southern side of Magill Street and Botany Street. Accordingly, the building was moved 25 metres north of its originally intended location, as defined in the Precinct Masterplan.'</i> It is noted that in shifting the ASB to the north, this represented the maximum possible distance to: (a) maintain required critical clinical connections to the existing Hospitals Campus; and (b) to retain alignment with the public route proposed in the Precinct Masterplan for connecting to the future bridge over Botany Street to UNSW. Refer to the summary of massing studies in Appendix F.
Parking While acknowledging Sydney's strategic shift towards more sustainable transport models Council recommends that further information be provided, in particular details of the Green Travel Plan to justify: • If the predicted increase in public and active transport usage will sufficiently offset the forecast parking demand of staff, patients, and visitors; and • If the proposal, with no on-site parking provided, could effectively manage any additional parking demand without placing extra pressure on the existing road network. Council requests that further investigation be undertaken to identify the need for on-site parking in the development site. Furthermore, Council requests that HI consider a parking strategy on the existing parking provision available on campus to manage parking demands of staff shift rotations.	Section 4 of the Transport Assessment (Appendix I to the EIS) outlined the mode shift away from staff parking that will be required to offset the increase in parking demand forecast for the ASB. This indicated a 6% shift away from staff parking by 2022, while patient and visitor parking was assumed to remain unchanged. The assessment identified a potential distribution of this 6% mode shift to be accommodated by public transport (3%), cycling (2%) and car pooling (1%). The Transport Assessment identified the following factors that could bolster staff public transport use: • The completion of the CBD & South East Light Rail (CSELR) Project will provide a much more legible and reliable public transport service. In conjunction with the current express bus services, peak capacity between the CBD and the Precinct is forecasted to double. • Staff postcode data identified opportunities to improve uptake of bus use for staff living south of the Precinct. Due to poor bus travel time comparability to the private vehicle, only 12% of staff are using public transport in this area, compared to 25% for the campus average. Arup understands that TfNSW are currently investigating opportunities to improve transport connectivity to and from the Precinct via the South East Sydney Transport Study. A GTP has been developed by the SELSHD (refer to Table 3-1 and Appendix B). The GTP contains a package of measures to promote use of public transport, cycling and

Issue	Response
	walking for travel to and from the Precinct including: • Improve staff inductions to inform new starters of bicycle parking facilities, end of trip facilities, car pooling programmes and public transport routes and stops. • Cycling to work as a mode of travel for staff will be supported by the creation of a bicycle user group, an audit and augmentation of current bicycle parking and end of trip facilities to encourage a greater uptake of cycling, targeted communications to capture potential "interested but concerned" cyclists and promotion of events such as National Bike Week and Bike2Work Day. • Car pooling will be encouraged via the creation of a car share data base and potential staff intranet page, where staff can register their interest in car pooling by indicating where they live and shift times. Further, the SESLHD has the opportunity to adjust the on-site car parking strategy to further discourage staff single occupant private car use.
Green Travel Plan Council requests that a Green Travel Plan be submitted to the DPE as part of its assessment of the subject DA. In addition, Council requests that HI explore all possible incentives as part of the preparation of the Green Travel Plan, to effectively promote public and active transport modes, including ongoing monitoring of the performance (e.g. successes, failures and progress) and ongoing methods of improvement.	Refer to response in Issue 2b in Table 3-1 and 'Parking' above. The submitted GTP provides details on the proposed measures and monitoring mechanisms. It is noted that the SESLHD will continue to proactively engage and consult with patients, carers, consumers, community, staff and relevant Government Agencies to refine and implement the proposed GTP initiatives.
Bicycle Networks and Infrastructure Council recommends the inclusion of the following measures to deliver a mode shift to walking and cycling, including: • A new separated cycleway along the north edge of the ASB site; • A potential bicycle lane, planting and wider footpath on Hospital Road to facilitate traffic calming and pedestrian and bike rider safety; • A separated cycleway on Magill St and Francis Martin Drive, to connect to UNSW to the west, and to St Pauls St and the Spot to the east; and • High quality parking facilities in multiple	Bicycle Networks The internal streets and local connecting streets such as Magill Street can accommodate on-street cycling which offers cyclists with the best flexibility for connections to the wider networks. Separated cycleways are only functional when they connect seamlessly at each end and the short sections referred to by Council are considered unlikely to achieve this. Encouraging slower traffic speeds on the local streets will provide a suitable cycling environment. Bicycle parking facilities are being considered holistically across the Campus as part of the bicycle user group input to the GTP. This will consider the location of staff facilities and end of trip facilities. Botany Street Footpath The final design for the Botany Street footpath adjacent to



Issue	Response
locations across the ASB site. Council also requests footpath widening along Botany St extending into the development site to accommodate a shared path (approx. 3.5 – 4m wide). Council requests that these cross-pedestrian routes through campus buildings be reinforced by a wayfinding strategy.	the site will depend on services and stormwater requirements. A shared pedestrian/cycle path could be considered but it may not connect well at each end and hence use would be expected to be minimal. Wayfinding Strategy A Campus wayfinding strategy is being developed in line with the principles outlined in Section 3.7 of the Architectural Design Statement (Appendix D to the EIS).
Construction Traffic Council request that all construction trucks entering the site must turn left into the site from Botany St and all trucks exiting the site must turn right into Botany St and travel north to Alison Rd unless prior approval is provided in writing by Council. This is to ensure that construction trucks avoid Barker St and Botany St (south of the site). Council requests that HI closely liaise with Council's Transport Engineers regarding travel routes for construction trucks in preparation of the CPTMP and once completed, the CPTMP should be submitted to Council for approval.	Refer to Section 8.3 in the Preliminary Construction Management Plan (Appendix F to the EIS) regarding construction access and departure routes, which have been developed by Lendlease in consultation with the Council, TfNSW, Transport Management Centre (TMC), Sydney Coordination Office (SCO), RMS, local schools, UNSW, CSELR, and the Campus.
Operation Traffic Council notes that the proposed configuration/intersection amendments will result in a loss of on-street parking along Botany St, which however has not been considered in the EIS. Council therefore requests that relevant information (e.g. total number of parking to be removed) be included for clarity. In terms of the proposed signal-controlled intersection, Council recommends that HI, in consultation with UNSW approach RMS at an early stage so that the traffic signal could be installed during demolition to achieve improved intersection capacity and pedestrian amenity during both the construction and operation phases. Based on the SIDRA modelling conducted for the Botany Street/Barker Street intersection (provided in the Transport	Refer to Section 7.4 of the EIS regarding SEAR 5 Transport and Accessibility. Confirmation of on-street parking impacts on Botany Street and Magill Street The proposed geometry changes to Botany Street/ ASB Access Road/ UNSW Gate 11 and Botany Street/ Magill Street as well as the Ambulance and ED access on Magill Street is estimated to result in the following reduction in on-street parking spaces: • Botany Street ~ 16 spaces • Magill Street ~ 12 spaces Consultation with RMS regarding Botany Street signals A traffic signals warrant assessment was included as part of the Transport Assessment (Appendix I to the EIS). Arup and HI have consulted with RMS, while providing traffic modelling for RMS review. Lendlease is continuing this consultation process. Opening of Magill Street The opening of Magill Street to Hospital Road is intended



Issue	Response
Assessment Report), Council considers that the proposed opening of Magill Street will not result in significant improvement of the intersection performance. To effectively reduce traffic impacts and associated traffic noise on Magill Street, Council requests that Magill Street be retained as a no through road. Reduced traffic on Magill Street will have positive flow-on effect on the Botany Street/Magill Street intersection. Without the need to deal with high traffic volume, reconfiguration of the intersection may not be warranted and as such, a larger number of existing on-street parking spaces could be retained.	to provide a legible and direct route to the existing Campus car park for visitors following drop-off at the ED. This direct and legible route is to ease concerns of what would likely be distressed and concerned drivers from finding the car park. The Transport Assessment reviewed the traffic impacts associated with and without the opening of Magill Street (Section 5.1.2). This is summarised as follows: • Retaining the closure of Magill Street: This would likely result in an increase of approximately 1,400 vehicles per day (vpd) wishing to access the car park to use Botany Street and Barker Street. Intersection analysis of Botany Street/ Barker Street indicates this is anticipated to increase the average delay at this intersection by approximately 17% and pushing the intersection to practical capacity. • Opening Magill Street: The assessment conservatively estimated a maximum of 2,500 vpd would utilise Magill Street (this includes background traffic, ASB drop off traffic and ED traffic. The current function of Magill Street is a local road, serving primarily residents. However, with Magill Street being the southern boundary of the ASB, the function of this road will likely evolve. RMS guidance for residential streets indicates that 3,000 vpd is a reasonable upper limit for a local road.
Drainage and Flooding Council confirms that the solution proposed by HI is acceptable subject the above points (<i>copied below</i>) being further considered, and solutions developed. Council requests that should the proposal be approved, relevant conditions of consent to be included to effectively address these issues. • In line with previous advice, Council's preference is that if the existing piped drainage system is diverted within the site, it should be constructed as a separate system to the detention system required for the development. This would allow an easement to be created and for Council to own and maintain the drainage asset but not the detention system. It is noted that the on-site detention system presented to Council is in the order of 25 times larger than Council's existing stormwater	Form of Proposed System The flood modelling completed by the Project has determined that the development site is already largely impervious. Consequently, the prime purpose of the diversion / detention system is to divert runoff around the Project site and to provide storage for surface water that would otherwise travel overland and be stored above ground in Eurimbla Avenue. The runoff that is being stored is typically external runoff from the site. It is noted that the proposed development incorporates an On-Site Detention (OSD) system to mitigate the impact of the building on stormwater runoff. Ownership of Stormwater Asset HI will continue discussions with Council in relation to the ultimate ownership of the stormwater asset. Minimise Adverse Impacts In a letter to Council, dated 22 October 2018, HI noted that the Council had confirmed that <i>'the flood modelling work undertaken by HI's consultant team demonstrates that the adverse flooding impacts on homes and streets created by the design layout of the RCR are mitigated'</i>.



Issue	Response
system that runs through the site; • Section 5.2 of Part B8 of the Randwick DCP 2013 requires that the development minimises adverse impacts on flooding, conveyance of floodwaters and floodplain storage volume. The flood modelling work undertaken by HI's consultant team demonstrates that the adverse flooding impacts on homes and streets created by the design layout will be mitigated by the proposed on-site detention system. The hospital owns and maintains other on-site detention systems for its developed area. Similarly, the on-site detention system required for the proposed development, whether in-line or separated, should be owned and maintained by the hospital; • Council has previously raised questions about the potential for sediment to accumulate in the inline detention system due to the flat grade and absence of a low flow channel in the design. The accumulation of sediment may result in public health impacts including odour and may also increase the need for maintenance. HI has previously advised that this was being investigated but has not yet informed Council of the outcome of this investigation; and • Council understands that the detention system is required to have an inlet capacity of 12cu.m/s. The design of the inlet structures should consider both public safety in dry weather and in storm situations and consideration should be given to their appearance as an urban design element.	Sediment Accumulation In relation to sediment accumulation in the pipe system due to the relatively low grade of the system, the design of the system is such that only the first cell conveys flow for minor events. As such, this first cell acts as a low flow system. A review of the results for minor events indicates that the 1-year event would result in velocities more than 0.6 m/s. Such a velocity is expected to be sufficient for the cell to be self-cleansing. Inlet Structures Whilst it is agreed that there is a need for inlet structures, even in major events approximately half the flow entering the system in Eurimbla Avenue is conveyed by the underground drainage system in High Street. The catchment upstream of High Street drains to the underground drainage network via multiple inlets. The conditions at these existing inlets will not alter as a result of the Project and public safety will not alter in dry weather or storm events. At High Street itself, as standard gully pits are used there will be no adverse impact on public safety in dry weather. In wet weather, the depth of flooding is not increased for the major flood event compared to the base case; for the 100-year event, the depth of flooding is less than 350 mm. Further, using the critical 60-minute duration storm as a guide, as the catchment is urbanised, the peak depth occurs during the first 60 minutes of the event i.e. when major rainfall is occurring. In such circumstances, it is expected that peak water depths at the point of entry to the system at High Street will coincide with rainfall of such intensity that people or vehicles will not be able to move within the catchment. It is therefore considered that adequate public safety is provided during storm events. To provide additional surety with regard to inflows to the system, additional inlets are being located at the Probable Maximum Flood (PMF) flood level. At present, a total of four inlets are to be adopted. The inlets will be provided with dome covers to promote inflow. A typical inlet configuration is shown in Figure 4-1. This inlet configuration has been designed to mitigate the risk of blockage. These inlets will be at a suitable level within the drainage easement so as to not affect public safety in dry weather. As the inlets are not expected to be active even in a major event, it is considered that the high-level inlets will also not pose a safety concern during storm events.

