

Preliminary Construction Management Plan

Shoalhaven Hospital Redevelopment

JOHNSTAFF PROJECTS

[VERSION v1.3]
5 September 2022



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Version	Date	Issued To	Status
1.0	18/07/22	_planning Pty Ltd	Draft v1.0
1.1	19/07/22	_planning Pty Ltd	Draft v1.1
1.2	25/07/22	_planning Pty Ltd	Final
1.3	05/09/2022	_planning Pty Ltd	Final – post ToA

1 Introduction

One of the key objectives of the NSW State Infrastructure Strategy is Investing in our health system, as well as upgrading hospitals and other social infrastructure in regional hubs. Given the recent announcement of the Shoalhaven Hospital Redevelopment, this project is amongst those at the forefront of this objective.

A \$438M capital project has been announced by the NSW Government to develop Shoalhaven District Memorial Hospital to support the projected population growth. The application seeks consent for the construction and operation of a new multi-storey Acute Services Building providing new treatment and support services that will integrate with the existing hospital. For a detailed project description refer to the EIS prepared by _Planning.

The proposed Shoalhaven Hospital Redevelopment under this SSDA relates solely to the development of a new hospital building and its ancillary works. The scope includes a new 7-level building of approximately 31,000m² GFA, with rooftop plant and helipad.

This Preliminary Construction Management Plan (PCMP) contains preliminary construction methodologies for the delivery of this complex integrated project. This PCMP will evolve and be further developed by the successful Principal Contractor during the project planning and start-up in conjunction with the design consultant team, project stakeholders, HI, ISLHD and Johnstaff Projects (JSP). The following sections outline the delivery of the construction works being undertaken, and further outline key concerns and interfaces which require review and detailed strategies to enable the successful commencement, construction, commissioning and completion of this project.

The project is not staged however will follow a sequence similar to the below:

1. Demolition of pre-school and helipad (and other associated demolition works)
2. Enabling works including bulk oxygen compound relocation and water main relocation
3. Bulk earthworks
4. Structure
5. Facade
6. Internal fitout and finishes
7. External landscaping works
8. Handover and commissioning

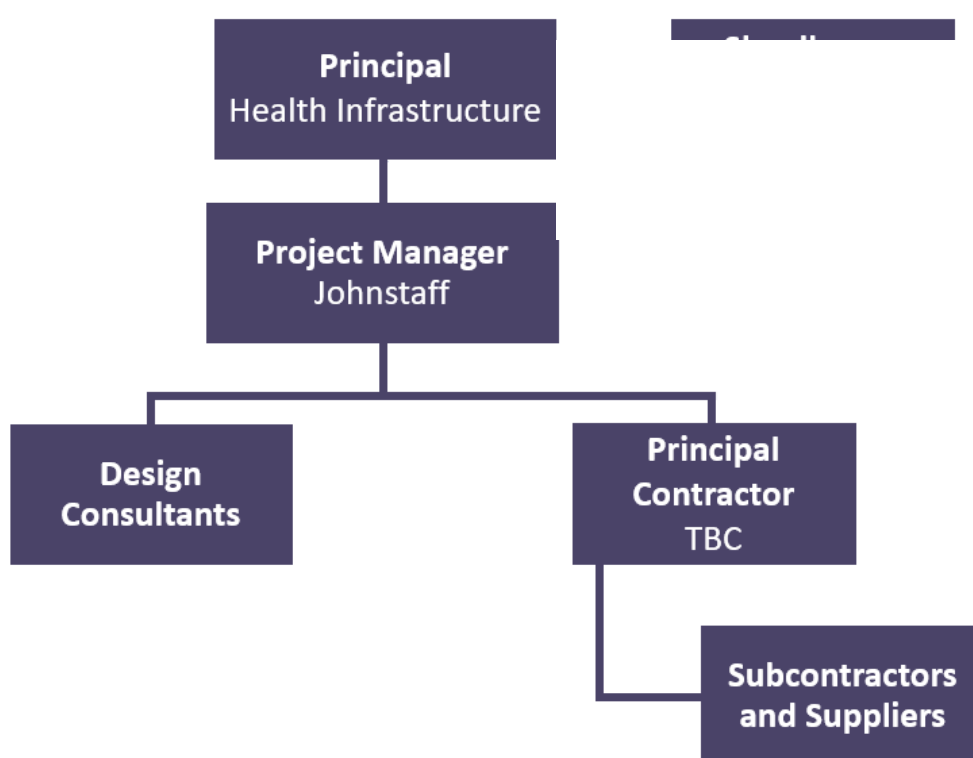
The Site Plan is included in Appendix A for information.

