

# Royal Prince Alfred (RPA) Hospital Redevelopment Project State Significant Development (SSD) Application



## Preliminary Construction Management Plan

**REVISION STATUS**

Revision	Date	Project
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3.0	10/10/2022	Final revision
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# PRELIMINARY CONSTRUCTION MANAGEMENT PLAN

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## 1 INTRODUCTION

The Preliminary Construction Management Plan (PCMP) has been prepared for Health Infrastructure and their consultant team to assist in the development of the design and staging for the proposed Royal Prince Alfred Hospital (RPAH) Redevelopment. The proposed RPAH project is a highly complex project which will be carried out in multiple packages. The project will require numerous service diversions and department relocations to facilitate the desired new campus layout.

The report addresses the Industry Specific – Hospitals SEARs relevant to the construction, operation and staging being;

### 25. Construction, Operation and Staging

- If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated.

This PCMP contains preliminary construction methodologies for the delivery of this complex integrated project. It is envisaged that this PCMP will evolve and will be further developed by the successful Contractor during the project planning and start-up phases in consultation with the design consultant team, project stakeholders, HI, SLHD and TSA.

The following sections outline the delivery of the construction works being undertaken for the RPAH, and further outline key concerns and interfaces which require review and detailed strategies to enable a successful commencement, construction, commissioning, and completion.

## 2 PROJECT DESCRIPTION

### 2.1 Site Description

The Royal Prince Alfred (RPA) Hospital campus is located in Sydney's inner west suburb of Camperdown, within the City of Sydney Local Government Area. The campus is situated between the University of Sydney to the east and the residential area of Camperdown to the west. A north-south arterial road (Missenden Road) divides the campus into two distinct portions, known as the East and West Campuses. The northern boundary of the campus is defined by the Queen Elizabeth II Rehabilitation Centre and the southern extent of the campus is defined by Carillon Avenue.

The works are proposed to both the East and West Campuses, as well as some off-site works occurring within the University of Sydney.

The site comprises the following land titles:

- East campus:
  - Lot 1000 DP 1159799 (12 Missenden Road, Camperdown, 2050)
- West campus:
  - Lot 11 DP 809663 (114 Church Street, Camperdown, 2050); and
  - Lot 101 DP 1179349 (68-81 Missenden Road, Camperdown, 2050)

Off-site works are proposed on University of Sydney land, known as Lot 1 DP 1171804 (3 Parramatta Road, Camperdown, 2050) and Lot 1001 DP 1159799 (12A Missenden Road, Camperdown, 2050).

### 2.2 Project Background

In March 2019, the NSW Government announced a significant \$750 million investment for the redevelopment and refurbishment of the RPA Hospital campus. The Project will include the development of clinical and non-clinical services

infrastructure to expand, integrate, transform and optimise current capacity within the hospital to contemporary patient centred care, including expanded and enhanced facilities.

The last major redevelopment of RPA Hospital was undertaken from 1998 to 2004 projected to 2006 service needs. Since then, significant growth has been experienced in the volume and complexity of patients, requiring significant investment to address projected shortfalls in capacity and to update existing services to align with leading models of care.

The redevelopment of RPA Hospital has been the top priority of the Sydney Local Health District since 2017 through the Asset Strategic Planning process, to achieve NSW health strategic direction to develop a future focused, adaptive, resilient and sustainable health system.

### 2.3 Description of development

Development consent is sought for:

- Alterations and additions to the RPA Hospital East Campus, comprising:
  - Eastern wing: A new fifteen (15) storey building with clinical space for Inpatient Units (IPU's), Medical Imaging, Delivery, Neonatal and Women's Health Services and a rooftop helicopter landing site (HLS)
  - Eastern extension: A three (3) storey extension to the east the existing clinical services building to accommodate new operating theatres and associated plant areas
  - Northern expansion: A two (2) storey vertical expansion over RPA Building 89 accommodating a new Intensive Care Unit and connected within the Easter Wing
  - Internal refurbishment: Major internal refurbishment to existing services including Emergency Department and Imaging, circulation and support spaces
  - Enhanced Northern Entry/Arrival including improved pedestrian access and public amenity
  - Demolition of affected buildings, structures and trees
  - Changes to internal road alignments and paving treatments; and
  - Landscaping works, including tree removal, tree pruning and compensatory tree planting including off-site to University of Sydney land.
- Ancillary works to the RPA Hospital West Campus, comprising:
  - Temporary helicopter landing site above existing multi storey carpark
  - Re-routing of existing services
  - Associated tree removal along Grose Street

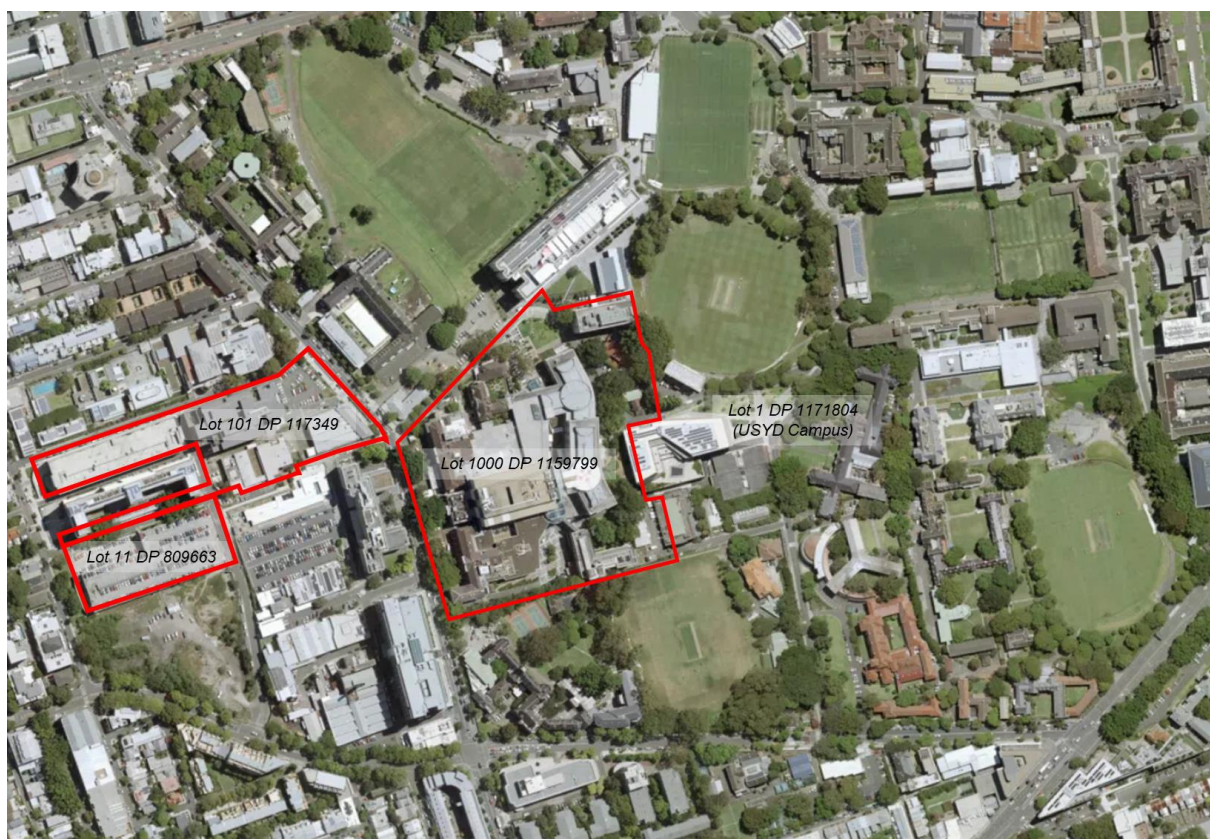


Figure 01: Site boundary

## 2.4 Future Projects and Expansion Strategies

The RPA redevelopment project is in close proximity to several other concurrent projects and contemplated future works for additional expansion of both the east and west campus.

### 2.4.1 Future Projects

- Sydney Biomedical Accelerator (SBA) – In August 2022 the University of Sydney, UNSW Health and the Sydney Local Health District announced a co-founded project to deliver a new facility immediately to the south east of the RPA redevelopment site.
- East Wing Building Shell – The east wing includes three levels of shell space (L2, L13, L14) which will be fitted out by the Health district at a future date.
- Bridge link to University of Sydney – In future, when the women's health department is reconfigured, it is intended to expand the Level 5 public domain eastward and provide a pedestrian bridge link between RPA level 5 and the University of Sydney.

### 2.4.2 Expansion Strategies

Women's Health and Radiology Expansion – The eastern extension has been designed to accommodate an additional level in future, to allow for eastward expansion of the women's health and radiology departments at Level 5.

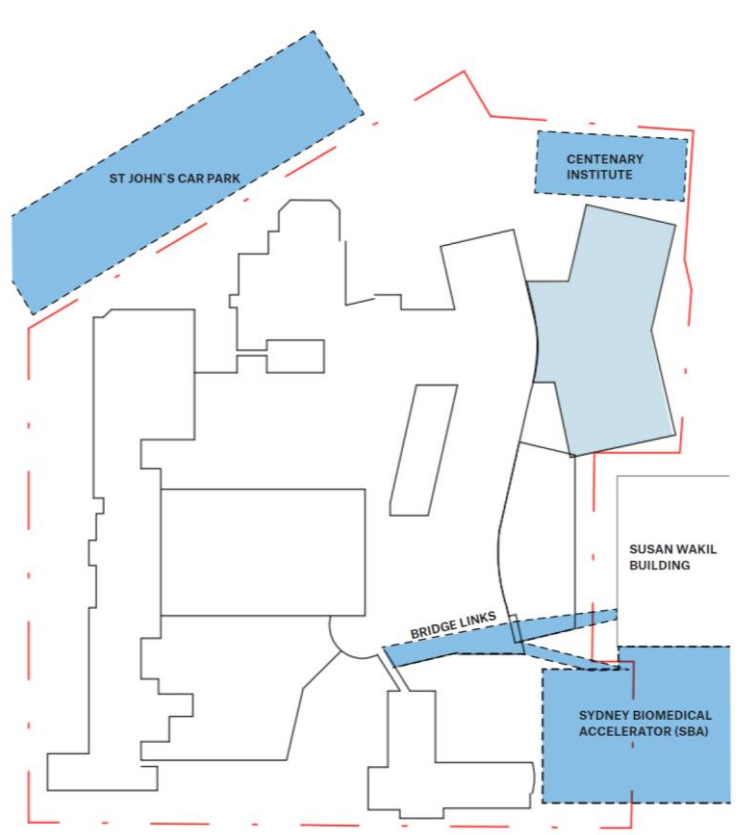


Figure 02: Future projects

### 3 PROJECT STAGING

The RPAH Redevelopment Main Works is proposed to be undertaken in 3 key project packages. These packages ultimately need to be completed in a staged approach as their completion typically enables the decant of existing hospital departments which in turn enables a subsequent stage of works to commence. As such, this PCMP addresses both general and package specific operation and site management requirements.