Issue	Response
The figure consists of three detailed technical drawings of a stormwater inlet configuration. The first drawing, titled 'FIELD INLET PIT - DOME TOP COVER' at scale 1:20, shows a top-down perspective of a square concrete surround containing a grid of reinforcement bars. Annotations specify 'NO REIN. 100 THICK CONCRETE SURROUND' and '2 x Ø12 @ 50 CHEMICAL ANCHORS'. The second drawing, 'FRONT ELEVATION - SECTION 2' at scale 1:20, is a cross-sectional side view showing the vertical arrangement of the bars, the placement of fabric, and the connection point where the inlet meets a 'PROPOSED CULVERT'. It includes dimensions for bar depth and fabric placement. The third drawing, 'END ELEVATION - SECTION 3' at scale 1:20, provides another cross-sectional view from a different angle, highlighting the 'BAR SPACING EVENLY ACROSS OPENING' and the 'FABRIC PLACED CENTRALLY TO BOX COVER'. It also shows the '2 x Ø12 @ 50 CHEMICAL ANCHORS'.	Response
Figure 4-1 Stormwater Inlet Configuration (Source: ACOR, 2018)	
Biodiversity	Removal and Retention of Trees
Council strongly recommends that any proposed removal of trees be considered and assessed as part of this DA given that it is the current DA which requires tree removal to enable the proposed development. Council also recommends that the proponent retain existing trees where possible for the benefit of local residents, patients, visitors and hospital staff.	An Arboricultural Impact Assessment Tree Protection Specification and an Addendum Assessment has been prepared by TreelQ. It included an assessment of 88 trees within and adjacent to the Project site (refer Appendix G). The assessments identified trees that may be impacted, (including by the proposed development) and where further detailed assessment is required to determine if medium impact trees can be retained. A Tree Protection Plan has been prepared accordingly.
Agreement with Council	Agreement with Council
Consistent with the recommendations of the Arborist Report, Council requests that further detailed assessments (root mapping), via non-destructive methods, be undertaken to assist with the retention of those trees identified with a high, medium, or low impact rating. A site-specific Tree Protection Plan is also required to be prepared for all trees being retained and those located within 10m of any construction activities.	The NSW Government is working on a tree-replacement strategy for the Project. The Applicant has committed approximately 200 trees to be considered for planting both within the Precinct and across the Randwick local government area in the coming years. Consultation with Council is being undertaken on their possible location.
Given that the Arborist Report submitted for this DA only assesses 11 trees, Council requests that detailed Arborist assessment be undertaken for other trees within and around the site, including street streets along Eurimbla Ave and Magill St.	
Council seeks to enter into an agreement with HI to ensure there is no ‘net loss’ of vegetation from public property, as well as form of compensation to offset any likely environmental impact associated with the tree removal by either:	



Issue	Response
• A direct financial payment being made to Council to facilitate tree plantings in the same streets or the surrounding areas/suburbs; or • HI undertaking such public tree plantings at its own cost, which must meet all of Council's requirements and specifications.	
<i>Landscaping and Public Domain</i> As part of the landscape concept plan, Council requests HI to consider incorporating an interpretive use of an old sandstone stormwater culvert which was uncovered (crossing High Street at Eurimbla Avenue) during light rail works. The light rail works required the stone culvert to be removed and it is now in Council's possession. Given that there are no public parks or open spaces in close proximity to the culverts former location, Council would support an interpretive use of the sandstone in landscape works associated with the project development so that the former craftsmanship and construction methods can be recognised appropriately in a local setting. In addition, the Landscape Design Report and Plans submitted for the DA are required to be revised to include the following additional information: • Planting Plan & Plan Schedule which includes proposed species, botanic and common names, pot size at the time of planting, quantity, location, dimensions at maturity and any other details required to fully describe the works; • A schedule showing the number of (as a percentage of total) the endemic, native and exotic specifics that will be used in all new planting, as well as the number of new canopy trees to be planted compared to number of trees removed; • Location of existing street trees in Botany St to be retained in accordance with the 'Tree Protection Measures'	Sandstone Culvert HI will investigate the potential interpretation of the culvert and where required, submit a final landscape concept plan for Council approval prior to operation. Landscape Design Report and Plans HI notes and accepts the Council's proposed recommended condition of consent requiring the Landscape Design Report and Plans be revised.



Issue	Response
condition, and how the planting strategy within the site will respond to the existing vegetation; and • Lighting strategy for paths and gardens to assist with way finding as well as surveillance/security.	
Heritage The assessments of Aboriginal and Historical archaeology which have been submitted are sufficient to meet statutory requirements, and their recommendations should be included as conditions of consent (should the DA be approved). If there are opportunities for onsite interpretation of the history of the place, consultation should be undertaken with the La Prouse Local Aboriginal Land Council to determine whether recognition of these or other Aboriginal associations with the area would be appropriate to commemorate in some form within the context of the proposed development. This would be consistent with interpretive displays elsewhere within the hospitals campus. A consent condition should be included that should Aboriginal or Historical archaeological material be discovered during site investigations or subsequent construction works, a comprehensive Interpretation Strategy and Plan for the site, including appropriate community consultation, be prepared and implemented as part of the proposed development. In relation to social impact of the proposed development, Council requests that photographic evidence catalogue the residences subject to the demolition. This may then be used in the future to set out the historical and social ties of those residences to the area through interpretive plaques, publications and/or as a social record of a changing landscape. The proponent should also be required to liaise with residents from Eurimbla Ave, Magill, and Botany St whose homes have been compulsorily acquired	Archaeological Assessments The Council comments in relation to the adequacy of the Aboriginal and Historical archaeology assessments are noted. Interpretation Consultation with La Prouse Local Aboriginal Land Council regarding opportunities for onsite interpretation regarding Aboriginal cultural heritage is already underway with focus applied to landscaping and the Arts and Culture Strategy. An Arts and Culture Committee has been established to provide advice to the Project and develop an overarching Arts and Culture Strategy for the ASB. The theme of recognising the site's land use history has been put forward to the committee to consider in the development of the Arts and Culture Strategy. Social Impact Photographic recordings have been undertaken for all buildings to be demolished at the site as part of the valuation process. HI agrees to the preparation of a photographic catalogue. HI does not intend to create a memorial garden on the site. However, opportunities to recognise previous land owners (e.g. through the erection of a plaque) will be referred to the project's Arts and Culture Committee for consideration.



Issue	Response
for the development, to discuss options for the creation of a memorial garden or plaque on the site.	
Noise and Vibration – Construction To avoid sleep disturbance to on residents to the south and north of the site, Council strongly recommends that the construction hours be reviewed, and no construction works be undertaken between 6am and 7am. This requirement is consistent with all other construction sites within the Randwick LGA. Consistent with the recommendations of the Noise and Vibration Assessment Report, Council requires that appropriate mitigation measures be included in the CNVMP to reduce construction traffic noise during the sensitive times, e.g. no truck movements along Magill Street and Hospital Road and no idling or parking of trucks on the surrounding residential streets. Council recommends that relevant conditions be included to reinforce these noise mitigation measures.	Refer to Section 7.9 of the EIS regarding SEAR 10 Noise and Vibration and Section 7.18 of the EIS regarding SEAR 19 Construction Hours. Section 2.3 of the Transport Assessment indicates that the road network surrounding the Campus experiences a network weekday peak from 7:30am – 8:30am and 4:45pm – 5:45pm, based on surveys. Consultation with Council, TfNSW, RMS, SCO and TMC has informed the proposal to schedule truck movement between 6am – 7:30am and minimise truck movement between 7:30am – 9am to reduce traffic congestion and cumulative noise generation to the surrounding areas including the Randwick Town Centre. Noisy construction works such as piling and structural will only commence from 7am onwards to align with the other developments in the area. A condition is accepted by HI to include appropriate measures into the CNVMP to reduce construction noise and vibration during sensitive times.
Noise and Vibration – Operation Council recommends that alternative locations be considered for the loading bay and car park access to protect the amenity of residents on Magill street. Council considers that the loading dock should be located further away from the Magill Street end. Council stresses that noise from loading and unloading associated with the proposed loading dock during the night time period may cause sleep disturbances, in particular noise from the reversing alarms of trucks. Council understands that administration controls will be implemented to manage night time noise from the loading dock. It is recommended that these controls be included as conditions of any consent. In relation to any ongoing night-time traffic noise on Magill St, Council requests that the Noise and Vibration Impact	Car Park Access Refer to response in Issue 1 in Table 3-1 with regards to the decision not to relocate emergency department access point provided suitable mitigation measures. Loading Dock The ASB loading dock is a satellite port with movements in support of only ASB operations and limited to light and medium vehicle access. The existing campus dock array remains the primary destination for major deliveries to ASB including linen, waste and food. Consideration has been given to the loading dock location by moving it away from Magill Street to Hospital Road to limit truck movements along Magill Street and protect residential amenity. Relocating the loading dock further north would preclude the development options for the future expansion area to the north. A 4-metre-high wall to the loading dock has also been proposed to help mitigate and screen acoustic and visual impacts. HI accepts a condition in relation to administration controls to minimise night time noise.



Issue	Response
Assessment Report be updated to include detailed acoustic assessment for each individual property, with specific measures proposed to minimise noise impacts on those properties (e.g. building acoustic treatments to the most sensitive receivers). The proponent should be required to offer at-receiver noise mitigation in the form of double glazing and air-conditioning to all residents affected by high levels of construction and operational noise. Long term noise monitoring and validation of mitigation works should be undertaken upon commencement of operation of the ASB to assess if the acoustic mitigation measures are effective. Consultation should also be undertaken with the most affected receivers during this noise validation process. The EIS has not outlined how the noise impact from the helicopter operations can be managed. It is therefore recommended that noise from this source be investigated in more detail including consideration of alternative landing locations. Council notes that residents who live near the subject site, in particular along Magill and Botany Streets will be significantly affected by the demolition, construction and operational noise created by the proposed hospital redevelopment. Many residents in the area have been affected by noise associated with the light rail construction works since the beginning of 2016. As such, Council requests that: • The proponent establishes a community reference group to facilitate effective ongoing communication with local residents and other stakeholders affected by any demolition and construction works; and • The proponent establishes appropriate mechanisms in consultation with TfNSW to minimise the occurrence of concurrent construction works associated with light rail and the	Detailed Acoustic Assessment The acoustic data to determine the rating background levels (RBLs) in the Noise and Vibration Impact Assessment (Appendix G to the EIS) was collected in accordance with the requirements of the NSW Noise Policy for Industry (i.e. acoustic data has been collected at the reasonably / potentially most-affected residences). The data collected at each monitoring location is a fair representation of the worst-case (i.e. lowest) rating background levels (RBLs) applicable for each individual, potentially-affected property. For vehicular traffic on public roads, engineering noise controls at the source (i.e. at / on public vehicles) will not be possible. Therefore, further work will be undertaken during the design finalisation phase to establish feasible and reasonable noise mitigation measures. The measures that could be implemented to minimise and mitigate the potential noise impacts at the Magill Street residences include road design (including road surfaces) and traffic management, noise barriers / screening and at-property treatments. Helicopter Operations Section 6.3 of the Noise and Vibration Impact Assessment determined that some residential receivers within Catchment A will experience increased helicopter noise levels of up to 10 – 15 dB(A) above their current noise exposure from the existing helicopter landing site (HLS). Residential receivers within Catchment B will experience helicopter noise levels that are similar to their current noise exposure. Noise impact from helicopter operations can be managed by adopting mitigation measures which are often defined within Fly Neighbourly Agreements between aircraft operators and communities or authorities that have an interest in reducing the disturbance caused by aircrafts within the area. The following measures may be included to manage helicopter noise: • Follow flight paths to avoid noise sensitive areas; • Follow high ambient noise routes (busy roads, highways etc; • Follow unpopulated routes (waterways etc); • Maintain an appropriate flyover altitude; • Maintain an appropriate hover/circling altitude; • Reduce speed; • Observe low noise speed/descent settings; • Vary the route used to avoid repetition; and