2 Key Participants / Stakeholders

Stakeholder	Contact Details
Client(s)	Health Infrastructure, Jeremy Hart – 0450 166 193
Client Representative(s)	Johnstaff, Gilda Barakat – 0437 007 772
Principal Contractor	To be appointed

3 Organisational Chart

Project Organisational Chart



4 Key Milestones

Indicative program for the DA scope as outlined in section 1, are as flows

	Indicative Date
SSDA Approval	December 2022
Contract Award	December 2022
Site Establishment	March 2023
Complete Site Works	2026

5 Construction Methodology

This plan has been compiled for a SSDA application to provide a high-level overview of the delivery of the Shoalhaven Hospital Redevelopment – Main Works. The plan will be further developed by the Principal Contractor to respond to detailed site planning.

The project is not staged however will follow a sequence similar to the below with the durations provided being indicative only and subject to sequence followed by appointed Principal Contractor:

1. Demolition of pre-school and helipad (and other associated demolition works) (3-4 month duration)
2. Enabling works including bulk oxygen compound relocation and water main relocation (3-4 month duration)
3. Bulk earthworks (3-5 month duration)
4. Structure (6-9 month duration)
5. Façade (4-6 month duration)
6. Internal fitout and finishes (6-9 month duration)
7. External landscaping works (4-6 month duration)
8. Handover and commissioning (3-4 month duration)

The Construction Management Plan (CMP) will then remain a 'live' document reflecting the site delivery parameters for the duration of the project. The Plan covers the following areas of management:

a) The operations of site management when undertaking the works:

- Legislative and Regulatory Requirements
- Site Fencing, Public and Property Protection
- Disruption Notices
- Site Amenities

b) Operating Hours

c) Traffic/pedestrian management for the duration of the works;

- Traffic and Pedestrian Management Plan
- Pedestrian Protection
- Deliveries and Material Storage

d) Environmental Health and Safety:

- Environmental Impacts
- Noise and Vibration Management
- Odour control
- Protection of trees
- Stormwater Management
- Waste Management and Recycling Principals
- Dust, Sediment and Erosion Controls

e) Dilapidation report

6 Operations of Site Management

The works will be undertaken by a Principal Contractor. All statements and proposals documented in this preliminary Construction Management Plan will be further detailed at the time of contract award for the Works to ensure alignment with the proposed methodologies and construction staging of the Contractor.

6.1 Legislative and Regulatory Requirements

The Works will be undertaken in accordance with the following legislative requirements and any others that must be complied with, as required:

- National Construction Code 2019 comprising the Building Code of Australia;
- Applicable Australian Standards;
- Protection of the Environment Operations Act and Regulations;
- Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA);
- Environmentally Hazardous Chemicals Materials Act 1985;
- Protection of the Environment Administration Act and Regulations;
- Work, Health and Safety Act 2011 and relevant codes of practice and Standards;
- Work Health and Safety Regulation 2017;
- Code of Practice for the Safe Removal of Asbestos 2019;
- Resource and Recovery Act 2001;
- Environmental Planning and Assessment Act 1987;
- Heritage Act 1997;
- Local Government Act 1993;
- Soil Conservation Act 1938;
- Threatened Species Conservation Act 1995 and Regulation;
- Biodiversity Conservation Act 2016;
- Native Vegetation Conservation Act 1997; and
- Australian Standard 4970-2009: Protection of Trees on Development Sites

6.2 Site Fencing, Public and Property Protection

The general principle is to separate construction areas of work from the public, hospital staff and visitors. Where there is a cross-over, this will be managed to ensure safety of all persons and equipment.

Appropriate hoarding/fencing (as specified in Australian Standards and SafeWork NSW requirements) will be installed to prevent public and staff access and to maintain security for the various areas of the works.

