



ROYAL PRINCE ALFRED HOSPITAL STAFF CAR PARK PROJECT – CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN

31 May 2016



Health
Infrastructure

1. Construction Management Plan

The Construction Management Plan (CMP) is distributed within the project team as required by the project governance structure. The distribution list will be updated by the principles representative who will ensure that revisions are issued to appropriate persons.

This document informs project stakeholders of the proposed construction management strategy and associated interfaces until such time the appointed Contactor provides a detailed Construction Management Plan aligned with the adopted method/s of construction delivery.

2. Definitions & Abbreviations

The following definitions and abbreviations have been used in this Construction Management Plan.

HI	Health Infrastructure
RPAH	Royal Prince Alfred Hospital
SLHD	Sydney Local Health District
CMP	Construction Management Plan
RMS	Roads & Maritime Services
REF	Review of Environmental Factors
WH&S	Workforce Health & Safety
EMP	Environmental Management Plan
SSD	State Significant Development
EPA	Environment Protection Authority

3. Site Management

3.1 Purpose

This CMP has been prepared to inform the State Significant Development (SSD) planning application and the associated Environmental Impact Statement (EIS) for the proposed project being undertaken by Health Infrastructure (HI) on behalf of Sydney Local Health District (SLHD).

The purpose of this document is to outline the key intentions and constraints for construction activities of the RPA Staff Car Park Project at Royal Prince Alfred Hospital (RPAH).

The CMP is used to set the ground rules for integrating and managing the construction process within an active metro hospital campus, and ensuring minimal disruption is made to the day to day activities of the public, staff and patients.

3.2 Project Description

The SSD Application seeks approval for the construction of a multi storey car park as part of the ongoing expansion of the Royal Prince Alfred Hospital (RPA Hospital). More specifically, this proposal seeks approval for the following:

- construction of a 9 storey car park comprising:
- 996 car parking spaces, 10 of which are accessible spaces;
- associated access from the new east hospital road via Broad Street, and egress onto Lucas Street and Church Street; and
- security measures to restrict access for hospital staff.
- associated landscaping works;
- 24 hour operation 7 days per week, as per the hours of operation for the RPA Hospital.

The Royal Prince Alfred Hospital is located in Camperdown, spanning Missenden Road west of the University of Sydney, approximately 1.7km north west of the Redfern Railway Station. It is approximately 5km south west of the Sydney CBD and is within the City of Sydney Local Government Area. The subject site within the hospital grounds is located on part of Lot 101 in DP 1179349.

4. Legislative Requirements

The works will be undertaken in accordance with the following Legislative Requirements:

- National Construction Code 2011 comprising the Building Code of Australia
- Protection of the Environment Operations Act and Regulations
- Environmentally Hazardous Materials Act 1985
- Protection of the Environment Administration Act and Regulations
- Work, Health & Safety Act 2011 and relevant codes of practice and standards
- Australian Standard 2601-2001: Demolition of Structures
- Code of Practice for Safe Removal of Asbestos (NOHSC: 2002 (2005))
- Guide to the Control of Asbestos Hazards in Buildings & Structures (NOHSC: 3002 (1988))
- Resource & Recovery Act 2001
- Environmental Planning and Assessment Act 1979
- Heritage Act 1997 and current amendments
- Local Government Act 1993
- Work, Health & Safety Regulations 2011
- Soil Conservation Act 1938

5. Site Working Hours

The hours of operation will be as approved by the approving authority. No works will occur outside the

hours nominate above unless prior approval is granted by the local consent authority.

Delivery of heavy machinery or excavating equipment may be required outside the proposed hours of operation to conform to the requirements of the Roads & Maritime Services (RMS).

6. Contractors Site Amenities & Compound

The Contractor will establish a site compound(s) that will accommodate the following for use, for the duration of the project; lunch, change facilities and site offices. All required consents for this will be secured.

7. Site Fencing and Public Protection

All works are to be undertaken in accordance with the public protection measures as required in the Australian Standards.

As a minimum, it is proposed to erect a 2.4m high solid "A" Class fence around the construction zone (or such hoarding / protective site fencing / scaffolding screens / catch screens as required) and within the hospital property boundary as necessary, to prevent both public and hospital staff access to the area of works, and to maintain site security.