Issue	Response
proposed hospital redevelopment, for the benefit of residents living within overlapping noise catchment zones.	• Use high take-off/descent profiles. Consultation <u>Engaging with local community during construction</u> HI is committed to continuing the extensive, transparent and proactive engagement with the local community that has already occurred since the Project was announced in mid-2017. In recognition of the time availability of site neighbours, the Project team has undertaken frequent and direct engagement. This has occurred throughout 2018 and ensures the construction staging approach and site plan design responds to stakeholder needs and mitigates potential impacts on the local community where possible. Feedback obtained on each of these engagements are incorporated into future approaches and communications. This engagement has resulted in changes to traffic management, site access and has informed how the project can best engage with the local community as the site transitions through each phase of construction. As each stakeholder has their own unique set of circumstances, regular and informative door knocks or briefings supported by written communication will continue to be provided to project neighbours, throughout each phase of construction to ensure their needs or concerns are appropriately addressed. Further details on the approach to construction communication and stakeholder engagement are contained in the Construction Communications Plan in Appendix N. The project community information line (phone 1800 571 866) operates 24 hours a day, 7 days per week to ensure all stakeholders have a direct communication channel to the project team so their feedback or complaints can be promptly responded to and resolved as required. In 2017, the project initiated a Consumer and Community Advisory Committee whose role is to participate in hospital design, and provide advice and guidance. <u>Interface with TfNSW</u> As part of the extensive stakeholder engagement program underway, RCR is engaging with TfNSW, RMS, SCO and CSELR to jointly manage the construction interface between the projects. Significant and frequent coordination is occurring between these parties to manage potential cumulative impacts on site neighbours, including but not limited to, noise impacts; focus is also applied to the coordination of site hours, site access, the programming of high impact activities and



Issue	Response
	coordinated notification of upcoming work to mitigate impacts on local stakeholders.
Sustainability Council believes and requests that the ASB should strive for a minimum 5-star green star rating to signify 'Australian Excellence' as a high-performance healthcare facility. Council requests HI investigate the following key measures to improve its green star rating: • Excess Energy from roof mounted photovoltaic systems could be exported to the University to reduce payback periods and provide a viable renewable energy solution; • Openable windows/louvres to allow for cross ventilation would improve passive cooling especially in the internal car parking areas, administrative and non-sterile sections of the proposed building; • Increased permeable areas in landscaped areas including internal courtyard is encouraged to meet proposed Water Sensitive Urban Design Objectives; • Cyclist facilities for visitors, patients and staff should be provided including end of trip facilities; and • Indoor Environment Quality (IEQ) should be a priority for a healthcare facility. Low Volatile Organic Compound (VOC) finishes, paints and adhesives should be utilised to improve indoor air and environment quality.	Refer to Section 7.5 of the EIS regarding Ecologically Sustainable Development. The EIS (p. 98) states that: <i>'The proposed development will achieve a theoretical 4-Star Green Star rating and a high level of sustainability performance aligned to industry best practice and standards including the National Construction Code (NCC) / BCA – Section J), DCP and NSW Health Engineering Services Guideline (June 2016).'</i> Refer response below in relation to OEH's comments on 'Sustainability and Building Design'.
Interface issues on Magill Street In summary the following key issues and corresponding measures are proposed to improve the amenity of those residences along Magill Street. • Council recommends that further measures be considered to reduce the visual dominance of the proposed development;	Refer to responses above under the headings 'Bulk and Scale', 'Operation Traffic' and 'Noise and Vibration – Construction' to address these issues.



Issue	Response
• Council recommends that Magill Street remain a no through road which is likely to reduce the estimated traffic volume, being 2,500 vpd during operation by appropriately 950 vpd; and • To avoid sleep disturbance from construction noise, Council requests that no construction works be proposed between 6am and 7am. To minimise night-time noise impact of the satellite loading dock, Council recommends that the access points of the loading dock be located away from the Magill Street end. In relation to ongoing traffic noise during night time, Council requests that the Noise and Vibration Assessment Report be reviewed to include specific noise mitigation measures for properties along Magill Street.	
Notice of Motion from Cr Veitch 1. Acknowledges that construction noise and vibration created by major infrastructure projects can have a profound impact on the physical and psychological health of residents who live in close proximity to these developments. Residents living near the subject site of Eurimbla Ave, Magill and Botany Streets will be significantly affected by demolition, construction and operational noise created by the POW Hospital Redevelopment Stage 1. 2. Notes that many residents close to the POW Hospital development live in close proximity to the CSELR construction zone, and have been affected by noise since the beginning of 2016. In addition, many residents in this area work as nurses, doctors and in other employment roles at the POW Hospital that involve shift work. 3. Arrange for public community information sessions with representatives from RCC, Health Infrastructure, POW Hospital and local residents to be held prior to a) the demolition of the subject site dwellings on Eurimbla Ave, Magill and Botany Streets and b) the commencement	HI notes the Notice of Motion. Refer to responses above in relation to Council's submission.



Issue	Response
of Stage 1 construction. 4. Propose the following conditions of consent to the Minister for Planning regarding SSD 9113 • That the Applicant establish a community reference group to facilitate effective ongoing communication with local residents and other stakeholders affected by the demolition and construction works. • That the Applicant establish appropriate mechanisms with the CESLR to minimise the occurrence of concurrent construction work for the benefit of residents living within overlapping noise catchment zones. • That the Applicant consider alternative locations for the loading bay and car park access to protect the amenity of residents on Magill St. • That the Applicant offer at-receiver noise mitigation in the form of double glazing and air-conditioning to all residents affected by high levels of construction and operational noise. • That the Applicant liaise with residents from Eurimbla Ave, Magill and Botany Streets whose homes have been compulsorily acquired for the development, to discuss options for the creation of a memorial garden or plaque on the site. • That the Applicant retain existing trees where possible for the benefit of local residents, patients, visitors and hospital staff.	
Recommended Conditions of Consent	HI has reviewed the recommended conditions of consent and provides its responses in a table in Appendix H.
NSW Environment Protection Authority	
The EPA notes that the EIS section 4.1 NSW Legislation appears to omit any reference to applicable environment protection legislation, including inter alia • Protection of the Environment Operations (Waste) Regulation 2014,	Refer to Section 7.17 of the EIS regarding SEAR 18 Waste which contains the following information, summarised below. <i>'A Waste Management Plan (WMP) for the construction phase has been prepared by Lendlease (2018) ... For the construction phase, the Contractor is to implement strategies</i>



Issue	Response
• Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014, • Radiation Control Act 1990, and • Radiation Control Regulation 2013.	<i>in the WMP.</i> The construction WMP prepared by Lendlease (refer Appendix Y to the EIS) has referred to the <i>Protection of the Environment Operations (Waste) Regulation 2014</i>. <i>'For operational phase, the SESLHD currently implements the POWH WMP... For the operational phase, a detailed ASB WMP is to be prepared to the satisfaction of the SESLHD prior to the commencement of operation.'</i> The current Prince of Wales Hospital Waste Management Plan (Appendix Z to the EIS) refers to the <i>Radiation Control Act 1990</i>, and <i>Radiation Control Regulation 2013</i>. The ASB Waste Management Plan will be prepared to comply with these requirements. The proposed development will comply with the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014.
The EPA acknowledges that the proponent may consider it useful to engage different contractors to undertake demolition, site preparation, bulk excavation, and construction stages of the project. The EPA thus expects the proponent to adopt all such means as may be necessary to ensure a seamless transition of environmental impact mitigation measures between demolition, site preparation, bulk excavation, and construction stages of the project, particularly if different contractors are to be engaged for some or all of those stages of the project.	The Applicant intends to use the one Head Contractor to oversee all elements/stages of construction ensuring a consistent approach to implementation of environmental impact mitigation measures.
Site contamination 1. The proponent be required prior to commencing work to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including – (i) asbestos containing materials, and (ii) lead-based paint, and (iii) residual pesticides within the footprint of demolished structures and near timber power poles, and (iv) PCBs near demolished substations and transformers. Further, that the required procedure includes details of who will be responsible for implementing the unexpected finds	Demolition and remediation of the site has been approved by the Sydney Eastern City Planning Panel in DA/208/2018 and does not form part of this application. However, to satisfy the EPA, the following comments are made. The Detailed Site Investigation prepared by Douglas Partners (Appendix C) details the procedures undertaken to assess contamination for the proposed development including boreholes, test pits and groundwater wells. Site investigations and reporting were undertaken with reference to <i>National Environmental Protection Measure 2013, Sampling Design Guidelines</i> (NSW EPA, 1995) and <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (NSW EPA, 2011). In the event of finding contamination and/or hazardous materials, the following documents will be prepared in accordance with the <i>State Environmental Planning Policy 55 - Remediation of Land (SEPP55)</i>. • Remediation Action Plan (RAP) which details the



Issue	Response
procedure and the roles and responsibilities of all parties involved. 2. The proponent be required to satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 'asbestos wastes'. Note: The EPA provides additional guidance material at its web-site http://www.environment.nsw.gov.au/waste/asbestos/index.htm. 3. The proponent be required to consult with Safework NSW concerning the handling of any asbestos waste that may be encountered during the course of the project. 4. The proponent be required to ensure that following demolition of any existing structures, road pavement and infrastructure, electricity substations/transformers and in ground utilities, further investigation is undertaken of soil and groundwater, including within the footprint and immediate surrounds of those demolished structures, infrastructure, substations/transformers and utilities prior to undertaking any construction. 5. The proponent be required to ensure that following excavation a Site Validation Assessment report is prepared to determine pre-construction contamination conditions of the site including any fill material imported to the site. 6. The proponent be required to consider the guidance material provided in the <i>National Environment Protection (Assessment of Site Contamination) Measure</i> as well as the following EPA documents when undertaking further site assessment and validation - • Technical Note: Investigation of Service Station Sites, 2014, • NSW EPA Sampling Design Guidelines, • Guidelines for the NSW Site Auditor	necessary remedial work or management required to render the site suitable for the proposed development / land use; and • Site Remediation & Validation Report (SRVR) which documents the completeness of the remedial work. A RAP has been prepared by Douglas Partners and is contained in Appendix I. The Construction Waste Management Plan (Lendlease, 2018 – Appendix Y to the EIS) was informed by the <i>Protection of Environment Operations (Waste) Regulation 2014</i> as State Legislation. The Preliminary Construction Management Plan (Lendlease, 2018 – Appendix F to the EIS) recognises asbestos as a primary hazardous waste during construction phase. The following text is included on Page 16 of the CMP: <i>'Lendlease is well equipped to coordinate and manage the safe removal of hazardous materials and understand how to appropriately managed risk associated with transporting hazardous materials within a live operational hospital campus and adjacent properties.'</i> This includes revision of the Asbestos Management Plan and Register and ensuring the Asbestos Remediation Contractor is appropriately licensed. HI accepts the EPA's requirements and notes that the procedures will detail roles and responsibilities of involved parties.