The RPAH Project packages are currently defined by Health Infrastructure as follows:

- Works Package 01: (Construction October 2023 – October 2026)
  - Tree removal, service diversions.
  - New east building demolition, preparation and construction.
  - Vertical extension.
  - New lift installations.
  - Linkway at level 07, vertical extension
  - Temporary helipad and gas compound works on the west campus.
- Works Package 02: (Construction November 2023 – February 2026)
  - Eastern extension civil and piling, structural and façade.
  - Loading dock road lowering and associated service relocations.

- Works Package 03: (Construction November 2026 – July 2028)
  - Relocation of Existing Departments.
  - Eastern Extension connections into the existing and internal fitout.
  - Internal Refurbishments (including Recovery / Perioperative Unit, Emergency Department, Ambulance Entry, Radiology Rooms, and Cardiac Cath Labs (warm shell).
  - Site wide landscaping.

This PCMP sets out overarching requirements for the successful delivery for the RPAH Redevelopment Project and further provides a preliminary Operation and Site Management Strategy (see Section 6.0) to address the following key focus areas:

- Site fencing and site compounds.
- Environmental controls.
- Tree protection areas.
- Major plant and equipment locations.
- Hoardings, lifting operations, concrete pumping and material laydown areas.
- Temporary works required in and around site.
- Interface works to existing facilities.
- Proposed hours of work and project calendar.
- Site access and routes to facilitate operational and construction activities.

## 4 RISK AND HAZARD MANAGEMENT

### 4.1 Identification and Management of Key Project Risks

Construction of RPAH presents several challenges that need to be delivered through a planned and structured approach. During the detailed design and pre-construction phase an extensive analysis of the project documents will need to be undertaken including multiple site inspection to thoroughly understand and plan the project to mitigate the key risks.

An initial assessment has been carried out of such risks and include but are not limited to:

- Disruption to critical life services.
- Impact on hospital operations.
- Infection control.
- Environmental conditions; noise, dust, vibration, odours, and fumes.
- Identification of potentially hazardous materials.
- Damage to existing buildings and equipment.
- Continued compliance of existing fire zones and egress routes.
- Maintain the public's perception of a functional hospital.
- Disruption of the existing hospital parking.



- Construction workers access and egress affecting daily hospital operations and the local road, cyclists, and pedestrian networks.
- Ensuring residents are well supported through appropriate management and notification of construction activities.
- Working around children.
- Interface with public transport operations.
- Unauthorised access to the construction site.

The Contractor must prepare a detailed Risk Assessment during the pre-construction phase to inform the construction methodology, eliminate or manage risks appropriately and to ensure a smooth interface with the existing hospital campus.

#### 4.2 Managing Risks Within an Operational Hospital Environment

The project has critical construction and services interfaces, and non-negotiable stakeholder requirements to ensure operational continuity is maintained.

Upon receipt of the Detailed Design and during the pre-construction phase the contractor will work in a collaborative manner with HI, TSA, SLHD, the greater Royal Prince Alfred Hospital Campus and Sydney University to develop a stakeholder communication structure to address all stakeholder requirements and concerns.

The activities below have the potential to significantly impact on the operation of the hospital, the wider precinct, and neighbours, if not managed effectively and communicated proactively with stakeholders:

- Disruption Notice timeframes.
- Access and traffic management.
- Planning and management of any major shutdowns.
- Minimising and controlling disruptions.
- Protection of existing hospital assets.
- Maintenance of existing patient and staff privacy and security.
- Emergency after hours callouts.
- Hazardous material identification and removal.
- Noise, dust, and vibration controls.
- Air monitoring (for contaminants).
- Out of hours works.

The following management plans would be developed as a minimum prior to commencement of works, incorporating stakeholder input and establish clear and concise communication channels for each area of interface works to support the ongoing operation of the hospital:

- Stakeholder Management Plan.
- Risk Management Plan.

#### 4.3 Key RPAH Construction Interface Overview

An initial review of the construction interfaces has identified several interfaces that require detailed construction methodologies to ensure business continuity is maintained during the construction. These interfaces include:

- Augmentation of existing hospital services; particularly medical gases, fire systems, relocation of the sewer, stormwater, and high voltage power.
- Fitout work and refurbishments within existing buildings.
- Maintaining access to critical operation facilities such as the loading dock, emergency departments, intensive care services etc.
- Staged handovers and Occupation Certificates.
- Heavy demolition adjacent operational facilities.
- Construction beside and over existing buildings with sensitive equipment such as MRIs, cyclotron, fresh air intakes, imaging etc.
- Impacts on major traffic and pedestrian areas.
- Fire egress points modified during construction.
- Continual access for Authority emergency vehicles.

#### 4.4 Hazardous Material

To manage hazardous material on the project the Contractor will develop a site-specific Hazardous Material and Unexpected Finds protocol. The protocol shall cover hazardous material removal including investigation, identification, testing, removal, final testing, methodology of removal, tracking for auditing purposes, and clearance certificates prior to subsequent works commencing.

Investigations will be undertaken by the Contractor prior to the commencement of works and periodically throughout the RPAH Redevelopment Project.

Initial investigations have identified hazardous materials are likely to be encountered in, but not limited to, the following works:

- Asbestos Containing Material (ACM) encountered during demolition of existing buildings and service spaces (namely in the demolition of the Chapel and Pathology Buildings, existing plantrooms, façade breakthrough, service risers, and in refurbishment spaces), and in-ground services insulation.
- Contaminated fill material.
- Lead paint that may have been used on some of the existing buildings.
- Potential biological hazards to the sewers and drainage of the existing buildings which have housed clinical service departments presently or historically.
- Needles and sharps located around the campus.

The Contractor's site-specific methodology for removal of hazardous waste and unexpected finds shall ensure that waste is disposed of correctly and efficiently including:

- Review and revision of the Asbestos Management Plan and Register, and continual validation of material data that been captured to date.
- Ensure the Asbestos Remediation Contractor is appropriately licensed and that the chain of custody is documented with the landfill facility to ensure the asbestos is appropriately and lawfully disposed of.
- Review all site occupational and environmental management and monitoring programmes.
- Review and revise as required the communications and Industrial Relations strategies.
- Remediation Action Plan (if required) validation process to be implemented throughout the works.

Of major importance in managing the removal of hazardous materials is communicating the known extent and areas of works, and any new unexpected finds. As a public health facility and the perceived potential to public health risks, this is particularly important for RPAH. To this end, appropriate and responsive communication protocols will be established.

#### 4.5 Infection Prevention and COVID 19 Management

Infection control is one of the critical areas where works in health precincts are more challenging than conventional complex construction projects. The Australian Guidelines for the Prevention and Control of Infection in Healthcare provides a very robust set of processes for assessing and implementing infection control measures during construction works.

A project specific Infection Control Plan is to be developed prior to commencing the construction works. In preparing this plan the Contractor shall refer to the 'Infection Control Principles for the Management of Construction, Renovation, Repairs and Maintenance within Healthcare Facilities'. The plan shall identify the different types and locations of works planned on the RPAH Project and specify the level of infection control required for each type of activity.

The measures that will be implemented for the project will vary from minor within the new works footprint to extensive for refurbishment and extension works.

Pandemic Management will also be critical in the delivery of the RPAH. The successful contractor should complete and implement a Pandemic Management Plan to consolidate site-specific management information for a proactive approach to managing and limiting the spread of the COVID-19 Pandemic.

This Management Plan should outline the guidelines, procedures, and processes for containing and managing the impact of the COVID-19 Pandemic. These management expectations should be based on advice provided by the Australian or State/Territory based governments and their relevant Health Authority, as well the relevant corporations. It should identify matters to be considered and related controls at the workplace to manage the spread of COVID-19.

Examples of general site control include the following:

- Social distancing and avoidance of personal contact. This could include workforce segregation, segregated offices, project teams, and expanded amenities.
- Workforce temperature screening.
- Hygiene and cleaning including deep cleans and decontamination monitoring following a Confirmed Case on site.
- Communication and consultation.
- Management of Suspected Case and Confirmed Case reporting including close contact tracing within this workplace.
- Federal, State and Territory Governments and relevant Health Authority directions, rules instructions and guides as amended and updated.
- General PPE (e.g., face masks).
- Segregated worker movements and extended site hours



## 5 AUTHORITIES

### 5.1 Utility Provider and Associated External Approvals

At various stages external approvals of components of the works will be required. This will include:

- City of Sydney Council.
- Sydney Water.
- Jemena (gas).
- AusGrid.
- NSW Fire and Rescue.
- Roads and Maritime Services (RMS).
- Civil Aviation Safety Authority (CASA).
- Careflight Helicopters or Helicopter Emergency Medical Services (HEMS).
- Ambulance NSW.
- Sydney Buses.
- Communications providers.
- Other relevant utility providers.