Site Notices will be erected at the boundary of the site. The site notices will include details of; Principal Contractor details, name of Site Manager and 24-hour contact number, approved hours of work, and details of the Principal and other appropriate stakeholders. Safety related statutory signage will also be erected on the boundary of the site in accordance with SafeWork NSW requirements.

Site, precinct information and traffic signage and any temporary traffic measures required will be installed and maintained for the duration of the Works.

These public and property protection measures will be reviewed at the time of contract award and during monthly PCG meetings, to ensure alignment with proposed preferred methodologies and construction stage and to ensure that the safety of the public and staff is maintained at all times during the works.

6.3 Disruption Notices

Any planned disruptions will be managed through the process of Disruption Notices (DNs). For such stoppages, the DN will describe the applicable works, timetable, issues and risk management plans.

DNs are submitted by the contractor to the project manager and impacted stakeholders for approval. Depending on the nature of the works these may be required between 48hrs and 6 weeks prior to commencement of works.

6.4 Site Amenities

The site amenities and compounds erected will accommodate lunch, bathroom and change facilities for the duration of the project. The Contractor will be encouraged to provide parking within their site compound where possible. To minimise the impact on street parking, contractors and sub-contractors will be encouraged to use public transport or car share.

7 Operating Hours

Monday to Friday	0700 – 1800
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Saturday	0800 – 1300
Sunday and public holidays	No Work

Some work may need to be completed outside of the above hours, such as connecting and disconnecting services to avoid disrupting local residents and/or hospital operations. If required, these activities will be planned in consultation with stakeholders and Shoalhaven City Council to ensure all aspects of the works are clearly understood by all parties and minimise disruption to hospital operations.

Deliveries will be scheduled and distributed to ensure avoidance of congestion to surrounding roads networks and within the hospital precinct. Materials handling will be conducted within the construction site perimeter reducing any impacts on traffic flows within the hospital area.

8 Traffic Management

8.1 Traffic and Pedestrian Management Plan

Note: This section is to be read in conjunction with the Traffic Impact Statement appended to the SSDA; prepared by TTW.

Prior to construction works commencing, the Principal Contractor will develop a Construction Pedestrian and Traffic and Management Plan which will detail how traffic, pedestrian and cyclist access will be managed during the construction works.

Traffic flows and vehicle/pedestrian separation are a major consideration and pedestrian routes are to be maintained throughout construction. Traffic control personnel will be provided by the Principal Contractor during operating hours, or as advised by the Principal Contractor within their Construction Pedestrian and Traffic and Management Plan.

Key issues for traffic, pedestrian and cyclist management during construction to be considered in the Construction Pedestrian and Traffic and Management Plan include, but is not limited to:

- Provide safe and uninterrupted access for pedestrians and vehicles accessing the construction site, hospital site and resident driveways;
- Ensure maximum safety of site personnel, pedestrians, cyclists, commuters, and drivers;
- Minimise environmental nuisance and impact as a result of construction traffic;
- Ensure construction traffic does not unduly interrupt existing traffic flows on the local road network;
- Safe operation of buses and other transport services during construction in adjacent roads;
- Have no vehicles arrive at the site, without prior arrangement, outside the approved working hours;
- Encourage site workers to utilise local public transport system and car sharing wherever possible;
- Timely and effective implementation of traffic management measures;
- Maintain access at all times for hospital and stakeholder's deliveries; and
- Fulfilling the Council and Transport for NSW requirements.

Temporary access roads will be provided for the delivery of materials and completion of site works during construction.

8.2 Pedestrian Protection

Pedestrian and vehicular movements into and around the site will be maintained, or alternate routes determined where necessary, and be defined by clear signage. If necessary, physical traffic management personnel will be used to guide pedestrians and vehicles safely.

Temporary hoarding appropriate to the interaction between pedestrians and construction works (as per Workcover requirements and Australian Standards) will be constructed to prevent unauthorized access to the construction site. These hoardings and fences may be staged to allow for appropriate construction methodologies to be planned.

8.3 Deliveries and Materials Storage

Deliveries to within the site will be managed through dedicated site entrances and exits. These will be outlined by the Principal Contractor.

Materials will be staged and stored in such a way to promote a clear and safe work site. At all times, materials are to be stored within the confines of the site. While loading and unloading vehicles, it will be clearly stated that vehicles must not obstruct roads, driveways and escape routes from the building or fire protection equipment.