Temporary bollards, road and pedestrian barriers with signage will be erected where works impede on the roadway/parking zones.

Vehicular access & egress will be maintained during the works and any site activities associated with these works, deliveries etc. A detailed methodology will be developed by the Contractor, in consultation with the local traffic authority as required to minimise disruption to the surrounding access roadway and enable free access to surrounding buildings by hospital staff and the public.

All public and property protection measures will be reviewed at the time of contract award and prior to works commencing to ensure alignment with the proposed methodologies to ensure that safety of the general public and staff is maintained at all times.

8. Dilapidation Report

Prior to commencing works onsite the Contractor will complete and submit a Dilapidation Report. The report should cover at a minimum the following areas:

- Existing Roads
- Existing Footpaths
- Trees to be retained
- Existing stormwater systems
- Adjoining hospital buildings
- Adjoining properties e.g. Queen Mary Building
- Adjacent properties on Church and Lucas Streets
- Public assets at risk of being affected by construction activity

9. Traffic Management

The following section provides an assessment of the construction traffic impacts associated with the proposed development. Construction activities are estimated to occur over a one year period, noting this timeframe will be updated once a Contractor is appointed.

9.1 Construction Traffic Routes

Construction vehicles will have origins and destinations from a wide variety of locations throughout Sydney. However, all construction vehicles are to be restricted to the State and Regional Road network where possible.

As such, construction vehicle routes have been developed with the aim to provide the shortest distances to/ from the arterial road network, whilst minimising the impact of construction traffic on streets in the vicinity of the site. Alternative routes would not be used without specific prior approval from the appropriate stakeholders. No trucks will be permitted to layover on approach to the work site.

Truck drivers will be advised of the designated truck routes to/ from the site. The primary and secondary truck routes are shown in Figure 7.1 within the Transport Impact Assessment submitted as part of this EIS.

9.2 Construction Traffic

Heavy vehicles including Articulated Vehicles (AV) such as delivery trucks and Heavy Rigid (HR) such as concrete trucks are expected to access the site. These different types of vehicles may access the site at the same time. Other heavy machinery plants such as cranes will be delivered to site in the early stages of site establishment. All heavy goods such as girders or machinery plants are likely to be delivered outside of peak traffic hours.

Workers will generate additional traffic to the site. Road network impacts will be mitigated by the fact that construction workers generally start earlier and finish earlier than the commuter peak periods, and would likely not coincide with the hospital peak periods. Construction workers driving to sites in constrained parking environments such as RPAH with a nearby train station typically carpool – further reducing the impact on the road network.

The impact of construction traffic will be further developed once a Contractor has been appointed, however volumes are expected to be low and in the order of 50 vehicles per day. The traffic generation of this magnitude is less than the amount of trips generated and assessed for the operational phase of the development and therefore the potential temporary impacts are anticipated to be minimal.

9.3 Parking

Minimal (if any) on-site parking will be provided for construction traffic due to physical site constraints for amenities, scaffolding and materials handling and local traffic conditions.

9.4 Driver Code of Conduct

Traffic Controllers will be used to stop traffic on the public street(s) to allow trucks to enter or leave the site. Where possible, vehicles must enter and exit the site in a forward direction. They must wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way. Vehicles entering, exiting and driving around the site will be required to give way to pedestrians at all times.

9.5 Measures to ameliorate impacts

Mitigation measures would be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general, and would include the following:

- Truck loads would be covered during transportation off-site
- Establishment and enforcement of appropriate on-site vehicle speed limits (20km/h), which would be reviewed depending on weather conditions or safety requirements
- Neighboring properties would be notified of construction works and timing.
- Comments will be recorded and taken into consideration when planning construction activities.
- All activities, including the delivery of materials would not impede traffic flow along local roads
- Materials would be delivered and spoil removed during construction hours
- Avoid idling trucks alongside sensitive receivers
- Deliveries would be planned to ensure a consistent and minimal number of trucks arriving at site at any one time

9.6 Construction Traffic Management Plan

Prior to the commencement of construction, a Construction Traffic Management Plan (CTMP) is to be prepared by the Contractor to ensure the safest possible management of construction access. The requirements for this Plan are set out in the Traffic Impact Assessment submitted as part of the EIS. The CTMP would address:

- Construction vehicle numbers and frequency;
- Approach and departure routes;
- Anticipated special out of hours or escorted deliveries;
- Parking access arrangements during construction; and
- Provision of acceptable pedestrian management measures.