The approach to dealing with these authorities will differ dependent on the respective requirements, however fundamentally the Contractor should seek:

- Prior coordination with HI to ensure all approaches are aligned.
- Early contact to mitigate potential delays and identify potential issues.
- Establish common contacts that can provide continuity of service on the project.

## 6 OPERATIONS AND SITE MANAGEMENT

### 6.1 Overview

The RPAH Redevelopment will require precise site establishment, staging and operation of each of the key project packages to ensure safety, appropriate security, interface management and productivity are achieved.

As the RPAH Redevelopment Works will be conducted in 5 key project packages accordingly this detailed preliminary plan addresses both general and package specific Operation and Site Management requirements. These packages are as follows and are detailed further in this section of the plan:

- New East Building and Vertical Extension, demolition, preparation, and construction.
- Eastern Extension.
- Internal Refurbishment.
- Lambie Dew Drive
- Temporary Helicopter Landing Site

The construction duration and start date are as per appendix 01.

### 6.2 Construction Hours

#### 6.2.1 Out of hours works

##### Extension of Saturday working hours in line with CoS Construction Code

In addition to the ICNG [3] recommended standard construction hours and in line with “Category 1” working hours in the CoS Construction Code (outlined in Table 22 in SSDA Acoustic Report rev F), approval is being sought to extend Saturday construction hours for the following:

- All east campus works:
  - Vertical extension
  - East extension
  - New east wing
  - Ambulance bay works
  - Lambie Dew Drive
  - Refurbishment works

No general extension of hours is sought for the temporary HLS works.

Proposed typical hours of works are presented in the following table 1:

Day	Standard construction hours	Proposed construction hours
Monday – Friday	7:00am to 6:00pm	7:00am to 6:00pm
Saturday	8:00am to 1:00pm	7:00am to 7:00pm <sup>1</sup>
Sunday and public holiday	No work	No work

Table 1: Proposed standard construction hours

**Notes:**

1. No “high” noise works (demolition, excavation and piling) are proposed outside of the standard ICNG Construction Hours. No temporary HLS works are proposed outside of the standard ICNG Construction Hours.

**Out-of-hours refurbishment works**

The proposal would seek to conduct out-of-hours fit-out and refurbishment works, as long as the works are being conducted indoors, with base building works completed and no openings / open windows / open doors in the façade near where the works are being conducted.

**Other ad hoc out-of-hours works**

In addition to the above, it is understood that essential out-of-hours works (OOHW) will likely be required from time to time in order to minimise impact on staff and patients in the hospital.

Approval for ad hoc OOHW is not being sought at this time; approval for these works will be sought on a case-by-case basis as the need arises. Arup recommends that approval be granted for OOHW which cannot take place during standard hours, including demolition works where deemed absolutely necessary.

**6.2.2 Justification for extension to operating hours on Saturdays**

Given that the site is located within the boundaries of the CoS Council, it is proposed that OOHW could be conducted in accordance with Category 1 working hours as outlined in Table 1. It is also noted that slightly longer hours will shorten the construction duration for an essential service site.

Arup recommends that approval be granted for the extension to operating hours and noted in Table 1, on the condition that high noise impact activities are avoided. In particular, the following activities are excluded:

- Demolition works
- Excavation works
- Piling

**6.2.3 Justification for OOHW refurbishment and fit-out works**

It is noted that approval is generally granted for works to occur outside of standard project construction hours, where there is considered to be a minimal noise impact upon external sensitive receivers, and indoor fit-out and refurbishment would typically meet this criteria.

The contractor is to use discretion when carrying out these OOHW, and avoid using louder plant where it may pose a disruption to nearby external receivers.

As these proposed works are not expected to impact external receivers, a quantitative construction noise assessment is not warranted. The contractor should, however, consider impacts to internal receivers on a case-by-case basis in consultation with HI.

**6.3 General Project Operation and Site Management****6.3.1 Dilapidation Survey**

Prior to the commencement of works, the contractor will complete an extensive dilapidation survey of the existing hospital and its neighbour's infrastructure covering roads, footpaths, external and internal areas of existing buildings located adjacent to the construction site. Coordinated access to internal hospital areas will be arranged through HI and SLHD. The resulting Dilapidation Survey report will be provided to the Principal as a pre-commencement record of the existing facilities adjacent to the construction areas.

The report shall also address existing plant and equipment conditions to determine the suitability and condition of any plant and equipment that the new works interface with.

### 6.3.2 Construction Traffic and Deliveries

One of the key requirements to achieve the successful delivery of the RPAH will be managing the flow of materials and equipment into and out of the construction site. The intent is to minimise impact on the existing hospital operations and minimising further congestion on the neighbouring roads. The building contractor's planning considers and manages this through:

- The maintenance of pedestrian and traffic flows on the surrounding roads and footpaths.
- The unimpeded continued use of existing vehicular and pedestrian entry and exit points as far as possible within the Royal Prince Alfred Hospital campus.
- 24-hour access to ambulance drop off areas.
- Facilitates access to and from loading docks.

Preliminary Construction Traffic and Pedestrian Management Plans have been developed for each package giving specific focus to:

- Carpark entry and egress.
- Site Loading Zones.
- Traffic control locations.
- Construction vehicle paths of travel.
- Pedestrian access routes including the relocation of crossings away from the site but remaining within the vicinity of existing pedestrian routes.
- Ambulance bay facilities. No works or vehicle movements will be allowed to affect the access of ambulance entry/exit and parking area.
- Hospital loading dock and deliveries.
- Ambulance drop off/pick ups.
- Patient transfers.

A detailed Traffic and Pedestrian Management Plan shall be prepared by the Contractor for the project prior to the commencement of works to ensure coordination between the sites and the Hospitals operation.

### 6.3.3 Fencing and Hoardings

Maintaining a secure and safe perimeter to protect the public and staff from construction activities is important for the on-going safe operation of the hospital. Secure hoardings and fencing will be installed to prevent unauthorised public access and to maintain security of the construction site 24 hours a day.

Site security is paramount for public safety and the Contractor will implement security turnstiles on the entry to the primary works site to prevent unauthorised access. Vehicle entrances will be managed by Traffic Controllers and marshals and secured when not in operation.

Typically, the site compound(s) will be secured with a mixture of solid hoarding, chain wire fencing and/or concrete barriers with anti-gawk screens. The type of hoarding should be chosen in consideration of environmental, security, privacy, and robustness.

The location of all fences should be designed in consultation with HI, SLHD and TSA, and take into consideration public/staff paths of travel both internally and externally. The Contractor is to plan the works to either maintain or divert public and staff paths as required. This should include:

- Authority access and egress.
- RPAH and University of Sydney emergency exits.
- RPAH staff and delivery operations.
- Public movements around the wider campus (University of Sydney, St Johns, and the general public).

Segregation is covered in further detail in the package specific sections of this plan.

#### **6.3.4 Site Security and Gates**

The site perimeter shall be always secure with no unauthorised access.

Out of hours security patrols will be used where deemed necessary, with a focus at the back end of east campus works as the potential for theft and vandalism increases. Extended shutdown periods can also be monitored by external security services. CCTV with active motion sensors will be used to track any unauthorised access to tower cranes.

It is anticipated during the construction of the New East Building, Vertical Extension and Eastern Extension that construction worker access to the site will be strictly controlled through a secure gate and turnstiles that require personalised identity swipe cards to gain access to site. This also create a live record of who is on site at any given time to provide a checklist if site is ever evacuated in an emergency.

During the refurbishment works, construction worker access will be monitored via a sign in register as the nature of these works and fencing compound does not easily enable the installation or maintenance of a turnstile system.

#### **6.3.5 Site Compound and Amenities**

Accommodation and amenities for the construction workforce will be provided in demountable site sheds. These site sheds will be erected, relocated, and removed throughout the redevelopment to cater for staged work areas and workforce numbers. Refer to Appendix 01-3 for the indicative layout and areas suggested.

Final site accommodation locations and layouts must be developed by the Contractor in consultation with HI and SLHD during the detailed planning phase for the package of work.

#### **6.3.6 Worker Transportation and Parking**

To mitigate any further congestion around the already busy Royal Prince Alfred Hospital campus, workers coming to RPAH site will be encouraged to use public transport. Workers will be encouraged to utilise the train and bus network which will drop workers at the neighbouring Central, Newtown and Macdonaldtown stations which have buses and/or within walking distance of site.

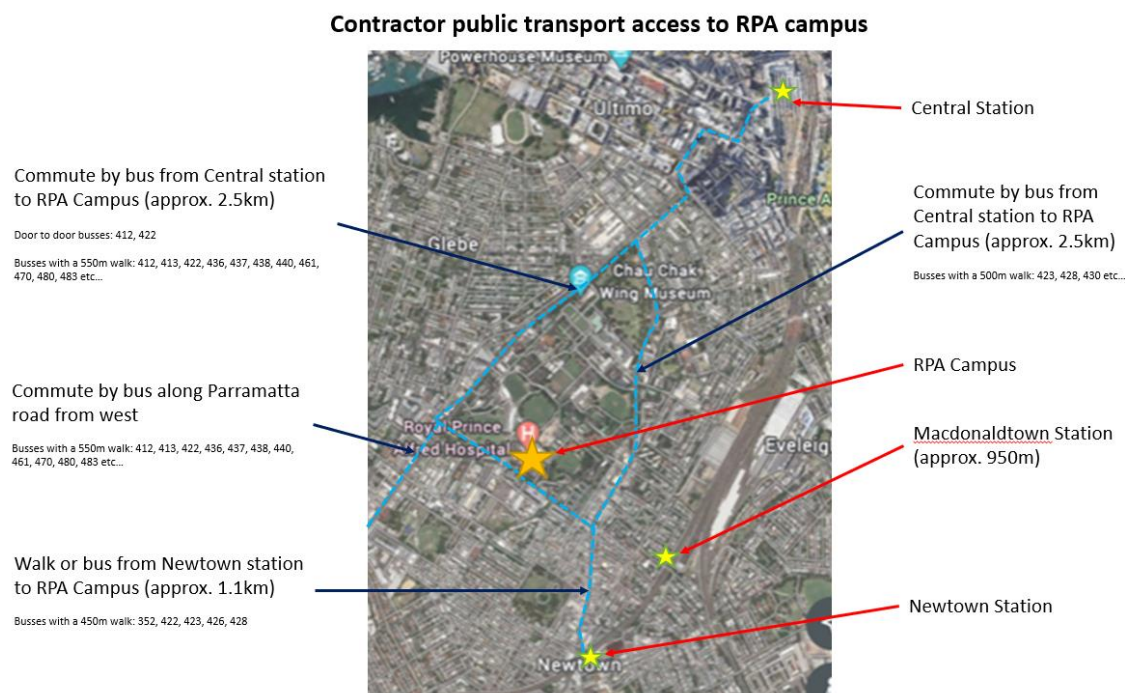


Figure 03 shows the area map and access to site via major public transport hubs

### 6.2.8 Construction Worker Inductions

Inductions for the project should be specifically tailored to inform workers of their obligations working within a live hospital environment. The content of the induction will be reviewed with HI and SLHD's project team to ensure the strategies imposed by the Contractor are aligned with the requirements of the Hospital.