Issue	Response
Scheme (3rd edition) 2017, and Guidelines for Consultants Reporting on Contaminated Sites, 2011. 7. The proponent be required to ensure that the processes outlined in <i>State Environmental Planning Policy 55 - Remediation of Land (SEPP55)</i> are followed in assessing the suitability of the land and any remediation required in relation to the proposed use. 8. The proponent be required to ensure that the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site so as to result in significant contamination. 9. The proponent be required to notify the EPA should any contamination of the development site be identified which meets the triggers in the <i>Guidelines for the Duty to Report Contamination</i>. 10. The proponent be required to engage a site auditor accredited under the Contaminated Land Management Act should additional site investigations reveal further contamination of soil or groundwater – (a) to review the adequacy of contamination assessment reports, any remediation action plan and unexpected finds procedure, and (b) to provide a Section A Site Audit Statement (SAS) and accompanying Site Audit Report (SAR) certifying the suitability of the development site for the proposed use.	
<i>Noise and vibration [construction phase]</i> <u>General construction hours</u> The proponent be required to ensure that as far as practicable all demolition, site preparation, bulk earthworks, construction and construction-related activities likely to be audible at any noise sensitive receivers such as surrounding residences are only undertaken during the standard	Refer to 'Noise and Vibration - Construction' response above in Table 4-1 regarding Lendlease's strategy on "General construction hours" and "Idling and queuing construction vehicles". The Noise and Vibration Impact Assessment (Acoustic Studio, 2018) outlines mitigation measures relating to scheduling of construction activities, including: Scheduling noisy construction works such as piling and structural work from 7am to align with other developments in the area; and



Issue	Response
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. <u>Intra-day respite periods</u> The proponent be required to schedule intra-day 'respite periods' for construction activities identified in section 4.5 of the Interim Construction Noise Guideline as being particularly annoying to noise sensitive receivers, including surrounding residents. <u>Idling and queuing construction vehicles</u> 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. <u>Reversing and movement alarms</u> The proponent be required to consider undertaking a safety risk assessment of site preparation, bulk earth works, construction and construction-related activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.	Ensuring periods of respite are provided in the case of unavoidable maximum noise levels events. HI agrees to incorporating measures relating to intra-day respite periods and management of reversing and movement alarms into the CNVMP, as appropriate.
<i>Dust control and management</i> The proponent be required to minimise dust emissions on the site and prevent dust emissions from the site.	Refer to Section 6.6 of the Preliminary Construction Management Plan (Appendix F to the EIS) regarding dust control and management.
<i>Waste control and management (general)</i> The proponent be required to ensure that: all waste generated during the project is assessed, classified and managed in accordance with the EPA "Waste Classification Guidelines Part 1: Classifying	Refer to the ASB WMP (Construction) prepared by Lendlease in Appendix Y to the EIS.



Issue	Response
<i>Waste</i>", November 2014 and the 2016 Addendum thereto; 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. The proponent be required to identify and implement feasible and reasonable opportunities for the reuse and recycling of waste, including food waste. <i>Waste control and management (concrete and concrete rinse water)</i> The proponent be required to ensure that concrete waste and rinse water are not disposed of on the development site, and prevented from entering waters, including any natural or artificial watercourse.	
<i>Noise and vibration impacts [operational phase]</i> <u>Background noise</u> The proponent be required to review the noise impact assessment to ensure the provision of at least a 'week's worth' of valid data from background monitoring locations 11, 12 and 13, including confirmation of whether – (i) any background noise measurements were affected by average wind speeds greater than 5 metres per second, (ii) what, if any, data was excluded from the calculation of background noise levels, and (iii) whether the review indicates any change required to the rating Background levels (RBLs) provided in the EIS. <u>Magill Street residences</u> The proponent be required to review the	Background Noise Refer to Section 7.9 of the EIS regarding SEAR 10 Noise and Vibration. Unattended long-term noise monitoring was carried out from 18th July to 25th July 2018 at locations 11, 12, and 13 to capture a combination of ambient and background noise levels along Magill Street. None of the background measurements were affected by average wind speeds greater than 5 metres per second. For Location 11, seven days of valid data were collected. None of the data was excluded from the calculation of background noise levels and thus no change was required to the Rating Background Levels (RBLs) provided in the EIS. For Location 12, six and a half days of data was collected as the power supply failed 12 hours before completion of the 7-day monitoring. The 6.5 days' worth of data showed consistent background and ambient noise levels and on this basis no change was required to the RBLs. For Location 13, 11 hours of data were excluded from the calculation of background noise levels (from 7:15am to 6:15pm on 23 July) due to noise generated by gardeners using <i>'power hedge trimmers and leaf blowers'</i>.



Issue	Response
location and orientation of those parts of the development having direct noise impacts on Magill Street residences or necessitating traffic movements along Magill Street, including a comparative noise impact assessment of design options that provide alternative locations and orientation of the proposed – • ambulance access, • emergency department (together with associated emergency department 'drop off' vehicular access, short stay parking and re-parking activities), and • satellite loading dock/waste collection areas. <u>Ambulance and emergency department 'drop off' access</u> The proponent be required to undertake a detailed comparative noise impact assessment of alternatives (e.g. Botany Street, Hospital Road) to the proposed location of ambulance access and emergency department 'drop off' access from Magill Street. <u>Waste collection services</u> 1. 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 Friday, subject to a potentially less restrictive regime pending noise compliance monitoring of typical loading dock operations (particularly during evening and night assessment periods). 2. The proponent be required to review the noise impact assessment of the proposed 'satellite loading dock' operations having explicit regard to the predicted noise impact on the upper storey of residences located on the opposite side of Magill Street for alternative designs with and without a roof installed over the loading dock and courtyard. 3. The proponent be required to consider undertaking a safety risk assessment of	Following exclusion of this data, the remaining 6 and a half days' worth of data is consistent and repeatable, thus no change was required to the RBLs. Magill Street Residences / Emergency Access Refer to response provided in Issue 1 of Table 3-1 discussing the alternate locations of the emergency access and appropriate mitigation measures implemented to reduce direct noise impacts on Magill Street. Loading Dock / Waste Collection Section 6.2.1.3 of the Noise and Vibration Impact Assessment assesses the impact of loading dock noise generation on the Magill Street residents. The details for the perimeter wall around the loading dock was determined from this assessment to provide effective acoustic screening between loading dock activities and upper storey residences. With the wall provided, noise emissions from the satellite loading dock meet the NSW NPI noise emission criteria and sleep awakening criteria at the upper storey of the residences located on the opposite side of Magill Street at all times and, therefore, at all residential and other noise-sensitive receivers. This assessment also assumes the use of tonal movement alarms for vehicles in the loading dock, however Section 6.2.1.3.3 of the Noise and Vibration Impact Assessment also recommends the use of non-tonal movement alarms to further minimise the noise impacts. HI supports the undertaking of a safety risk assessment of waste collection services at the loading dock to determine whether it is practicable for non-tonal movement alarms to be used without compromising safety. If a roof (assuming a lightweight (metal-deck, or similar) roof construction) is provided for the satellite loading dock, the noise emissions from the satellite loading dock will reduce by a further 10 to 15 dBA when assessed at the upper storey of residences on Magill Street. Mechanical plant and equipment A comprehensive quantitative assessment of operational noise impacts of mechanical plant and equipment on all surrounding noise sensitive receivers was completed in Section 6.1 of the Noise and Vibration Impact Assessment. This comprehensive quantitative assessment is based on the acoustic data that has been provided by the building services engineers for the plant selections that have been made at the SSDA stage. The noise controls described in Section 6.1 and Appendix D for the mechanical plant and equipment have been determined from this comprehensive quantitative assessment in order to ensure that the



Issue	Response
waste collection services to be provided at the satellite loading dock to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding residents, without compromising safety. <u>Delivery of goods</u> The proponent be required to ensure delivery of goods to the loading dock are not undertaken other than between the hours of 7.30 am and 6.00 pm. <u>Mechanical plant and equipment</u> The proponent be required to: (a) provide a comprehensive quantitative assessment of operational noise impacts of mechanical plant and equipment on surrounding noise sensitive receivers, especially residences; (b) ensure mechanical plant and equipment installed on the development site does not generate noise (individually or cumulatively) that would – (i) exceed the Project Noise Trigger Levels, and (ii) exhibit tonal or other annoying characteristics.	mechanical plant and equipment on the development site does not generate noise (individually or cumulatively) that would exceed the Project Noise Trigger Levels or exhibit tonal or other annoying characteristics. There is potential for alternative plant selections to be considered as the development progresses through detailed design stages. Therefore, it will be necessary for the acoustic consultant to continually review plant selections and update noise controls so that mechanical plant and equipment will not generate noise (individually or cumulatively) exceeding the Project Noise Trigger Levels, or exhibit tonal or other annoying characteristics.
<i>Emergency back-up generators and Underground Petroleum Storage System</i> The proponent be required to design, install and operate any underground petroleum storage system in accordance with the requirements of the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014.	The proposed development will comply with the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014.
<i>Waste management (clinical and related waste)</i> 1. The proponent be required to properly classify and manage clinical and related waste in accordance with the EPA's Waste Classification Guidelines. 2. The proponent be required to ensure that the occupier of the hospital prepares	As stated in Section 7.17 of the EIS regarding SEAR 18 Waste, a detailed ASB Waste Management Plan is to be prepared to the satisfaction of the SESLHD prior to the commencement of operation'. The ASB WMP will maintain compliance in accordance with the EPA's Waste Classification Guidelines and the "Clinical and Related Waste Management for Health Services", dated August 2017.



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and implements a revised waste management plan, in respect of clinical and related waste generated at the development site in accordance NSW Health policy directive 2017_026 titled <i>"Clinical and Related Waste Management for Health Services"</i>, dated August 2017	
Radiation control 1. The proponent be required to clarify whether nuclear medicine or radio-therapy facilities are to be located in the acute services building. 2. The proponent be required to apply for and obtain any necessary amendment to the 'radiation management licence' currently held under the name of the South Eastern Sydney Local Health District in respect of 'regulated material' at the new facilities and the management and handling of any waste containing radioactive material. 3. The proponent be required to ensure shielding of 'regulated material', including diagnostic imaging equipment is assessed and calculated in accordance with the EPA's guidance material provided in <i>"Radiation Guideline 7 - Radiation shielding design assessment and verification requirements"</i>.	The Hazardous Chemicals (Dangerous Goods) Matters Advice states that diagnostic and clinical treatment radiation equipment will be co-located with the ED. When radiation equipment models have been identified and specified, SESLHD will arrange accordingly for the required amendments to the 'radiation management licence' prior to operation of the ASB. A shielding assessment will be prepared to ensure requirements in the Australian Standards and the EPA's <i>"Radiation Guideline 7 - Radiation shielding design assessment and verification requirements"</i> are met.
NSW Office of Environment and Heritage	
Aboriginal Cultural Heritage An Aboriginal Cultural Heritage Assessment Report (ACHAR) has yet to be submitted as required by the proposals SEARs (item 9 dated 12 March 2017). The proponents progress letter in Appendix O, states this should be completed by mid-September 2018. OEH notes that this report was not on the DPE major projects assessments tracking website on the closure of the public exhibition period on the 26 September 2018. OEH will assess and provide separate comments once this ACHAR has been submitted. Please note, the proposal should not be determined without an assessment of the ACHAR	Refer to response in Issue 2a in Table 3-1. HI notes that OEH will review and comment on the final ACHA Report.