10. Crane Management

It is likely that a single tower crane will be established on site. Other mobile cranes will be required from time to time to facilitate construction activity. It is envisaged that mobile cranes will be positioned from time to time in agreed loading zones. The Contractor will confirm the site crane strategy when appointed.

13. Disruption Notice Process

The Contractor will be required during the construction period to plan and organise its work activities to minimise disruption to the existing building and services. To ensure this position the Contractor will develop a disruption notice process in line with the SLHD disruption policy that will ensure the key project stakeholders are aware of any works that may impact their services and enable any preparation and consultation to be effected.

14. Weekly Site Meetings

Weekly site meetings will be conducted at an agreed time and attended by key project stakeholders. Weekly meetings will be held by the Contractor to discuss and minute current progress on site, upcoming works/disruptions and any project related issues encountered. Minutes will be distributed to the project team following each meeting.

15. Environmental Management

The Contractor undertaking/managing the works will be required to provide an Environmental Management Plan (EMP) to ensure that all elements of the plan meet all statutory requirements as well as NSW Health requirements.

As a minimum, the erosion and sediment controls for the works shall be designed, installed and maintained in accordance with the requirements of the Managing Urban Stormwater: Soils & Construction, as described in "The Blue Book" 2004 (4th edition).

The environmental performance of the contractor(s) will be monitored by the Contractor throughout the works.

The following specific environmental management principles are to be implemented on the site:

- Noise & Vibration
- Dust Mitigation
- Odour Control
- Storage of Dangerous Goods
- Stormwater Run-off

15.1 Noise & Vibration

Noise from any of the site areas will not exceed the limits set-out in the Noise Control Act 1975. No machine will work outside the normal working hours previously described, unless prior approval has been granted by the local consent authority.

Demolition and excavation works shall comply with Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites".

The noise and vibration from the use of any plant or equipment, or other building services associated with the hospital premises of enabling /early works scope of works, will not give rise to an offensive noise as defined under the provisions of the Noise Control Act 1975.

As part of the noise mitigation strategy for the project, all trucks, excavating equipment and machinery will be checked for defective or operationally noisy exhaust systems.

Prior to commencement of the works, liaison will take place with occupants from the neighboring departments within the hospital site.

15.2 Dust Mitigation

Dust control, minimisation and where possible, mitigation, will occur at the source of dust and where dust occurs, during construction activities to prevent airborne dust particles transferring to the hospital campus and environs within proximity to the hospital.

15.3 Odour Control

It is not expected to have extraordinary issues with odour associated with the works. Plant and machinery involved in the works will be serviced regularly and checked for emissions.

15.4 Storage of Dangerous Goods

Works will require the use of flammable fuels such as petrol, diesel and oxy-acetylene etc. Storage of such items will be in a secure, lockable compound with sufficient ventilation in accordance with relevant codes of practice & standards.

Material Safety Data Sheets for all flammable or potentially harmful liquids or gases will be provided by the Contractor prior to works commencing on site

15.5 Stormwater Run-off

Drainage of surface water run-off will be allowed to flow along the existing contours of the site surface water infrastructure which includes kerb-lines, gutters, gully-pits and stormwater run-off drains.

The site areas associated with the project will be continually cleaned of rubble to minimise possible sediment flow during rainfall periods. Stormwater kerbs and drainage lines will have sediment controls in place.

Stormwater grate inlets surrounding the demolition areas will be covered with a selected geotextile fabric to allow water to enter the drains and retain the sediment generated by the works.

All drainage controls will be frequently checked, particularly during heavy rainfall periods.

15.6 Complaint Procedure

A procedure for dealing with complaints regarding noise dust and other environmental nuisance will be established and a register will be maintained at the project office.