The project induction will train new workers on project specific safety and emergency procedures; and address key interface controls, including:

- Working in a live environment: Maintaining business continuity for the Hospital is key for a successful project and will be the underlying theme of the induction procedure for every worker on site.
- Infection control: Content within the induction should focus on the importance of infection control and the risk to the existing Hospital from construction works. It should also focus on work methodologies and quality procedures to ensure the end product delivered to the client has been constructed in accordance with the documentation and without risk of infection to end users.
- Access within the existing Hospital: The induction needs to provide clarity regarding no access into existing Hospital areas. There shall be clear 'no-go' zones identified including the travel path for all emergency vehicles to and from the Hospital.
- Separation of construction works from Hospital Operations: Access to and from site will be defined and out of bounds areas clarified for workers.
- Disruptive works procedure: All workers shall be made aware of their responsibilities towards understanding what constitutes disruptive works and understand the timeframes associated with preparing to carry out any such works.
- Working around children: All workers will be made aware of their responsibilities towards working in facilities with children.

- Working adjacent to the existing clinical spaces: All workers shall be made aware of patient privacy within the facility. For example, no unauthorised removal of privacy screens erected to prevent direct sightline into wards will be permitted.
- Working adjacent to local Residential and Business properties: All workers will be made aware of the need to ensure positive contractor behaviour when approaching and whilst on site, including minimising disruptions to local parking and access.
- Minimising disruptions to RPA Hospital's parking and access for staff.

#### 6.3.9 Construction Worker Support

The health and wellbeing of construction workers is paramount. In particular providing the construction workforce on site with a comfortable environment which supports healthy minds in the workplace. Initiatives to support construction worker welfare should be employed by the Contractor onsite including:

- Quit smoking support.
- Healthy living courses.
- Mates in Construction (MIC) - mental health support.

#### 6.3.10 Site Evacuation / Major Incidence Response / Emergency Procedures

Prior to commencement of any work the Contractor shall develop a strategy to deal with any major incident or emergency. This will be detailed in an Emergency Evacuation Plan and Crisis Management Plan.

#### 6.3.11 Temporary Services

Prior to commencement of each package of Works a detailed Temporary Services Plan shall be prepared by the Contractor. These plans will be developed following detailed site investigations and as the Detailed Design becomes available

### 6.4 Stage Specific Operation and Site Management

Preliminary sketches in the appendices have been prepared for each of the respective packages. The following sections should be read in conjunction with these plans as they seek to provide further clarification regarding individual package requirements.

### 6.5 New East Building and Vertical Extension Works

#### 6.5.9 Site Fencing, compound and shed locations

Due to the constraints around site, the site accommodation has indicatively been located adjacent to USYD's Susan Wakil Health Building. The Contractor shall use a combination of A-Class, B-Class, turnstiles, and site gates to secure the site perimeter. Concrete jersey kerbs should also be used in all locations where traffic segregation for protection is required, particularly along Lambie Dew Drive.

#### 6.5.10 Tree Protection Areas

Several existing trees in the vicinity of the work zones will be retained and protected during the works. Upon completion of the detailed alignment information for the new services, roads, and foundations; and prior to the commencement of works, a final Tree Protection Plan shall be developed by the Contractor for implementation. This plan will meet the requirements of the approved SSDA conditions.



### 6.5.11 Location of Major Plant and Equipment to Serve the Works

Preliminary tower crane locations have been proposed on the site set up drawings (refer to Appendix 01-4) to indicatively identify coverage. A detailed crane strategy will need to be developed by the Contractor prior to commencement of works to establish the most suitable cranes for the project considering the design parameters and adjacent stakeholder's aviation requirements.

Prior to the establishment of any cranes the Contractor shall engage their aviation consultant to review the proposed crane selection and confirm that the selection is aligned with the aviation management plan and meets the relevant stakeholder requirements.

Erection and removal of the tower crane will be by a mobile tower crane that may require one off access via the north-east through USYD property.

Hoists are proposed for the movement of construction workers and materials between the floors safely and efficiently. An indicative location for the hoists has been proposed in the preliminary site setup drawings (refer to Appendix 01-4). However, the final location, quantity, and size the hoists are subject to coordination with the detailed design when it has been developed.

The following list provides an outline of envisaged plant required for the New East Building and Vertical Extension Works, plant and equipment includes but is not limited to:

Equipment Type	Item
Heavy Vehicles	Concrete trucks Dump truck / articulated haul trucks (35-50 tonne) Delivery trucks (rigid, semi-trailers, and truck & dog) Skip trucks
Site Equipment	Mobile cranes Tower cranes Bulldozers Front end loaders Excavators (w/ rock saw and rock breakers) Graders Vibrating rollers and compactors Piling / drilling rigs Concrete pumps Jack hammers and drills

### 6.5.12 Locations of hoardings and overhead protection, details of concrete pumping activities, lay down areas and key lifting zones

Hoarding is proposed to the perimeter of the New East Building and Vertical Extension works to ensure segregation of the public from the construction site. Internal weatherproof and dust proof hoardings will also be required to be erected by the Contractor in the locations where the existing buildings are being demolished or at the interface / connection points between new and existing buildings. The location and details for internal hoardings have been preliminarily identified (refer Appendix 01-5). But the final alignment, types, and weatherproofing (where required) are to be coordinated and agreed with the Contractor, HI, SLHD and various stakeholders, particularly those that interface with the operational hospital and the adjacent University of Sydney.

It is anticipated that a loading zone will be set up on the either side of Lambie Dew Drive's northern end. The north-eastern loading zone will be for the unloading of large deliveries for the east tower crane and will be temporarily supplemented with the laydown area in the north-west whilst the New East Building is in civil / structural works. Subsequently any overhead lifting will require an appropriate hoarding to be installed over any public / pedestrian footpaths.



All concrete pumping operations are expected to be undertaken from within the site compounds, however, it is anticipated that concrete trucks will need to be held in a loading/construction zone along the entry road to ensure continuity of concrete supply during larger concrete pours.

#### 6.5.13 Temporary Works Required in and Around the Site

Prior to the commencement of the Works and in conjunction with the development of the Approved For Construction (AFC) documentation, the Contractor shall undertake detailed investigations into existing services connections feeding to or through the work site. A detailed temporary works strategy will need to be developed as part of the Construction Management Plan for these works.

Initial documents have highlighted the following temporary works and services disconnections need to be addressed as part the detailed Construction Methodology. This is not an exhaustive list of temporary works or service diversions but rather prompts for the Contractor to consider:

- Shoring to excavations.
- Service disconnections, isolations, and relocations.
- Temporary pedestrian and vehicle paths around the campus (inclusive of signs and lighting).
- The implication of existing services and finishes around internal hoardings at connections between new and existing.
- Temporary diversions of mechanical intakes, exhaust, and quench pipes.
- Potential propping of the existing plantrooms to facilitate the vertical extension works.
- Temporary flashings and seals around connections between new and existing; and in particular, on the roof of existing structures for vertical extension works.
- Visual and/or acoustic treatments for existing openings, doors, and windows.

#### 6.5.14 Interface Works to Existing Facilities and Details of Proposed Shutdowns

Prior to the commencement of the works and in conjunction with the development of the design, the Contractor shall undertake detailed investigations into existing service connections required for the new East and Vertical Extension buildings. A detailed services interface strategy will need to be developed as part of the Construction Management Plan for these works to ensure extensions and upgrade to existing services and infrastructure minimise disruptions to the existing hospital's operations.

Initial investigations have highlighted that the following services interface works need to be addressed as part of the detailed Construction Methodology. This is not an exhaustive list but rather prompts the Contractor to consider:

- HV connections.
- Potable water connections.
- Natural gas connections.
- Medical gas and bulk oxygen connections.
- Sewer connections and possible underbores.
- Stormwater relocation.
- Fire panel connections and upgrades.
- BMCS connections and upgrades.
- Security system and CCTV connections and upgrades.

- Communications and IT system connections.
- Possible pneumatic tube system connections and upgrades.

Investigations has identified construction traffic, where possible, need to enter site via the newly established haul road. Where an alternate route is required, a detailed strategy will need to be developed by the Contractor. However, preliminary site access drawings have been proposed (refer Appendix 01-6 that show the indicative pedestrian and vehicle movement during RPAH Redevelopment) by utilising the existing roadways with minor upgrades/changes.

#### 6.5.15 Site Access and Routes for Construction Works

Materials will be delivered directly to site on large rigid and articulated vehicles and unloaded using the site cranes and manitoux for distribution around the site.