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given the extensive bulk earthworks of approximately 40,000m ³ proposed.	
Biodiversity The Biodiversity Development Assessment Report prepared by Ecological Australia (August 2018) does not satisfy "Application of the no net loss standard" (section 11 of the BAM) because the vegetation at the development site has not been assessed for its habitat value and no field assessment of habitat constraints or microhabitats has been carried out. As such, it cannot be determined if the impacts on these potential biodiversity values have been avoided, minimised and mitigated through reasonable measures, as per section 11.1.1.3 (a) of the BAM.	Habitat assessments were undertaken by Eco Logical Australia during the field survey; with no hollow-bearing trees being recorded. The habitat was assessed to be substantially degraded such that naturally occurring threatened flora species are not present. No candidate species credit was required to offset the development. Habitat for threatened species have been addressed as prescribed impacts, in the amended Table 19 of the revised Biodiversity Development Assessment Report (BDAR) in Appendix J. Potential foraging habitat for the Grey-headed Flying-fox will be removed, however, it is a relatively small area relative to available habitat within the locality. Landscape plantings using native species would replace some removed foraging habitat. Retention of trees along the perimeter of the site was prioritised to minimise impacts to biodiversity values where possible.
Biodiversity Further, the following biodiversity and impact assessment requirements of the BAM must be addressed in an updated BDAR: • No field assessment of the habitat constraints or microhabitats on the development site, as required by 6.4.1.17 of the BAM, has been reported in the BDAR. • The following sections from the BAM are applicable but have not been addressed: ○ 9.2.1.3 'The assessment of the impacts of development on the habitat of threatened species or ecological communities associated with human made structures'. It appears that the habitat value of human made structures was not verified in the field (see page 17 of the BDAR "Consideration was given during literature review to buildings or structures that could potentially be utilised as a roosting resource by microchiropteran bats (microbats)"). Such structures however, could	Refer to above response and Table 10 of the revised BDAR regarding habitat field assessments required by 6.4.1.17 of the BAM. Biodiversity Impact Assessments (9.2.1.3, 9.2.1.4 and 9.2.1.5) required by the BAM have been addressed in Table 19 of the revised BDAR. Table 20 of the BDAR has been revised to reflect the changes recommended by OEH. No hollow-bearing trees were recorded. Habitat assessments were undertaken during the field survey, potential limited to those described in prescribed impacts in Table 19. As stated in the BDAR, the connectivity of the site is limited to highly mobile species. Considering the high mobility, their ability to move between habitats will not be compromised by the development. As such, there is minor loss of a connecting foraging habitat. Regarding measures to mitigate impact to native vegetation and habitats the revised Table 20 states '<i>No remnant native vegetation is present within the site that would be suitable for restoration and rehabilitation</i>'. Given the absence of remnant indigenous plant community on or adjacent to the site, it is unsuitable for restoration and rehabilitation of native vegetation. Planting locally occurring species is more suitable given the level of disturbance in the site. The removal of vegetation is subject to separate planning approvals. The BDAR has assessed the worst-case scenario



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afford habitat for certain microbat species and at least one such species <i>Saccolaimus flaviventris</i> (the yellow-bellied sheath-tailed bat, known to utilise buildings and tree hollows as roost sites) has been recorded within 3 km of the site. ○ 9.2.1.4 'The assessment of the impacts of development on the habitat of threatened species or ecological communities associated with non-native vegetation'. The BDAR contains no details of any habitat assessment for non-native vegetation. Even where the vegetation is entirely exotic and thus not "native vegetation" and not a PCT, the vegetation should still be assessed for its values as habitat for threatened species and with respect to the impacts of the proposal, including the impacts prescribed by the regulations (in accordance with sections 6.7 and 9.2 of the BAM). ○ 9.2.1.5 'The assessment of the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range'. While the BDAR contains statements as follows "The development site is located within a fragmented and urbanised landscape. No connectivity exists between areas of habitat in the locality except for highly mobile species." (page 17) and "habitat for threatened species is limited to marginal foraging habitat for highly mobile species" (page 16), no assessment as per section 9.2.1.5 has been carried out. Impacts on foraging habitat for highly mobile threatened fauna species, such as the Grey-headed Flying-fox, should be assessed. ● Regarding measures to avoid and minimise the impacts of the project,	of complete removal of vegetation within the SSDA site, including vegetation approved for removal under the two REFs and the DA.



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table 20 on page 22 of the BDAR is unclear. For example: ○ the first row lists "displacement of resident fauna" as a measure to minimise impacts (when it is an impact itself) and the associated action states "no trees within the development site contained suitable hollows for fauna habitation", even though the vegetation at the development site has not been assessed for its habitat value ○ the second row lists "instigating clearing protocols including pre-clearing surveys, daily surveys and staged clearing ..." as a measure to minimise impacts but these measures are not reflected in the associated action ○ the third row lists "installing artificial habitats for fauna in adjacent retained vegetation and habitat or human made structures to replace the habitat resources lost ..." as a measure to minimise impacts but the associated outcome counters this with "replacement of habitat features not required". ● Tables 11, 12, 14 and 15 (pages 16-18) of the BDAR demonstrates efforts to avoid and minimise impact on biodiversity values. However, some justifications in the BDAR are not always substantiated, for example: ○ in Table 11 it states that "Habitat for threatened. species is limited" but the vegetation at the development site has not been assessed for its habitat value and no field assessment of habitat constraints or microhabitats has been reported ○ Table 11 also states 'The site does not currently provide connectivity enabling species and genetic material between areas of adjacent habitat' but the location map clearly shows a network of trees/shrubs	



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across the assessment area, which forms part of a very wide network across Sydney's eastern suburbs of trees along most streets, and in small to large parklands. - Regarding measures to mitigate indirect impacts on native vegetation and habitat: - the following is listed as a measure to minimise impacts in table 20 (page 23) of the BDAR "making provision for the ecological restoration, rehabilitation and/or ongoing maintenance of retained native vegetation habitat on or adjacent to the development site". However, the associated action (regarding landscaping in the development site) does not support this measure i.e. landscaping is not ecological restoration, rehabilitation and maintenance of retained vegetation - furthermore, the BDAR states "approval to remove all vegetation on the site has been sought under separate planning approval pathways" (page iii) while the Randwick Campus Redevelopment - Stage 1 Aboricultural Impact Assessment (ELA, 16 May 2018) supporting this SSD states "Trees that form part of this assessment are those assessed as being able to be retained as part of the proposal" (page 1). As such, it is not clear what the indirect impacts on native vegetation and habitat will be.	
<i>Floodplain Risk Management</i> OEH has reviewed the Civil Report (May 2018) in Appendix P and advises that: Section 2.2 of the Civil report addresses the overland flood characteristics in the vicinity of the site for the 1% Average Exceedance Probability (AEP) and the probable maximum flood (PMF).	HI notes OEH comments in relation to floodplain risk management.



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• The SSD indicates compliance with Council's flood planning level requirements for critical facilities as outlined in Randwick Development Control Plan (DCP, 2013). • The SSD assesses climate change impacts on the 1% AEP due to potential increase in rainfall intensities. Section 3.2.2 indicates that, increasing the 1% AEP design rainfall intensities by 10% would produce a 0.5% AEP flood and increasing those rainfalls by 30% would produce a 0.2% AEP event. • Section 4 identifies flood mitigation measures for major overland flow and a proposed stormwater plan for minor drainage, the aim of these management measures is to ensure the operational of the facility during all flood events up to and including the PMF. • Post development flood behaviour which includes the proposed management measures is addressed in Section 4.3.3 of the Civil Report.	
<i>Sustainability and Building Design</i> The EIS notes that the Hospital redevelopment was informed by a Precinct Masterplan which outlines urban design principles that includes a 'green/healthy' precinct as one of the four overarching principles. The EIS states in the project overview a benefit of the development and an objective of the development (section 1.3) as being "Effective mitigation of potential environmental impacts to maintain balance between environmental and community wellbeing." This is the first major redevelopment of the Prince of Wales Hospital in 20 years and presents a good opportunity to implement a range of ESD initiatives and meet the precinct masterplan principle of green and healthy. In the Integrated Water Management Plan, Section 8 (Appendix U) it states all of the following additional ESD measures are 'unlikely to	The ASB has been designed to incorporate appropriate Environmentally Sustainable Design (ESD) initiatives. However, as an acute health care facility it must comply with the NSW Health Infrastructure design requirements. A range of ESD initiatives were reviewed during the design stage but were ruled out due to health care and hygiene requirements, spatial allowances and costs to implement. Rainwater harvesting, and grey/black water treatment and reuse were not incorporated due to infection control and a negative cost benefit analysis result. In relation to landscaping; green spaces including lawns and tree plantings have been incorporated in the Leve -01 and -02 levels as shown in the Architectural Drawings. This provides a natural linkage into the new building and an escape for the built environment. Green roofing and green facades were considered; however, health care operational requirements, capital costs and ongoing maintenance costs made these options prohibitive. Green roofing would increase the loading to the structure; requiring a thicker structural floor plate, larger columns and increased loading to the foundation. Increased column thickness would compromise the floor space and impact the ASB's operations.



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be implemented': • solar contribution for water heating (minimum target to be a 50% annual solar gain) • rainwater harvesting for mains water supply sustainability for reticulation to landscape irrigation • low voltage power generation by converting liquid flow (either water supply or sewage) at authority points of connection into energy • capturing of waste water from the cooling towers • grey water treatment and reticulation to building - limited to staff amenities • black water treatment and reticulation The SSD should include provisions and design controls relating to sustainability, WSUD, urban tree canopy and green cover guidelines to assist with reducing the urban heat island effect, local temperatures and to maximise the long-term ecologically sustainable development outcomes of the proposal. OEH recommends the development incorporate green walls and where possible green roofs (except at the helipad) and/or a cool roof into the design. It is noted there are areas proposed as landscaped rooftops on level 04 could be suited to a green roof. The benefits of Green Roofs and Cool Roofs are outlined in the OEH (2015) Urban Green Cover in NSW Technical Guidelines which can be found at the following link: http://climatechange.environment.nsw.gov.au//Adapting-to-climate-change/Green-Cover OEH also recommends that the NSW and ACT Governments Regional Climate Modelling (NARClIM) climate change projections developed for the Sydney Metropolitan area are used to inform the building design and asset life of the project. These include over 100 climate variables, including temperature, rainfall,	With regard to Water Sensitive Urban Design (WSUD), two on-site detention (OSD) tanks are proposed to service the ASB. This will manage overland and underground flows and reduce the risk of flooding. This work has been carried out in consultation with the Council and will be further assessed and developed during the detailed design phase. The collected water can be used for irrigation purposes. The overland and underground water flow modelling has been carried out in consultation with Council. The modelling has considered climate variations and a range of treatment solutions. The WSUD solutions will continue to be assessed / developed during the detailed design phase.



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hot days and cold nights, severe Forest Fire Danger Index (FFDI) and are publicly available online and at fine resolution (10km and hourly intervals) for 20-year time periods: 2020-2039 near future and long- term 2060-2079. The Civil Design report that accompanies the EIS states that the development will utilise WSUD treatment and a combination of vegetated buffer, bioretention swales, vegetated swales, and filtration devices will be used through a treatment train approach to improve water quality before any stormwater discharges from the site. These elements are designed to achieve all the pollution reduction targets (Gross Pollutants, Total Suspended Solids, Total Phosphorus and Total Nitrogen) required to discharge stormwater to Council's stormwater network. The building is also targeting a 4 Green Star rating. OEH supports these initiatives. However, OEH is concerned that other than the gross pollutant trap shown on the civil design drawings, no other WSUD treatments noted above are shown on the plans.	
Additional Matters It is noted that the DA/208/2018 for the demolition of 92 dwellings and vegetation removal was determined by Randwick City Council and supported by an arborist report. The Arborist report only looked at the trees along Hospital Road and not all the site trees are subject to this DA. Further, the demolition plan also only shows a limited number of trees only along Hospital Road to be removed and the supporting flora and fauna assessment report states "the DA excludes Eurimbla Avenue which will be addressed at a later stage under a separate assessment under Part 5 of the EP&A Act." Consistent with this, the EIS states that a separate Review of Environmental Factors is being prepared for demolition of Eurimbla Avenue road and pavements,	Refer to above response under 'Biodiversity' for the Council's submission. Eurimbla Avenue is being acquired from the Council and it will be decommissioned by the Health Administration Corporation.



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tree removal and other works to Eurimbla Avenue. The EIS (section 2.3.2) also states that Eurimbla Avenue is currently under Council ownership and is yet to be acquired. Please note, the street trees proposed for removal would be on council land and under Council ownership presently, and as such Council permission via a DA is most likely required for the tree removal pre-cursor works.	
Transport for NSW	
<i>CBD & South East Light Rail Project</i> <u>Comment</u> The CSELR was determined by the Minister of Planning on 4 June 2014. It is advised that: • The CSELR corridor is located on the High Street section adjacent to the subject site; and • Construction is underway in accordance with the existing approvals and any modifications subsequently approved. The Statement of Environmental Effects prepared to support the development states that the development site is affected by overland flooding. It is advised that the subject development could have the potential to impact surrounding land/ activities, including the CSELR, by contributing to additional flooding during construction and operation. <u>Recommendation</u> It is requested that the applicant provides additional information satisfactory to the CSELR team's requirements regarding the following: • Construction activities do not adversely impact the completion of the CSELR's program of works; and • The proposed development does not adversely impact the CSELR through additional flooding or changes to overland flow paths during the proposed development's construction and operation.	Construction Activities As discussed in the response to the Council's submission, significant and frequent coordination is occurring between HI and the CSELR teams to manage construction interfaces and potential cumulative impacts. Overland flooding Refer to Sections 7.14 and 7.15 of the EIS which address overland flooding impacts during the construction and operation phases. It is considered that the construction and operational phases of the ASB are not anticipated to generate additional flooding or changes to the overland flow path which would impact the CSELR.