Access to the site compound will be through the early construction of the entry and exit roads.

8.4 Parking

The Contractor will be encouraged to provide parking within their site compound where possible. To reduce the demand for construction workforce parking, Contractors and Subcontractors are encouraged to use public transport, carpooling and active transport.

9 Environmental Health and Safety

9.1 Environmental impacts

An Environmental Management Plan (EMP) that complies with environmental legislation will be developed by the Principal Contractor. The EMP will describe the environmental strategy, methods, controls, and requirements for the execution of the Works. It will stand alone as the master document for site environmental activities.

The primary aim and objective of the EMP will be to provide a framework of procedures to minimise the impacts of the construction of the project on the environment. The environmental performance of the contractor will be monitored throughout the Works.

9.2 Noise and Vibration Management

Note: This section is to be read in conjunction with the Noise Impact Assessment appended to the SSDA prepared by Acoustic Logic.

The main findings of the Noise Impact Assessment are:

- Provided the recommendations of this assessment are adopted operational noise emissions will comply with the established trigger levels at all receivers.
- The preliminary construction noise and vibration assessment indicates that construction noise emissions will need to be managed as recommended in the assessment and the NSW Interim Construction Noise Guideline. Adverse construction vibration impact is unlikely. A detailed construction noise and vibration management plan should be produced prior to the commencement of construction based on the proposed methodologies.
- Noise from helicopter operations to surrounding properties is likely to decrease as a result of the helipad location being relocated to the roof of the proposed ASB.
- There would not be a perceptible increase in traffic noise on surrounding streets as a result of vehicle movements generated by the proposed development

Noise from the construction site shall not exceed the limits set out in the Interim Construction Noise Guidelines, EPA and Australian Standards. No machine work will occur outside the approved working hours set unless approval has been given through the Disruptive Works Notice (DWN) process and relevant authority notifications.

The noise and vibration from the use of any plant equipment and/or building services associated with the premises shall not give rise to an offensive noise as defined under the provisions of the Interim construction Noise Guidelines, EPA and Australian Standards.

As part of noise mitigation for the project, the contractor will be responsible for the management, checking of compliant maintenance regimes and statutory supervision of all equipment, such as making sure all trucks and machinery involved in the Works will be checked for defective exhaust systems and general servicing.

Guidelines for operational limits, identification of at-risk receivers and implementation of mitigation measures will be provided in a project Noise and Vibration Management Plan. The objectives of the Construction Noise and Vibration Management Plan will be to:

- Ensure that construction works do not significantly impact background noise levels around the hospital precinct, and those applicable guidelines and regulations are met;
- Ensure all equipment operates within the applicable noise levels;
- Ensure that construction works do not cause sufficient vibration to damage surrounding buildings, and comply with the applicable guidelines and regulations;
- Vibration does not affect occupiers of the adjoining buildings; and
- Ensure construction methodologies adopted minimise the impact of noise, dust and vibration.

9.3 Odour Control

Odours associated with demolition for the site will be assessed and minimised. All plant and machinery involved in the Works will be regularly serviced and checked for exhaust emissions and catalytic converters are to be utilised.

9.4 Protection of Trees

Note: This section is to be read in conjunction with the Arboricultural Development Impact and Tree Protection Report appended to the SSDA prepared by Moore Trees.

The contractor undertaking the Works will be required to comply with Australian Standard 4970-2009: Protection of Trees on Development Sites for the proper care and protection of trees retained and integrated into the construction project.

The contractor will be required to put in place procedures to protect trees at every stage of the development process.

The contractor undertaking the Works will be required to submit for approval to the Principal a comprehensive plan regarding guidance on how to protect retained trees during construction work. This plan will need to define how to calculate the tree and crown area requiring protection and isolation from construction activities and the use of tree protection measures such as barriers and protectors.

9.5 Tree Removal

Note: This section is to be read in conjunction with the Arboricultural Development Impact and Tree Protection Report appended to the SSDA prepared by Moore Trees.

Although the design has taken into consideration the retention of trees where possible, 26 trees are to be removed due to their proximity to the proposed Acute Services Building and associated works. Trees shown to be retained will be protected during construction in accordance with the Arborist advice.