Access to the site for construction workers will be through a pedestrian gate directly adjacent the proposed site accommodation near the Susan Wakil Health Building. This means the no construction workers are required to enter the existing hospital to access the site for the majority of these works.

### 6.6 Eastern Extension

#### 6.6.1 Site Fencing, compound and shed locations

Due to the nature of the works, proximity to the loading dock and the importance of the loading dock to RPAH operations, a detailed construction methodology is required to be reviewed and agreed with HI, TSA, SLHD and the various stakeholders prior to commencement of works. These works will primarily be completed under DWMS's that should include details of additional short term site compounds, swept path assessments showing the impact on each dock and agreed hours of works.

It is anticipated that the site compounds will change in shape, size and location as the work area progressively moves to minimise impact on the loading dock. This compound will require secure fencing and gates. Concrete jersey kerbs or water filled barriers should also be utilised in all locations that traffic protection is required.

#### 6.6.2 Tree Protection Areas

Several existing trees in the vicinity of the work zones will be retained and protected during the works. Further investigation will need to be conducted to determine the complete scope of trees requiring protection and captured within a final Tree Protection Plan.

#### 6.6.3 Location of Major Plant and Equipment to Serve the Works

The preliminary tower crane locations for the East Building and Vertical Extension works are anticipated to have partial coverage over the Eastern Extension. Where reach is not achievable, materials should continue to be lifted by the Tower Crane and skated into place to minimise impact on hospital operations. However, where direct lifts are required for works such as structural steel and concrete pumping, the Contractor shall allow to review and agree setup with HI, TSA and SLHD as part of the detailed construction methodology.

The following list provides an outline of envisaged plant required for the Eastern Extension Works, plant and equipment includes but is not limited to:

Equipment Type	Item
Heavy Vehicles	Concrete trucks Dump truck / articulated haul trucks (35-50 tonne) Delivery trucks (rigid, semi-trailers, and truck & dog) Skip trucks
Site Equipment	Mobile cranes

	Tower cranes Excavators (w/ rock saw and rock breakers) Graders Vibrating rollers and compactors Piling / drilling rigs Concrete pumps Jack hammers and drills
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#### 6.6.4 Locations of hoardings and overhead protection, details of concrete pumping activities, lay down areas and key lifting zones

Hoardings are proposed to the perimeter of the site accommodation and Eastern Extension to ensure segregation of the public from the construction site. Internal weatherproof and dust proof hoardings will also be required to be erected by the Contractor in the locations where the extension interfaces with existing buildings. Where possible, the Contractor shall plan the Works so that the breakthrough is completed after the existing apartments have been decanted. The location and details for hoardings have been preliminarily identified (refer Appendix 01-4). But the final alignment, types, and weatherproofing (where required) are to be coordinated and agreed with the Contractor, HI, SLHD and various stakeholders.

It is anticipated that the north-eastern loading zone set up on Lambie Dew Drive's northern end will function as the primary supply of materials for the Eastern Extension. The north-eastern loading zone will be for the unloading of large deliveries for the tower cranes and lifted over Lambie Dew Drive to the Eastern Extension and skated into place where possible. Any overhead lifting above any public / pedestrian footpaths will require an appropriate hoarding to be installed.

The concrete pumping operations are anticipated to require different set up locations depending on the direction of RPAH flow of traffic for the loading dock deliveries. The Contractor should also consider the time and size of pours, and an anticipated holding zone for queuing concrete trucks that minimises its impact to hospital operations.

#### 6.6.5 Temporary Works Required in and Around the Site

Prior to the commencement of the Works and in conjunction with the development of the Approved For Construction (AFC) design, the Contractor shall undertake detailed investigations into existing services connections feeding to or through the work site. A detailed temporary works strategy will need to be developed as part of the Construction Management Plan for these works.

Initial investigations have highlighted the following temporary works and services disconnections that need to be addressed as part the detailed Construction Methodology. This is not an exhaustive list of temporary works or service diversions but rather prompts for the Contractor to consider:

- In-Ground services for the Lambie Dew Drive road lowering.
- Temporary access and staging for construction, public, and hospital vehicles.
- Temporary pedestrian paths around the campus (inclusive of signs and lighting).
- Temporary protection of existing structures directly adjacent the demolition, piling and civil works.
- Noise and vibration mitigation for demolition works within the existing loading dock.

#### 6.6.6 Interface Works to Existing Facilities and Details of Proposed Shutdowns

The existing loading dock beneath the Eastern Extension is the primary loading dock for the RPAH Eastern Campus. Due to the nature of the Eastern Extension, the works will have a significant impact on the operation of the loading dock. As such, minimisation of the impact of these works to hospital operations is paramount and central to the success of the Eastern Extension works. Prior to commencing works, the Contractor, HI and SLHD will need to agree on the methodology of works. This should include details of:

- Construction and hospital vehicle and pedestrian staging.
- Operational access ways.
- Road lowering (civil and services) staging and hours of works.
- Piling staging and hours of works.
- Structural steel staging, hours of works, laydown and lifting mark ups.
- Concrete pumping staging and potential setup locations.
- Impacts of works along the live edge of the slabs above Lambie Dew Drive.

#### 6.6.7 Site Access and Routes for Construction Works

The site access and routes of the Hospital operations will be considered when staging the works. The Early and Enabling will allow Hospital, Authority, and limited construction vehicles to access the loading dock and Eastern Extension site from both the North (via John Hopkins Drive) and from the South (via Gloucester House Drive).

Access to the site for construction workers will be through a pedestrian gate from the site accommodation. This means that no workers are required to enter operational environments to access the site.

### 6.7 Refurbishment

#### 6.7.1 Site Fencing, compound and shed locations

The contractor shall implement a secure hoarding around the site compound where possible and install secure gates on the entry to the work front to prevent unauthorised access. Where hoardings are being installed internally, refer to Section 6.6.5.

#### 6.7.2 Temporary Works Required in and Around the Site

The temporary works in and around the refurbishment will be dictated by the staging and must be further investigated by the Contractor during the design and planning phases in consultation with HI, SLHD and TSA. The works to the loading dock will require significant coordination with the hospital operations and will require some out of hours work.

The key to the success of the refurbishment staging will be the minimisation of disruptions to the live hospital environment. To achieve this, the following must be taken into consideration by the Contractor whilst planning, staging, and designing the refurbishment works:

- How and what clinical operations and support services are maintained. Noting that temporary decants may need to be required.
- The impact to live services and locations for isolations.
- Emergency evacuation scenarios and fire protection requirements.
- It is recommended to align the boundaries for each refurbishment stage with new or existing fire compartments.
- What the impacts on public, patient, and staff routes, and what is the temporary impact of constructing the temporary paths prior to taking possession of areas.
- Coordinating new departmental requirements with the existing structure for new MME loadings, set downs and penetrations.
- Endeavour to plan refurbishment works over multiple levels vertically and concurrently to reduce disruption to above and below departments.

- For accuracy of planning and design, the Contractor and consultants should not rely purely on As-Built data and further investigations are recommended to confirm the onsite data during design and planning phases. This should include the reticulation of services, changes to the originally designed redundancy and the confirmation of fire wall/compartments.
- Operational readiness and decanting activities.
- HI and SLHD delivery, installation and commissioning of major plant.

### 6.7.3 Interface Works to Existing Facilities and Details of Proposed Shutdowns

There are several existing hospital departments that interface with the refurbishment works. Subsequently, minimising the impact on these departments, staff, and its patrons is paramount to the success of the project.

Upon receipt of the Detailed Design and prior to the commencement of the works, the Contractor will need to develop an interface strategy in conjunction with HI, SLHD and any other stakeholders to agree items such as the locations and types of hoardings, strategies for dust, noise, vibration, fumes, and odours, and detailed service staging, interruptions, testing and commissioning.

### 6.7.4 Site Access and Routes for Construction Works

The layout of construction access routes to and from the work front for labour and materials will need to be agreed in consultation with the Contractor, HI, and SLHD. This should include the location and type of fencing, hoarding, and access doors/gates. The work front fencing and hoarding will need to be noise, acoustic, secure, fire, water, dust, and odour appropriate. The routes for worker and material movements and the type of hoarding proposed should be selected to minimise impact on the operational hospital environment.

It is anticipated that material deliveries on trucks will be able to enter the site for unloading in the existing loading dock off Lambie Dew Drive and brought up the service lifts to the respective floors. This will need to be further validated by the Contractor upon review of the Detailed Design and agreed refurbishment staging.

## 7 ENVIRONMENTAL PROTECTION

A detailed Environmental Management Plan (EMP) must be prepared by the Contractor in consultation with HI, SLHD and any other stakeholders prior to commencing any packages of work on the project. The following Environmental factors are vital to the success of the project and accordingly preliminary strategies have been addressed in this PCMP:

- Noise and vibration.
- Air quality.
- Dust, emissions, and ventilation within clinical spaces.
- Sediment control.
- Protection of trees.
- Waste and recycling.

### 7.1 Noise and Vibration

The Contractor shall review, assess, and audit all departments and buildings near the works (inclusive of University of Sydney buildings) to ascertain a list of sensitive equipment so that this can be taken into consideration when planning the Works. The Contractor should also engage an acoustic consultant prior to the construction works to provide detailed advice and practical methodologies in the form of a Construction Noise and Vibration Management Plan (CNVMP) to manage the potential noise and vibration issues with the adjacent sensitive receivers. The report shall look to introduce measures such as:

- The necessary vibration monitoring and back to base alarm monitoring to ensure the nominated accepted level stipulated by the SLHD and associated buildings is not breached.
- Positioning major plant away from sensitive receiver boundaries as much as possible. Where possible concrete pumping zones, craneage, and loading zones are to be positioned away from operational existing facilities. Where applicable treating plant with mufflers and noise mitigating filters.
- A management plan shall be developed for piling operations close to existing buildings, particularly those housing sensitive equipment.
- The CNVMP, will detail the criteria and protocols for vibration and noise protocols to the surrounding properties. Identified sensitive receivers that should be considered in relation to vibration are:
  - Royal Prince Alfred Hospital.
  - RPAH heritage and/or significant buildings.
  - Various RPAH departments' equipment.
  - Neighbouring business facilities.
  - Neighbouring residential properties.
  - Neighbouring University of Sydney facilities, accommodation, and research centres.
- Ensure the protection strategy considers the heritage and/or significant buildings located on or adjacent to the site.