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<i>Construction Worker Transportation Strategy</i> <u>Comment</u> The applicant's proposal to minimise construction workers driving to the precinct and parking is supported as the Preliminary Construction Management Plan prepared to support the development states the following: • The applicant recognises that a dedicated worker and transportation strategy needs to be implemented; • Construction workers would be encouraged to use public transport to reduce the amount of light vehicles on the road and to ease congestion around the Randwick Precinct; and • The applicant will establish a "park and ride" and associated shuttle bus service. <u>Recommendation</u> It is advised that the applicant be conditioned to prepare a Construction Worker Transportation Strategy in consultation with the Sydney Coordination Office within TfNSW and Roads and Maritime Services.	Section 6.4.10 of the Preliminary Construction Management Plan addresses worker transportation and parking by providing key strategies which will be reviewed with TfNSW, SESLHD and HI through the detailed design phase. The TfNSW recommendation to prepare a Construction Worker Transportation Strategy is accepted by the Applicant.
<i>Construction Pedestrian and Traffic Management</i> <u>Comment</u> Several construction projects, including the CSELR, University of New South Wales, Inglis Stables and surrounding new residential developments will occur at the same time as this development within the Randwick Precinct. The cumulative increase in construction vehicle movements from these projects could have the potential to impact on general traffic and bus operations within the Randwick Precinct, as well as the safety of pedestrians and cyclists particularly during commuter peak periods. Further, TfNSW advises that the use of High Street by the development's construction vehicles must be avoided to	Refer to Section 7.4 of the EIS regarding SEAR 5 Transport and Accessibility. The TfNSW recommendation is accepted by the Applicant.



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ensure that the interface risk between construction vehicles and the CSELR construction and operation and buses is mitigated. <u>Recommendation</u> It is requested that the applicant be conditioned to: • Prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with the Sydney Coordination Office and CSELR team within TfNSW and Roads and Maritime Services; and • Consult with TfNSW and Roads and Maritime Services at monthly Traffic and Transport Construction Coordination meetings during construction.	
<i>Travel Demand Management Strategy and Green Travel Plan</i> <u>Comment</u> The Transport Assessment Report prepared to support the development application includes potential travel mode share shifts for car (driver and passenger), public transport, walking and cycling. The report also recommends a Green Travel Plan be established by the applicant. TfNSW advises that preliminary discussions have commenced with the health and education institutions within the Randwick Health and Education Precinct to support their development of strategies to reduce the proportion of single-occupant car travel and increase the mode share of public transport and active transport within the precinct. <u>Recommendation</u> It is requested that the applicant be conditioned to prepare Travel Demand Management Strategy and Green Travel Plan in consultation with the Sydney Coordination Office within TfNSW and Roads and Maritime Services and in conjunction with all stakeholders within the Randwick Health and Education	The TfNSW recommendation is accepted by the Applicant. Refer to related responses in Issue 2b of Table 3-1 and under heading 'Green Travel Plan' in the Council's submission.



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Existing Bus Route Information <u>Comment</u> It is noted that bus route information provided in the Transport Assessment Report is not up to date. <u>Recommendation</u> It is requested that the bus route information provided in the Transport Assessment Report be updated.	Updated bus service route map and existing frequencies have been prepared by Arup and is provided in Appendix K. This data is consistent with information captured within the GTP.
Suggested draft Conditions of Consent Suggested draft Conditions of Consent are included in TAB A.	The draft Conditions of Consent are accepted by the Applicant.
Roads and Maritime Services	
The application proposes a signalised pedestrian crossing on Botany Street for the Library Walk/ASB entry intersection to allow pedestrians crossing to and from The University of NSW. In accordance with Section 87 of the Roads Act, 1993 approval for a traffic control light requires consent from Roads and Maritime. The approval of a traffic control light is largely dependent on general warrants in accordance with Roads and Maritime requirements for Traffic Signal Design – Section 2 Warrants. Roads and Maritime notes the proposal does not yet meet the warrants and therefore consent is not provided. Should the warrants for a traffic control light be met in the future, Roads and Maritime would consider the request.	A traffic signal warrant assessment (Arup, 3 April 2018) was included as part of the Transport Assessment. This assessment considered the following: Traffic demand This reviewed current traffic volumes for both Botany Street and UNSW (Gate 11). The warrants required 4 individual hours of at least 600 vph in each direction on the major road and 200 vph on the minor road. The data indicated that warrants were almost met, with 7 instances of traffic flow on the major road exceeding 600 vph and 4 instances of flow exceeding 580 vph. Furthermore, the UNSW Gate 11 provides access to UNSW main carpark, which accommodates approximately 1,000 parking bays. Pedestrian safety There is currently limited pedestrian demand crossing Botany Street. However, the assessment noted that pedestrian desire lines crossing Botany Street will likely intensify due to the following: • The expansion of the Campus towards Botany Street and the potential for UNSW to be incorporated within the expansion of future stages will increase pedestrian flow between UNSW and the Campus (across Botany Street). • The completion of the CSELR will increase pedestrian flow to and from this location to the closest Light Rail stop (located on High Street near UNSW gate 9). Traffic modelling The assessment considered sensitivity traffic modelling to understand the impacts of increased propensity for drivers exiting onto Botany Street to avoid High Street (which will

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	have reduced capacity due to light rail operations). Modelling indicated that if the current 126 vph turning right from UNSW Gate 11 increases by 35 vph, the operation of the intersection will exceed practical capacity and reach a Level of Services (LoS) F. Furthermore, this assessment has yet to consider potential expansion of the Campus north of the ASB site, which would likely increase traffic flow through this intersection.
1. A Construction Pedestrian and Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council prior to the issue of a Construction Certificate. 2. Construction vehicles shall not use High Street without prior approval of the Sydney Coordination Office within TfNSW and Roads and Maritime Services. 3. All works/signposting associated with the subject development (including public utility adjustment/relocation works) shall be at no cost to Roads and Maritime.	RMS comments are noted. Section 8.0 of the Preliminary Construction Management Plan (CMP) addresses Combined Traffic and Pedestrian Management.
Government Architect NSW	
GANSW support the design objectives, generous areas of landscaping and civic ground floor public amenity. We do not support the adverse impact on neighbouring dwellings by overshadowing and the emergency entrance on Magill Street, which offers little amenity to patients and family. We require further information to understand the justification of the massing and orientation of the building and the master planning strategy driving the proposal.	Refer to response in 'Solar Access and Overshadowing' addressing Council's submission. Refer to Appendix F for a chronological study of the development of the ASB massing. A rotated option with the courtyard facing north was not pursued due to: • An increase in travel distance for critical patient movements between the ASB and existing Hospitals Campus; • A likely increase in overshadowing to Magill Street due to the increased width of the rotated building by approximately 25 metres in the east/west direction; and • A lack of ability to make high level clinical connections to future clinical buildings in the northern expansion zone. It is also to be noted that a peer review exercise completed in October 2017 supported the proposed orientation of the ASB.
Master Planning Context It is unclear how the ASB responds to the precinct masterplan and the Randwick	Precinct Master Plan and Randwick Academic Health and Science Centre Master Plan The ASB will enhance the Precinct's capacity to respond to



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Academic Health and Science Centre Masterplan – both cursorily referred to in the architectural design statement. The master plan (p.4) lacks the detail required to explain the overall site strategy and how development stages 1 and 2 interrelate. The architectural design statement identifies the opportunity for the ASB to physically connect the Hospital Campus and UNSW to ‘enhance the potential for collaboration and engagement’. No details of the future pedestrian bridge over Botany St are shown other than on the masterplan section, which is not coordinated with the architectural drawings. Further information is required to verify the impact of Botany St bridge and the way it interfaces with the ASB forecourt. A detailed site-wide strategy should be provided that demonstrates a clear relationship between the ASB and the two future buildings planned for the northern half of the site as well as the Randwick Hospitals Campus to the east. Generous and intuitive through-site access, the provision of sunny outdoor space and the separation of vehicles from pedestrians should be clearly shown.	growing demand and ageing existing infrastructure. The Precinct Masterplan and the Randwick Academic Health Science Centre Masterplan (RAHSCM) were developed in 2016 to respond to the above matters. Hence, the Precinct Masterplan was developed with a forward-looking lens regarding the existing Campus’ relationship to the broader strategic planning context of the Precinct’s vision. The RAHSCM was developed reviewing the existing conditions and constraints of the existing Campus (including stakeholder and consultant inputs) along with the needs for the clinical core of the Campus to expand. The purpose of the RAHSCM was to commence the planning for the future staged growth of the Campus and Precinct. The Precinct Masterplan and the RAHSCM were undertaken in preparation for preliminary high-level briefings to understand potential scale and major clinical relationships. Extensive investigations concluded that locating the ASB to the west of the existing Randwick Hospitals’ Campus was the only option that satisfied all the service requirements for the facility. Interrelation Between Stage 1 and 2 The Precinct Masterplan and the RAHSCM establishes a zonal site-wide strategy demonstrating the uses of all proposed buildings within the Precinct. The future indicative two northern buildings are proposed to provide “Health Related Services” such as research, education and health support, which reinforce the ASB and clinical core, the “campus heart”. Future Pedestrian Bridge The location of the bridge is clearly shown on the architectural drawings and aligns with the location identified in the Precinct Masterplan. The bridge design over Botany Street will be subject to a future development application process. Opportunities for interface with the ASB could form part of the future bridge design. The master plan section shows the indicative aspiration for connectivity but is not intended to be a final design solution. Detailed Site-Wide Strategy The Precinct Masterplan and the RAHSCM had identified that appropriate uses for the zone to the north were for uses beyond the clinical core of the site. The Eurimbla Plaza public domain zone was established in the Precinct Masterplan as a major public space that would link these three buildings with numerous precinct major connections traversing this space. The public drop off is proposed at the



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	level below, interfacing with Botany Street level. A continuous public domain level from the High Street northern face between and through the northern buildings, through a future Eurimbla Plaza and entering into Level 00 foyer of the ASB building is proposed in the Precinct Masterplan. The portion of the site indicated as Future Expansion will be subject to a future planning approval submission once a detailed brief for this site has been formalised. There have been very preliminary discussions and high-level testing that has been undertaken for these sites with some of the precinct stakeholders. In all of these discussions, the importance of the open space network at Level 00, including the Eurimbla Plaza area, is fully recognised and remains within the briefing discussions to enable the Precinct Masterplan urban principles and urban structures. Preliminary discussions have also confirmed the intent to enable the vehicle drop off access to be at Level -01 as an extension of the ASB vehicle access point from Botany Street. Topography changes to enable public interface points at edges of site and the Integrated Ground Plane deck are proposed to be provided in line with the intent of the Precinct Masterplan to cover internal campus vehicle movement and provide a separated and pleasant pedestrian plane supporting various types of open space.
Built Form and orientation The scheme promises pleasant cascading roof gardens and a generous, sun-lit central courtyard with mature trees. This vision would be supported if the ASB was oriented with the courtyard facing north and sufficient soil depth to support trees was provided. However, the proposed building overshadows itself with upper, central and lower courtyards receiving little or no sun in winter - when sunny courtyards are most desirable. The upper terraces are likely to be too high to achieve a sense of cascading while safety issues associated by helicopter downwash have not been addressed. We recognise the complex range of factors influencing the form and orientation of the building, notably the requirement to locate the core towards the east of the site, adjacent to the	Building Orientation Numerous options for building orientation were tested during Concept Design and Schematic Design, respectively, including options with the courtyard oriented north. Essential operational relationships (for example, between the Helipad, ED and existing Campus operating theatres) were deemed to be the most critical factors in determining the building's siting and orientation. Other advantages of this orientation include the provision of a welcoming and green address to Botany Street. The east/west orientation is consistent with the established massing of buildings on the existing Campus, and supports both expansion to the north and integration with existing infrastructure. Building orientation is also designed to prevent western sunlight entering Inpatient Unit (IPU) bedrooms. Whilst the building form responds to critical clinical relationships, a generous width between the two IPU wings has been provided intentionally to maximise the opportunity for solar amenity in this orientation. Helicopter Downwash Impacts in relation to helicopter downwash were considered