16. Waste Management / Recycling Principles

The Contractor is committed to achieving compliance with the Environment Protection Authority (EPA) guidelines.

Prior to any structural subterranean activities taking place, additional site geotechnical investigations may be carried out if the information is not adequately covered in available geotechnical investigations for the purposes of waste / recycling classifications. All hazardous materials will be removed and disposed of at licensed waste facilities and certificates will be provided by the Contractor, who is required to provide all trucking and disposal documentation in accordance with their contract.

The key to maximising recycling opportunities and minimising landfill bound waste is to effectively separate demolition materials during the demolition process.

All waste material generated from the works will be recycled and repurposed where possible, with the exception of soft demolition materials and hazardous materials such as asbestos and the like.

The following table sets out the materials that may be encountered during the works and the general waste management principles that will be adopted through the construction process:

Material	Source	Recyclable	End Usage (%)
Asbestos	Subterranean Material Fire Doors etc.	No	Certified Landfill – 100%
Concrete	Suspended and ground floor slabs, walls, beams & columns	Yes	Road base, pipe bedding, sub-grade – 95%
Bitumen	Road Surface	Yes	Road base, sub-grade – 95%

A Construction Waste Management Plan (CWMP) will be prepared by the Contractor once engaged (see draft at **Appendix 1**).

17. Hazardous Materials Management

17.1 Identification

Existing Hazmat Report(s) identify possible locations of hazardous materials. However, more testing is required according to the Hazmat Reports conducted to date and as such, detailed Hazardous Materials investigations will be undertaken by the Contractor and its sub-contractors prior to any demolition works commencing on site.

Established safe work method strategies must be in place prior to commencing any work. The management and removal from site of any/all hazardous material will be undertaken in accordance with relevant Australian Standards.

17.2 Air Monitoring

In accordance with all codes and standards; air monitoring will be carried out by a registered occupational hygienist if asbestos removal or removal of other designated hazardous materials works

are undertaken. The monitoring results will be assessed by a hygienist consultant and distributed to the principal and the client.

17.3 Removal

Removal of any hazardous material will be carried out by a registered WorkCover licensed contractor supervised by both the Contractor and monitored by a registered occupational hygienist. All works will occur and comply within the requirements of relevant codes and standards.

17.4 Disposal

Asbestos and other hazardous materials will be sealed and loaded prior to transport in accordance with relevant codes and standards. All asbestos materials will be bagged, wrapped and placed in plastic lined disposal containers. All asbestos and hazardous materials will be disposed at a registered EPA landfill with full accountability and traceability of transport and disposal monitoring enforced and monitored through-out the works contract.

18. Workplace Health and Safety

The Contractor will develop, implement and manage a Project Management Plan that will provide a framework for managing WHS on the site. The Contractor will appoint a Site WHS Supervisor and all construction personnel will be required to hold the Construction Industry Induction Identification.

All individuals entering the site will be required to undertake a site induction to be conducted by the Contractor WHS Supervisor. Contractor will ensure that all Work Method Statements are complete for those parts of the works identified as being hazardous.

19. Services Disconnections

The Contractor will notify the management of RPA in advance of works commencing on site through consultation with services consultants if there is to be any disruption to services. Should shutdowns be required; these will be prearranged and programmed in advance for coordination with hospital management via agreed Disruption Notices. Services that may be subject to disruption are:

- Waste Water
- Water Supply
- Electricity
- Stormwater
- Telecommunications and Gas

In general; the following principles are adopted when disconnecting services:

- Service authorities will be consulted and application for consent forms submitted prior to works commencing, confirming lead-times, authority requirements, approved termination locations and program.
- Termination works in accordance with design engineer's specifications and instructions, and undertaken out-of-hours and by licensed contractors
- All/any termination works that impact on adjoining owners/departments will be notified.

20. Site Emergency Contacts

An emergency contacts list will be established prior to works commencing. This will include contacts from the Contractor, RPAH and the Project Manager.

A site board will be erected by the Contractor prior to works commencing on site. The site information board will display as a minimum the key site contacts, after hour's contacts relating to the site works. Information regarding site safety will be displayed at the site boundary and through-out the site area.