In addition, vibration sensitive equipment must also be protected during the works, particularly when operating near operational facilities. The Contractor must identify noisy works and implement strategies to minimise disturbance to sensitive receivers within the hospital.

## 7.2 Air Quality Management

The Contractor must implement appropriate controls to suppress dust and other suspended particles in accordance with legislation and risk management requirements that minimise the generation of dust on the site and potential emission issues relating to plant and equipment. Accordingly, an Air Quality Management Plan (AQMP) is to be prepared by the Contractor and included within the project EH&S Management Plan outlining a clear strategy for maintaining air quality. This AQMP should include as a minimum:

- Clear definition of trafficable and material storage areas to prevent unnecessary vehicle movement into other areas.
- Use of water carts to dampen work areas and exposed soils to prevent the emission of excessive dust.
- Installation of a wheel shaker grid and/or wash down facilities at the vehicle egress point.
- Ensuring trucks transporting materials to and from the site use covers to prevent windblown dust or spillage.
- Ensuring truck tailgate locking mechanisms are operational and in use.
- Periodic inspection of surrounding roads to ensure no construction contamination and the implementation of road sweeping if required.
- Careful selection of materials for temporary road surfacing.
- Aspergillus control during construction works within existing buildings.
- The Contractor and Subcontractors are to maintain their equipment / machinery to ensure exhaust emissions comply with relevant legislation and guidelines.
- All stockpiled waste materials are to be sorted, collected, removed from site, and reused where possible.

- Air quality monitoring.
- Dust screens and airlocks to be utilised with interior works.
- Provide construction filters to air intake vents.
- Use of temporary exhaust fans and filters to circulate construction zone air to the exterior of building.

### 7.3 Dust and ventilation within Clinical Spaces

The Contractors Environmental Management Plan shall address the progressive cleaning and final clean of the project prior to handover of the works. As a minimum the final clean strategy should reflect the following for clinical areas of the buildings:

- The Contractor shall ensure that an initial builder's clean is undertaken progressively as areas are completed and locked off. This must be completed prior to testing of any mechanical duct work to avoid intrusion of dust into the Heating, Ventilation, and Air Conditioning (HVAC) system.
- The final defect rectification will commence with the removal of all protection and general construction dirt and dust from the building.
- Then, shortly before handover and in parallel with final testing and commissioning of the building, a final clean shall commence and work progressively through the levels.
- External facades and roof areas are to be cleaned.
- Common areas, entrances and construction worker thoroughfares being the final areas to be cleaned. Where construction access routes cross operational areas (such as refurbishment works) regular inspection and cleans should be appropriately organised.

### 7.4 Sediment and Erosion Control

The Contractors Environmental Management Plan shall detail the necessary erosion and sediment control measures that they propose for the respective package of the project. Upon commencement of the works the Contractor shall establish the necessary sediment and erosion controls for the respective package on the project and maintain these measures throughout the project.

### 7.5 Protection of Trees

The Contractor will need to develop a Tree Protection strategy for the project. Particular attention will need to be given to the trees located within close proximity to the construction works, and/ or are listed as significant or part of heritage landscaping.

### 7.6 Waste Management and Recycling

The Contractors Environmental Management Plan shall address waste management and recycling targets in accordance with the project requirements. The Contractor shall monitor and report monthly on the recycling outputs confirming whether the targets are being achieved.

The Contractor shall ensure that the supply chain is responsible and accountable for maintaining a clean, clear, and safe working environment. Rubbish bins should be provided to all work areas and be regularly removed to the central skip bin location for collection and transport from site to a waste recycle facility.

Waste will be separated at a licensed waste management centre. Auditable records are to be kept of quantities of all materials both recycled and disposed as landfill. To ensure the RPAH project meets its sustainability targets, waste management reports will show monthly and cumulative performance.



## 8 TRAFFIC AND PEDESTRIAN MANAGEMENT

### 8.1 Traffic and Pedestrian Management and Control

A key to the successful delivery of the project will be managing the flow of materials and equipment into and out of the construction site whilst maintaining continuity of business for the operational Hospital. Furthermore, existing hospital parking facilities are already stretched with insufficient parking available for patients, visitors, and staff.

It is imperative that the Contractors planning considers and successfully manages the maintenance of pedestrian, traffic flow and parking to the surrounding buildings and roads.

Preliminary traffic and pedestrian management strategies have been developed as part of this PCMP for each stage of the project. These preliminary strategies are documented in the preliminary Site Layout Plans (refer to Appendix 01-1 and 01-2). The Contractor will develop their own Traffic Management Plans from first principles and in conjunction with their traffic management consultant prior to commencing each stage. The final Traffic Management Plan shall be presented to and agreed with HI and SLHD to ensure a collaborative solution is achieved for this critical component of the project.

The contractor must develop a strategy to mitigate any further congestion on the existing parking facilities.

Suitable temporary hoardings, site fencing and barriers are necessary to separate pedestrians and construction works and are to be constructed in a suitable location to prevent unauthorised access to the work zones.

## 9 HOSPITAL INTERFACE MANAGEMENT

### 9.1 Working in an Operational Environment

The successful delivery of the project will depend on detailed pre-planning involving all stakeholders, and the provision of clear and concise communication for each area of interface to allow the ongoing operation of the existing Hospital. To meet these requirements a three-tiered approach is proposed:

- Establish a robust Stakeholder Communication Plan.
- Operational level Construction Interface Group (CIG) with an established meeting schedule.
- Strict implementation of the Disruptive Works Notice (DWN) procedure.

#### 9.1.1 Construction Interface and Control Group

It is proposed that a Construction Interface Group (CIG) be formed prior to commencement of works on site. The CIG will contain members from the project team, the Principal, Hospital management, Hospital engineering staff and the SLHD.

The CIG will meet on a weekly basis to discuss short and medium interface works and be informed of the construction activities and progress. The CIG will also provide a forum to review and approve up and coming, and current Disruptive Works Method Statements (DWMS).

#### 9.1.2 Disruptive Works Notice Process and Neighbour Management

A formal notification process is to be developed to manage and communicate details and impacts of programmed works which will have an impact or potential impact on the hospital operations or create heightened risk of impacts.

DWMS's are to be submitted on a regular basis for activities including but not limited to service diversions, traffic diversions, connections between new and existing, works within the operational hospital campus and works on public roads. DWMS's will also be submitted for all other activities that could have the potential to disrupt the operation of the hospital, such as possible fumes caused by paint and vinyl laying activities etc.



Generally, DWMS's shall be issued to allow 2-3 weeks prior to the works being undertaken, but for major activities, these notifications should be provided with a minimum of 4-6 weeks' notice. These notification periods are provided to allow HI and SLHD sufficient time to review and mitigate the impact where possible, or if the impact is unavoidable, allow the hospital to plan and re-sequence their activities.

## 9.2 Coordination of Services Shutdowns and Reconnections

It is imperative that key building services are uninterrupted when constructing within a live hospital environment. No services affecting the project are to be shut down without the prior written permission of the Principal via the Disruptive Works Notice procedure. All isolated services are to be treated with lock-out / tag-out procedures. For all services requiring modification as part of the Contractors scope of works, the Contractor shall ensure that approval is obtained prior to commencement.

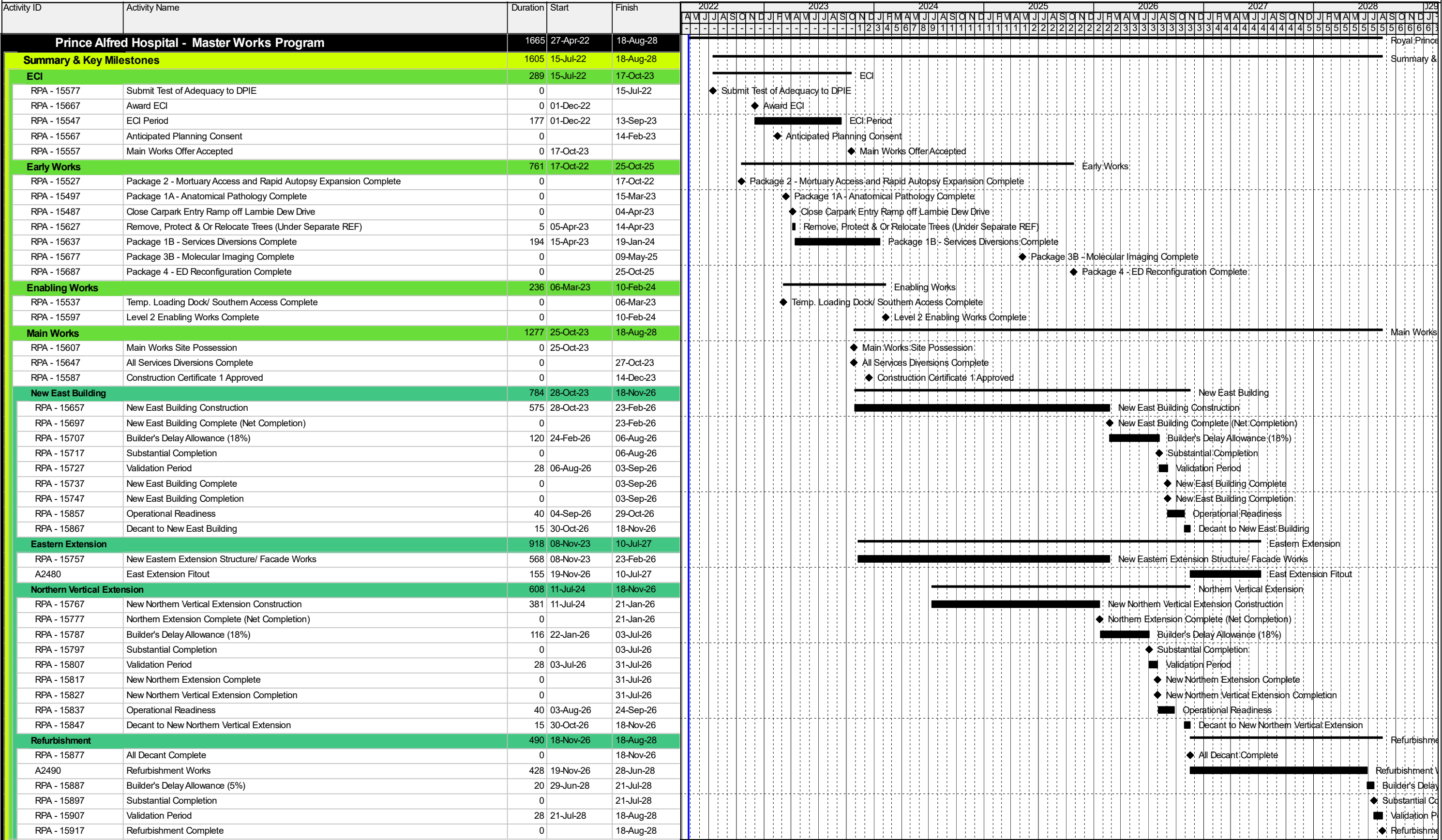
Any modifications affecting other sections of the live operating hospital must be agreed with the Principal prior to the works to ensure the timing is acceptable. Services shutdowns and cutovers must be programmed to occur at appropriate times to address all risks associated with the activity.