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existing hospital campus. However, fundamental architectural principles, including good solar orientation, should not be compromised in favour of departmental planning objectives. The requirement for proximity to the existing Hospital Campus clinical core is offered as justification of a zero-setback to Hospital Road, however the corresponding environmental impact has not been addressed. Massing studies undertaken during design development should be provided to justify the building form and orientation. Courtyard spaces should be examined in detail to ensure the best amenity is offered. Shadow diagrams of the courtyards at 21 June 11am – 2pm and at the equinox 11am – 2pm should be provided.	in the Wind Desktop Study in Appendix H to the EIS. Massing Refer to response above in relation to massing studies. Shadow diagrams for the courtyard have been prepared by BVN and are contained in Appendix E.
Facades and materiality While the composition and materiality of the façade is tidily composed, there is very little articulation given the size of the building. Articulation would create a better play of shadow and light and shade glazing to reduce thermal gain. The terrace on the northern side of the southern wing on level 7 creates visual interest and a place for people to sit in the sun. The façade could be further refined to express and respond to the different functions of the hospital conditions and the edge / aspect conditions.	A variety of façade types have been developed to reflect internal functions and respond to the different contextual conditions surrounding the ASB. Opportunities for shading and articulation have been maximised.
Landscape and public domain While the landscape plan indicates significant areas of open space to the west and north of the ASB, the drawings are diagrammatic and not coordinated with the architectural drawings. It is unclear whether a landscape strategy integrates the northern and southern portions of the site with through-site pedestrian links and connected parks responsive to level changes. The scheme forfeits the opportunity to activate Hospital Road,	Landscape Strategy Key public domains for the ASB illustrated in the Landscape Concept in the Landscape Design Report (Aspect Studios, 2018) are identical to that of the “Hospital General Arrangement Plan Level -01” in the Architectural Drawings. The Botany Street interface consists of extensive landscaping along Botany Street and Magill Street which connects the northern and southern portions of the site and provides distinct vehicular and pedestrian entries to the site. The design of landscaped areas provides intuitive wayfinding for pedestrians to navigate the ASB zones in a safe and efficient manner.



Issue	Response
applying a blank façade while directing pedestrians overhead in bridges. The landscape strategy should describe the long-term use of the area currently shown as 'temporary landscape' and consider ways of activating street frontages along Hospital Road. A vehicle drop-off road dominates the western forecourt and a shared zone should be explored as an alternative. Details of protected and open places to sit in sun and shade should also be provided, as should indigenous landscaping. An integrated landscape strategy should detail how the public domain and landscape principles described in the architectural design statement are achieved.	Hospital Road Façade Future masterplanning designates Hospital Road as a pedestrian thoroughfare at Level 00 with vehicles below at Level -01. Treatment of the façade at this level responds to this future condition, whilst providing windows to occupied spaces. Windows on Level 00 have been provided as well as a structural design for this façade to suit internal planning. The activation of Hospital Road to be utilised as a pedestrian thoroughfare is a key component of the precinct master plan. Design options to transform the area around Hospital Road will be assessed in future development application processes. Treatment of the façade on Hospital Road responds accordingly. Temporary Landscaping The temporary landscape will be replaced by a central public domain named the "Eurimbla Plaza" in the Precinct Masterplan, which will be developed and implemented in Stage 2 of the Project. Eurimbla Plaza is a shared open space located at the heart of the campus and symbolises the collaborative aspirations between the Campus and community partners. Shared Zone The current landscape proposal seeks to minimise the presence of roads within the constraints of traffic and civil engineering advice. Current landscape drawings provide additional details of various seating areas.
Entry, circulation and internal amenity The generous public entry, café and waiting areas on levels -01 and 00 are commended, offering good amenity and places to gather. In contrast, the ED entry offers little generosity or internal amenity for patients or visitors. Southern gardens shown adjacent to the entry are unlikely to be viable while wind effect may make outdoor areas uncomfortable. Amenity for emergency mental health care is of particular importance but appears poor in the current scheme. Internal stair access from level -01 to the ED would enable access to the café and generous waiting areas for ED users and should be investigated. Internal amenity would be significantly enhanced by the addition of sitting places on each floor for people to gather or retreat to. Modifications to the eastern circulation spine for this purpose	A generous canopy has been provided at the ED entry. Section 2.3.2 Predicted Wind Outcomes of the Wind Desktop Study states <i>'the emergency drop-off in the centre of the south façade, is considered well-located from a wind perspective'</i>. Mental health areas have been located in support of critical internal flows and to maximise access to daylight and external areas. These external spaces have been designed to maximise amenity within the constraints of the brief and security needs. Seating areas are provided at both ends of the eastern corridors on Levels 04-08, inclusive. Human-centred design strategies within the ASB include: • the provision of generous, green courtyard spaces over two levels (Level -02 and Level -01), including to the ED; • the use of natural timber and planting internally; • a generous, shared, double height public space to Levels -01 and 00; • a wide variety of seating configurations both internally



Issue	Response
should be investigated. Human centred design strategies should be explained.	and externally; • a generous and inviting public landscape zone to Botany Street; • full height windows to bedrooms and patient areas where permissible within clinical constraints; • external landscaped roof terraces; • intuitive wayfinding via the use of natural light and external views; and • a consistent, warm, and reassuring internal palette across the entire facility.
Impacts on neighbouring dwellings The proposed development is likely to significantly impact on the dwellings on Magill Street. Cumulative overshadowing to dwellings on Magill Street result in Nos. 7-15 Magill Street not receiving the minimum 3 hours solar access which is considered unacceptable. The impact of locating the emergency entry in a narrow suburban street is likely to be profound and is not supported. Hospital Road would appear more suited for an emergency entry, given the receiver of the associated impact would be the existing campus rather than dwellings. The proposed scheme needs to be justified and proposed measures to mitigate environmental impact including reduction of overshadowing detailed.	Refer to Issue 1 in Table 3-1 for comments regarding the location of the emergency access on Magill Street and the reasons why relocating to Hospital Road or Botany Street were discounted. The current building location has been shifted north as far as feasible within constraints of the site to limit overshadowing. The siting and form of the building is to be preserved to optimise access to the ED, build links to the existing Campus and UNSW, maintain clearances under the bridge and provide area for future developments to the north.
ESD Strategy Sustainability should be a fundamental aspect of every new public building. An ESD strategy should commit to rather than target ESD performance standards. Passive environmental design, solar power generation, solar water heating, PV, external solar shading and rainwater systems should be incorporated in the proposal.	Refer to response above in relation to OEH's comments on 'Sustainability and Building Design'.
Public art, cultural heritage and community consultation The proposal should support the specific needs and reflect the cultural heritage of the diverse community which includes indigenous and refugee populations.	An Arts and Culture Strategy is being developed with community and consumer input. An Arts and Culture Committee has been established for the Project and includes membership of an Aboriginal health representative, two members of the La Perouse Local Aboriginal Land Council and a consumer representative amongst other



Issue	Response
Consultation and engagement is crucial to identify specific cultural needs and to verify that the proposal is welcoming, accommodating and supportive. The early development of a public art strategy is encouraged. Public art should be developed with the community to celebrate cultural heritage and be integral to the architecture and landscape to mitigate the risk of omission.	stakeholders from across the SESLHD and other Project partners.
Civil Aviation Safety Authority	
CASA has reviewed Appendix AA to the Environmental Impact Statement 'Helicopter Approach and Departure Paths and Airspace Approval Status' of the development application and has no issues with the document. CASA assessed the building under the Airports (Protection of Airspace) Regulations 1996 and a copy of the assessment is enclosed. CASA also assessed the two tower cranes that will be used to construct the building. CASA's responsibility does not extend to the approval or consent for the development of helicopter landing sites (HLS). However, Civil Aviation Advisory Publication (CAAP) 92-2(2) provides guidelines for the establishment and operation of an onshore HLS. A copy of the CAAP is available from the following link: https://www.casa.gov.au/sites/fl/files/net351/f/assets/main/download/caaps/ops/caap-92-2-2.pdf. CASA recommends that the designer considers International Civil Aviation Organization (ICAO) Annex 14 Volume II, Heliports. A copy of the Annex can be downloaded from the ICAO website https://store.icao.int/. CASA also recommends that the concept design is reviewed by the helicopter operators.	HI notes the comments provided by CASA and the recommendation in relation to the HLS. Refer to response under heading 'Airport Height Restriction' in the Council's submission regarding the building. Refer to the Airports (Protection of Airspace) Regulations 1996 (APAR) approvals provided for TC1 – Tower Crane Operations and TC2 – Tower Crane Operations in Appendix L.



Issue	Response
Airservices	
<i>Airspace Procedures</i> With respect to procedures designed by Airservices in accordance with ICAO PANS - OPS and Document 9905, at a maximum height of 111m (365ft) AHD, of the redevelopment of the Prince of Wales Hospital Stage 1 will not affect any sector or circling altitude, nor any instrument approach or departure procedure at Sydney Airport. The redevelopment will not affect the Sydney RTCC. Note that procedures not designed by Airservices at Sydney Airport were not considered in this assessment. <i>Communications/Navigation/Surveillance (CNS) Facilities</i> This proposal for the redevelopment of the Prince of Wales Hospital Stage 1 will not adversely impact the performance of any Airservices Precision/Non - Precision Nav Aids, Anemometers, HF/VHF/UHF Comms, A - SMGCS, Radar, PRM, ADS - B, WAM or Satellite/Links. <i>Summary</i> Our initial assessment of the redevelopment of the Prince of Wales Hospital Stage 1 indicates no impacts to airspace procedures and CNS facilities.	HI notes the comments provided by Airservices.
Name withheld	
I wish to object to the policy of Compulsory Acquisition. Compulsory Acquisition instils enormous anxiety in people, especially those who are approaching or are in old age, at a stage of life when they are most vulnerable. I have observed at close quarters the devastating effect that this has had on residents who were displaced from their homes for the Randwick Campus Redevelopment. However, the anxiety of not knowing whether or when, compulsory acquisition might take place also produces considerable anxiety and can never be put to rest until and if the	HI has acquired properties on behalf of NSW Health for the land bound by Botany Street, High Street, Hospital Road and Magill Street for the Project. NSW Health currently has no plans to acquire additional properties surrounding the Project site. The acquisition process has been conducted in line with the reforms to improve the property acquisition process announced in October 2016 by the NSW Government in response to the Russell Review. The reforms deliver a fairer, more balanced and more transparent acquisition process from start to finish, for those affected by property acquisition.



Issue	Response
State Government publicly announces compulsory acquisition. I'm nearing my 80s and facing uncertainty at a vulnerable stage of my life. I wanted to age in my own home instead of taking up a bed in an ageing facility and so I have followed the Ageing in Place policy and made alterations to my house accordingly. I've tried to act responsibly - to make plans for my future - but they could have been totally misplaced. I need to make decisions about my living circumstances while I'm competent to do so but I find myself stuck in a state of limbo not knowing when or if the axe might fall. I dread receiving a letter that results in having to up-end my life within 12 months. This is no way for people to live out the remainder of their lives. I can only conclude that there is conflict between two Government policies; Compulsory Acquisition on the one hand and Ageing in Place on the other.	
There has been no mention of affordable housing for the many support staff who will be needed as the hospital expands. Where will they live and how far will they have to travel? The Newmarket development in Barker Street will not fulfil that need although it was a problem raised by the residents at the DA stage at a Randwick City Council meeting.	The scope of the SSDA does not include affordable housing for staff.



5 Changes to Proposed Development

There have been no significant changes to the proposed development, as submitted.

Two revised foundation plans (refer to Appendix M) have been prepared by Enstruct and are submitted for approval, following design development post lodgement.



6 Mitigation Measures

For ease of reference, all mitigation measures listed in the EIS, as well as additional measures described in this RTS Report, are summarised in Table 6-1:

- Amended measures are marked with an asterisk (*) with those measures (or parts thereof) no longer proposed shown in strikethrough (~~strikethrough~~) and new text shown in *italics*.
- New mitigation measures are marked with double asterisks (**) with new text shown in *italics*.