The Contractor shall consider appointing a Permit Controller as part of their team who will be the central controller of all services related permits and/or DWMS's.

## 9.3 Cranage and Helicopter Management Plan

Prior to the establishment of any crane(s) the Contractor shall engage an Aviation Consultant to review the proposed crane selection and finalise the Crane and Helicopter Management Plan.

# Royal Prince Alfred Hospital - Master Works Program



Non-Critical Critical Actual Work Summary  
Near Critical Hammock Milestone

PCMP Appendix  
01-1

Date	Revision	Checked	Approved
14-Jul-22	Revision 7	AZ	AA/VM





# Royal Prince Alfred Hospital Redevelopment | Haul Road Option 4: Entry via Missenden Road



Entry via Missenden Road & John Hopkins Drive.



## LEGEND

- Traffic Control locations
- ● Traffic controller gatehouse  
Allow for temporary power and a portable toilet beside
- Delivery Access route (Haul road)
- Sydney University Vet & Emergency
- Charles Perkins Centre
- Susan Wakil Health Building
- St John's College
- St John's Sport Oval
- Royal Prince Alfred Hospital

Delivery vehicles instructed to enter through East / West directions from Parramatta Road onto Missended Road

Proposed two traffic controllers at Missenden Road entry/ exit into RPA site due to high pedestrian and vehicle movement at this intersection

Proposed truck turning zone

Reverse trucks down dead end

Traffic Control to manage Lambie Dew Drive deliveries

## NOTE:

- Traffic Control personnel to maintain safety of pedestrian at all construction interface points at all times.
- Site directional signage to be place at all key sections of the haul road to assist all delivery drives.

FOR INFORMATION

Client:



Health  
Infrastructure



Health  
Sydney  
Local Health District



Royal Prince  
Alfred Hospital



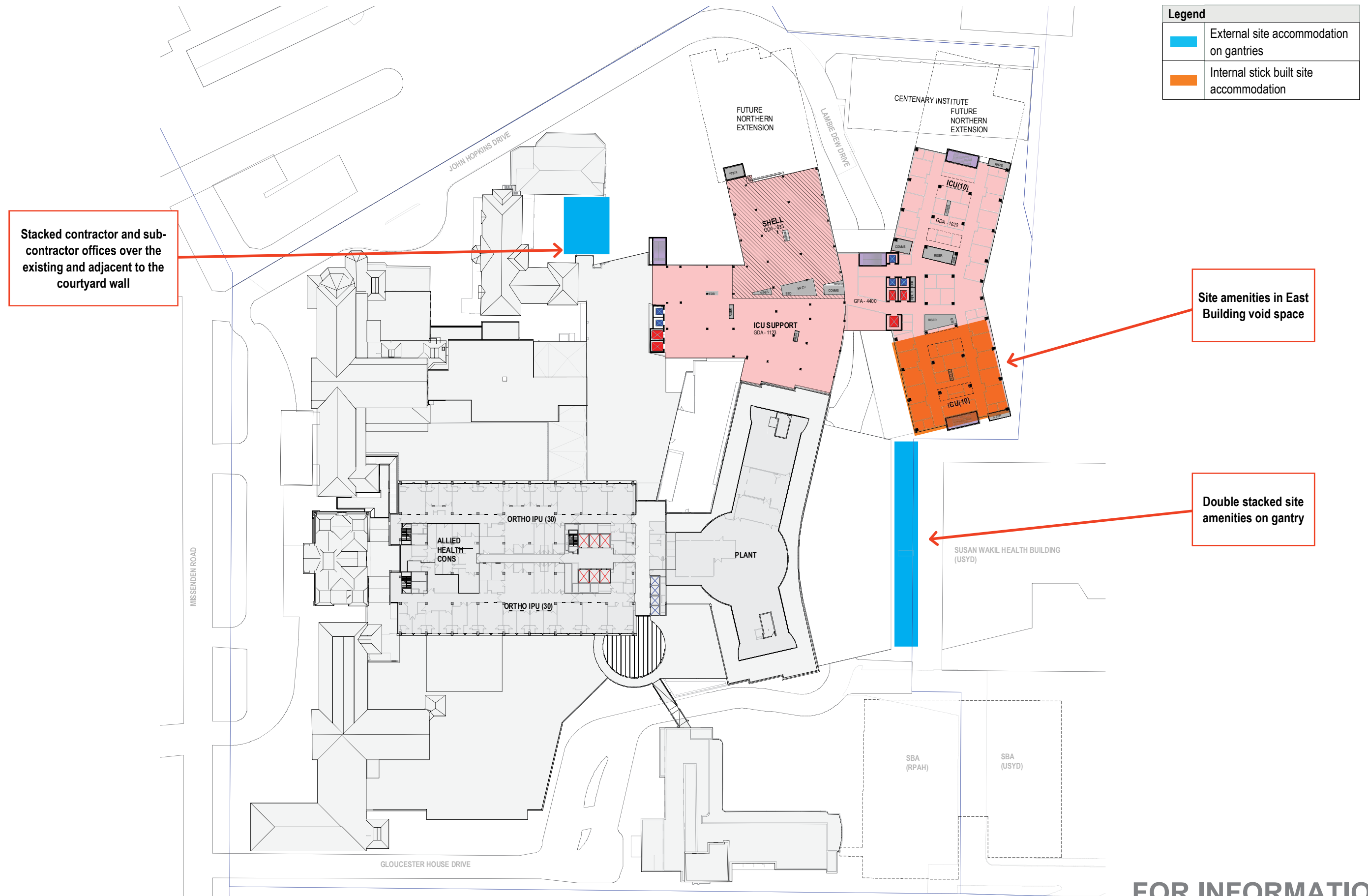
RPAH | PCMP Appendix

01-2





# Royal Prince Alfred Hospital Redevelopment | Site Amenities



FOR INFORMATION

Client:



Health  
Infrastructure



Health  
Sydney  
Local Health District



Royal Prince  
Alfred Hospital

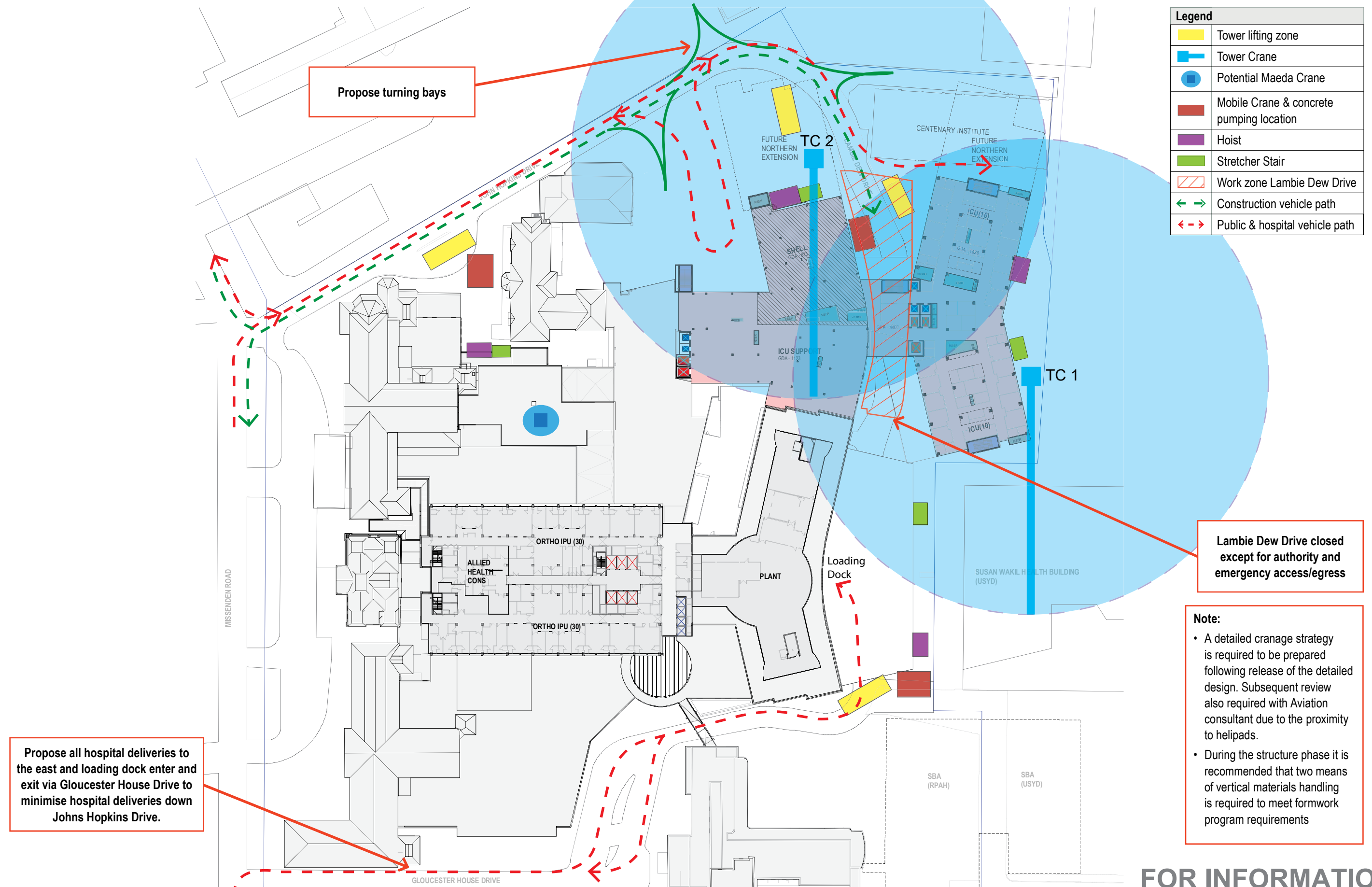


RPAH | PCMP Appendix

01-3



# Royal Prince Alfred Hospital Redevelopment | Tower crane, lifting zone locations & vertical movements



FOR INFORMATION

Client:



Health  
Infrastructure



Health  
Sydney  
Local Health District



Royal Prince  
Alfred Hospital

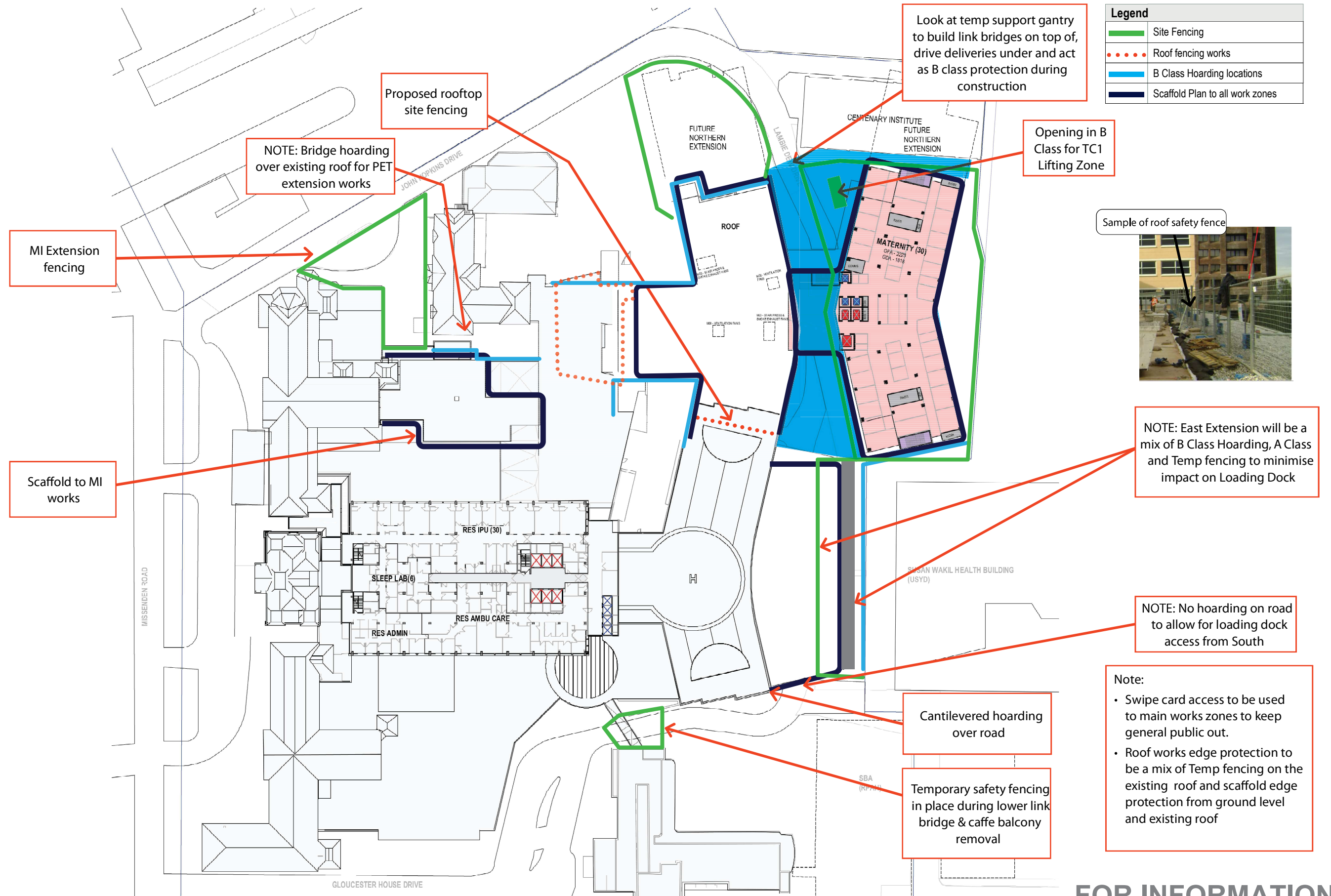


RPAH | PCMP Appendix

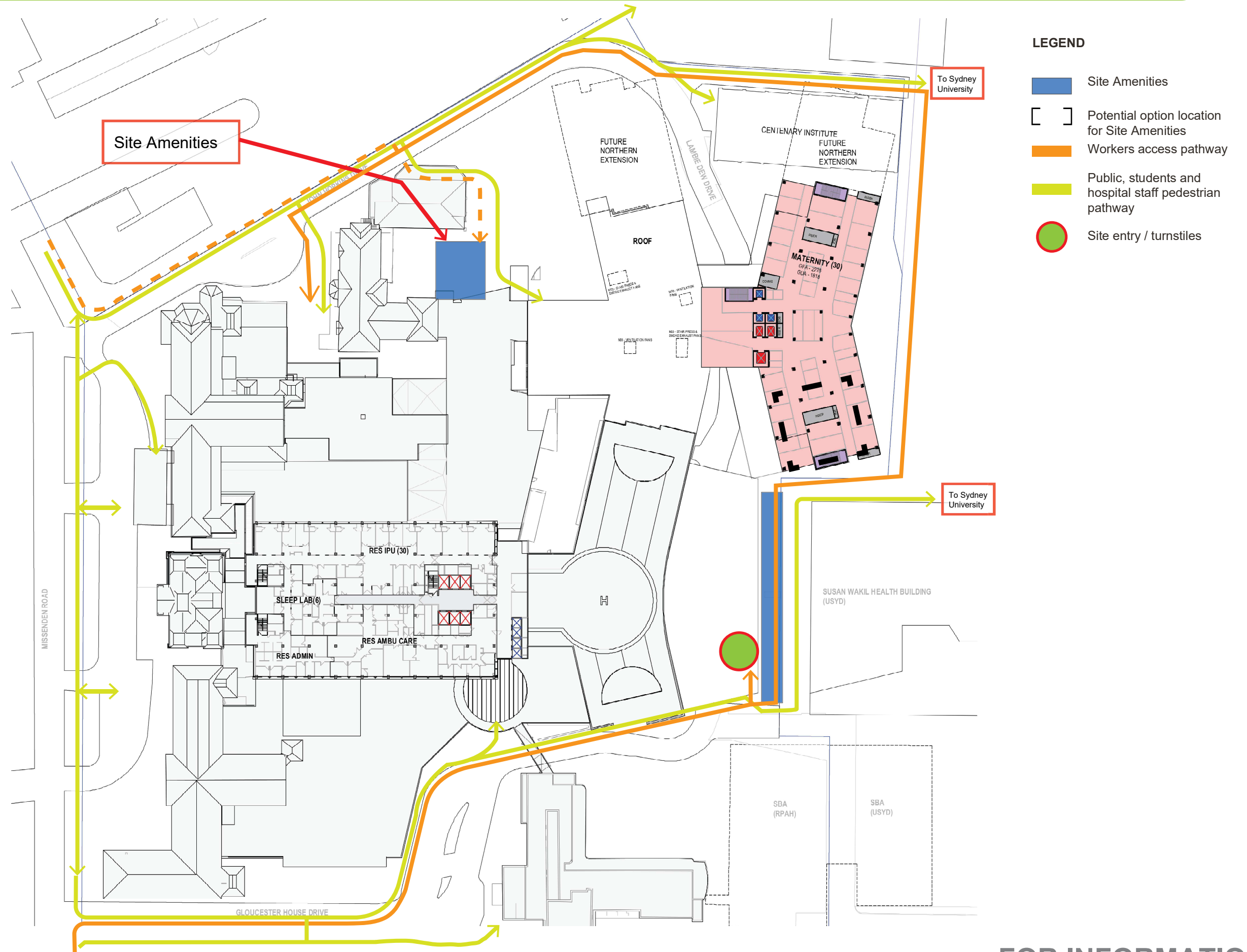
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# Royal Prince Alfred Hospital Redevelopment | Site fencing, hoarding and secure perimeter







FOR INFORMATION

Client:



Health  
Infrastructure



Health  
Sydney  
Local Health District



Royal Prince  
Alfred Hospital



RPAH | PCMP Appendix 1

01-6