Table 6-1 Summary of proposed amended recommended mitigation measures

Issue	Mitigation Measure	Phase(s)	EIS Ref.
Environmental Amenity	Potential visual and privacy impacts from construction are to be mitigated with the implementation of the strategies contained in the PCMP (Appendix F).	Construction	Section 7.3
	<i>** To mitigate noise and light issues on Magill Street, if any, which may cause sleep disturbance. The following measures are being considered:</i> • <i>Opening Magill Street (24 hours) for a trial period of 6 months to test and report on the level and nature of amenity impacts on residents and the planning merits of the street remaining open;</i> • <i>Noise-reducing surfaces on Magill Street to reduce "squeal" from tyres;</i> • <i>Road and site signage to alert users of the need to minimise traffic/people noise impacts to neighbouring areas;</i> • <i>Appropriate sound-proofing barriers and surfaces in the drop-off/Short stay area to reduce people noise which includes closing doors;</i> • <i>At receiver treatments such as acoustic glazing and treatments to ventilation openings/air vents; and</i> • <i>Buffer planting along landscaped areas to obscure headlights where possible.</i>	Operation	N/A
	All external lighting on the site to be implemented as part of the operation of the development is to have regard to the location of nearby residential dwellings. Lighting impacts are to be minimised to the extent possible, and comply with AS 4282:1997 – <i>Control of the Obtrusive Effects of Outdoor Lighting</i> and relevant Australia Standards in the series AS/NZ	Operation	Section 7.3



Issue	Mitigation Measure	Phase(s)	EIS Ref.
	<i>1158 – Lighting for Roads and Public Spaces.</i>		
	Protocols restricting roof and terrace access during helicopter operations are to be implemented.	Operation	Section 7.3
Transport and Accessibility	Prior to the commencement of construction, a CPTMP is to be prepared by the Contractor in consultation with the TfNSW Sydney Coordination Office and submitted for approval by the Council and HI.	Pre-Construction	Section 7.4
	* A Green Travel Plan will be prepared and completed implemented by HI in consultation with TfNSW and SESLHD for the operation of the proposed development. The Green Travel Plan will be submitted to DP&E post exhibition of the EIS. The Green Travel Plan will contain a package of measures to be introduced to promote the use of public transport, walking and cycling by visitors, patients, staff and supplier/service personnel for travel to and from visiting, treatment, work and for business related trips.	Pre-Operation and Operation	Section 7.4
	An accessibility policy is to be developed in consultation with Campus management and user groups as outlined in the Access Report (Appendix V). The purpose of the accessibility policy is to define the use and function of identified specialist areas and determine the suitability for full, partial or managed accessibility to achieve the intent of the DDA.	Pre-Operation	Section 7.4
Biodiversity	Further detailed assessments (root mapping) via non-destructive methods are required to determine suitability for retention of the trees subject to a high, medium or low impact.	Pre-Construction	Section 7.6
	A tree protection plan is to be prepared for all trees proposed to be retained and trees that are located within 10 m of any construction activities. Additional tree protection measures are identified in Section 5 of Appendix L.	Pre-Construction	Section 7.6
	Sediment barriers or sedimentation ponds are to be implemented during construction to control the quality of water released from the site into the receiving environment.	Construction	Section 7.6
	Hygiene protocols are to be implemented during construction to prevent the spread of weeds or pathogens between any infected areas and uninfected areas.	Construction	Section 7.6



Issue	Mitigation Measure	Phase(s)	EIS Ref.
Heritage	Further Historical archaeological advice is to be sought regarding any archaeological testing, salvaging (if required) and reporting and mitigation of impacts that may be required prior to works commencing at the site.	Pre-Construction	Section 7.7
	In the event that any potential archaeological relics are disturbed and identified within the site during works, a minimum requirement to mitigate potential impacts is that all work in the area will cease forthwith and the NSW Heritage Division and a qualified archaeologist will be consulted to determine an appropriate course of action prior to the recommencement of work in the area of the relic.	Construction	Section 7.7
	<i>** HI will investigate the potential interpretation of the sandstone stormwater culvert and where required, submit a final landscape concept plan for Council approval prior to operation.</i>	Pre-Operation	N/A
Aboriginal Heritage	Further Aboriginal archaeological advice will be informed by the consultation process with Aboriginal stakeholders that are in progress.	Pre-Construction	Section 7.8
	In the event of any materials of Aboriginal archaeological significance being discovered at the site, a minimum requirement to mitigate potential impacts is that the following mitigation measures must be implemented: • If suspected Aboriginal material has been uncovered as a result of works within the site: ○ Work in the surrounding area is to stop immediately. ○ A temporary fence is to be erected around the site with a buffer zone of at least 10 metres around the known edge of the site. An appropriately qualified archaeological consultant is to be engaged to identify the material. ○ If the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the Office of Environment and Heritage (OEH) guidelines: <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010)</i>. • Should human remains be located at any stage during works within the site, all works	Construction	Section 7.8



Issue	Mitigation Measure	Phase(s)	EIS Ref.
	must halt in the immediate area to prevent any further impacts to the remains. The site is to be cordoned off and the remains themselves left untouched. The nearest police station, the La Prouse Local Aboriginal Land Council and the OEH are all to be notified as soon as possible.		
Noise and Vibration	A CNVMP is to be prepared by the Contractor at the detailed design stage based on the proposed plant, equipment and methodologies to be employed.	Pre-Construction	Section 7.9
	All practical means are to be exercised to minimise impacts to affected buildings and occupants from any activities generating levels of vibration that exceed the relevant criteria on site. The following matters are to be taken into account (Acoustic Studio, 2018): • Modifications to excavation and construction equipment being or to be used. • Modifications to methods of excavation and construction. • Rescheduling of activities to less sensitive times.	Construction	Section 7.9
	The design and development phase will be used to inform and implement feasible and reasonable noise mitigation measures with regard to impacts to Magill Street in the night time period as a result of general traffic noise during operation as identified in the Noise and Vibration Impact Assessment (Appendix G).	Design and Development	Section 7.9
	Recommendations have been made by Acoustic Studio (2018) in the Noise and Vibration Impact Assessment (Appendix G) to mitigate external noise controls for building services proposed for the ASB, including items such as plant rooms, cooling towers, emergency generators fans and so forth.	Pre-Operation	Section 7.9
Sediment, Erosion and Dust Controls	Prior to the commencement of excavation works, a SWMP is to be prepared as part of the Contractor's CEMP to the satisfaction of HI and in accordance with the preliminary ESCP and the Landcom <i>Managing Urban Stormwater, Soils and Construction Guidelines</i> (the 'Blue Book'). The SWMP will be implemented, and updated (as required), during construction.	Pre-Construction and Construction	Section 7.10



Issue	Mitigation Measure	Phase(s)	EIS Ref.
	The Person Conducting a Business or Undertaking (PCBU) is to prepare a Safe Work Method Statement (SWMS) for all required activities to ensure an appropriate Risk Assessment (RA) has been undertaken. The RA is to consider risks of generating airborne contaminants and the potential impacts they may have on workers, other site occupants and the general public in the vicinity. The SWMS is to identify the controls that are to be adopted to eliminate the generation of airborne contaminants or to reduce them to the fullest extent possible.	Pre-Construction and Construction	Section 7.10
	Dust monitoring measures will be implemented to manage and mitigate the impacts of airborne dust and fine particulates generated during construction on surrounding residents and nearby Campus facilities including the RHW.	Construction	Section 7.10
Contamination	In the event that contamination and/or hazardous materials are found, the following documents are to be prepared to the satisfaction of HI (Douglas Partners, 2018): • Remediation Action Plan (RAP) – to detail the necessary remedial work or management required to render the site suitable for the purposes of the proposed development / land use. • Site Remediation and Validation Report (SRVR) – documents the completeness of the remedial work.	Construction	Section 7.11
Utilities	* The UMPES describes ESD initiatives minimising ASB energy consumption to be implemented, including: • Energy metering <i>in all areas</i>, daylight dimming <i>in perimeter areas excluding clinical areas</i> and motion sensing <i>in back of house areas and offices, excluding clinical areas and plantroom spaces</i>. • Potential <i>Rooftop</i> Roof-mounted PV installation <i>to be considered during detailed design</i>, subject to a payback period of less than five years. Generator flues will exhaust away from the helicopter flight path (AS1668.2) and flue locations to ensure non-interference with residential properties in Magill Street and the existing Campus. Air and diesel particulate filters	Pre-Construction, Construction, Pre-Operation, and Operation	Section 7.12



Issue	Mitigation Measure	Phase(s)	EIS Ref.
	will be installed to satisfy EPA and Council requirements. The 20, 000 L double-skin fuel tank will be fitted with leak detection and alarm, and containment perimeter. The IWMP highlights key ESD design initiatives, including: • Subsidiary water Water metering of cooling towers, hot water plant, Central Sterile Services Department (CSSD) and Retail tenancies. • Mechanical plant waste heat applied to hot water plant. • Increased thermal insulation thickness of no less than 25 mm across all hot water piping/supplies. Water monitoring by subsidiary meters also helps identify leakage and can facilitate manual isolation of non-critical areas under disaster or equipment failure scenarios. Plumbing and drainage crossing sensitive receptors will be treated to minimise acoustic transmission. The natural gas connection for the site is to be connected according to Jemena's requirements.		
Drainage and Flooding	Construction and operation of the proposed drainage system is to comply with Council's OSD requirements.	Construction and Operation	Sections 7.14 and 7.15
Drainage	The potential impacts of stormwater dewatering are to be managed by the Contractor during bulk excavation.	Construction	Section 7.14
Groundwater	* Groundwater Management is to be carried out in accordance with recommendations in Douglas Partners (2018) (Appendix R) which include the following: • For deep excavations, a secant pile shoring wall embedded into bedrock is recommended to cut-off water flow. Alternatively, a contiguous pile wall, with the gaps between the piles plugged with dry-pack grout upon excavation to retain soil, together with a drainage plenum around the site perimeter for collection and subsequent discharge of groundwater is considered to be a feasible retaining system, as proposed by Enstruct. Along sections of the proposed	Design Development, Pre-Construction and Construction	Section 7.16



Issue	Mitigation Measure	Phase(s)	EIS Ref.
	basement and possible future regrading of Hospital Road, where the top of bedrock is relatively shallow, a contiguous pile wall may be suitable instead of a secant pile wall. <i>A decision between the two options will be finalised during detailed design stage.</i> • A tanked basement comprising water-tight walls and floors would eliminate the requirement for permanent dewatering and approval from regulatory authorities. Alternatively, a drained basement may be suitable, however further assessment of the groundwater conditions and further estimation of groundwater inflow to the basement excavation is required for design. Based on the current preliminary information on groundwater at this site, groundwater inflow to the northern end of the basement excavation is estimated to be approximately 3 m³/day. The volume of groundwater ingress will ultimately depend on the soil permeability, rock fracturing and prevailing weather conditions. Greater volumes of groundwater ingress may also be experienced if leaking stormwater systems are present in the surrounding sandy soils or heavy continuous rainfall is experienced. <i>A decision between the two options will be finalised during detailed design stage.</i> • It is expected that a combination of shallow pad or strip footings and deep pile footings bearing in bedrock will be required to support the heavily loaded building columns. Beyond the ASB basement excavation, it may be possible to support lightly loaded structures on shallow, pad or strip footings bearing on loose to medium dense sand. • A preliminary flexible pavement thickness design was undertaken, resulting in a minimum pavement thickness of 300 mm. • For detailed design, further geotechnical investigation including rock-cored boreholes and groundwater monitoring wells is recommended to further characterise the subsurface conditions post-demolition of existing buildings.		



Issue	Mitigation Measure	Phase(s)	EIS Ref.
Waste	For the construction phase, the Contractor is to implement the strategies in the WMP.	Construction	Section 7.17
	For the operational phase, a detailed ASB WMP is to be prepared to the satisfaction of the SESLHD prior to the commencement of operation.	Operation	Section 7.17
Construction Hours	For any works that occur during the night time period (10pm-7am) that have the potential to affect residential receivers, all reasonable and feasible mitigation measures are required to be in place in order to reduce the construction works noise levels as far as is practicable.	Construction	Section 7.18



7 Conclusion

The RTS Report has been prepared under Clause 85A of the EP&A Regulation to support SSD 9113. It responds to the matters raised by DP&E in its preliminary assessment and in submissions by Government Agencies and the public during the public exhibition period.

It is submitted that the conclusions made in Section 11 of the EIS remain valid.