The project is committed to a 1 for 1 replacement of the removed trees with a native species within the local area. Refer to Landscape Drawings prepared by Site Image for Strategy around tree replacement.

9.6 Stormwater Management Plan

A comprehensive stormwater management plan will be developed by the Principal Contractor undertaking the Works.

9.7 Waste Management and Recycling Principles

The Principal Contractor will be required to recycle and reuse materials where possible. The contractor will be required to arrange for the sorting and recycling of waste materials and packaging to ensure maximum recycling is achieved. The contractor will be committed to achieving compliance with the EPA guidelines. All packaging is to be removed before materials are delivered to site to minimise waste generation on site.

9.8 Dust, Sediment and Erosion Controls

Note: This section is to be read in conjunction with the Sediment and Erosion Control plan and details appended to the SSDA prepared by Meinhardt Bonacci.

The appointed Principal Contractor will develop a strategy in accordance to the statutory regulations for dust control, and a comprehensive Soil and Water Management Plan, both of which will be included in the EMP. This strategy will include control measures and document how these measures are to be implemented and monitored. The design of these measures is in accordance with the Landcom “Blue Book”.

In general, where there is less than 150m³ per year of soil loss, the building of a sediment retention basin can be considered unnecessary (Section 6.3.2 “The Blue Book”). Nonetheless, the excavation of the building and On-Site detention/rainwater tank may act as a sediment basin to provide an opportunity to further improve water quality. Additionally, the following measures are provided to minimise the risk of sediments being washed into neighbourhood property and erosion of the site.

- A sediment fence/catch drain (or diversion bund) around the site
- Sandbag/Geotextile pit filters to be placed at stormwater inlet pits
- Temporary access to site with shaker pad
- An indicative stockpile area with sediment fence around it during construction. The stockpile must be located out of water flow paths (and be protected by earth banks/drains as required).

Provision of the Soil and Water management measures will ensure that the Council stormwater system and surrounding area is not affected by the proposed development during construction.

9.9 In Ground HAZMAT and Site Remediation

Note: This section is to be read in conjunction with the Remediation Action Plan appended to the SSDA prepared by Cardno.

Numerous assessments have been completed at the site with the most recent Environmental Site

Assessment (ESA) (Cardno, 2022a) prepared by Cardno identified total recoverable hydrocarbon (TRH), toxaphene and possible polycyclic aromatic hydrocarbon (PAH) contamination at borehole BH01 exceeding the adopted criteria within a carpark at Shoalhaven Hospital. The identified contamination meets the definition of a hotspot at >2.5x the adopted assessment criteria. Further delineation sampling undertaken as part of a Data Gap Investigation (DGI) (Cardno, 2022b) delineated the extent of impact to an area 2 m x 2 m with a depth of 0.5 m below ground level (m bgl) and an estimated volume of 2 m³.

Based on the status as a hotspot, the DGI concluded that while the contamination was not considered to impact suitability of remainder of the site for the intended use, identified impacts will require management as part of the proposed development.

A Remediation Action Plan (RAP) has been prepared to identify and outline methodologies to appropriately manage the identified impacts in the vicinity of borehole BH01 to enable redevelopment of the site.

The preferred remediation option is the offsite disposal of impacted soils.

10 Dilapidation Report

Prior to commencing the works onsite and at completion, the appointed Principal Contractor will generate a

Pre and Post Dilapidation Report. The report shall cover as a minimum the following areas:

- Existing roads and access roads;
- Infrastructure;
- Adjacent buildings;
- Adjoining properties;
- Existing landscape, including trees to be retained;
- Services mains;
- Stormwater systems; and
- Existing utilities and authority services.

The full extent of the Dilapidation reports will be agreed with the Principal prior to investigations proceeding.

Appendix A: Site Plan



JOHNSTAFF
Managing Contractor

Health
Illawarra Shoalhaven
Local Health District

NSW Health
Infrastructure
Project Manager / Contract Administrator

Building
PRJ
Drawing
SITE PLAN

At Scale
1 : 1000
Project No. 20278
Issue 11

Project
SDMH Shoalhaven District
Memorial Hospital
Scenic Dr, Nowra NSW 2541

Client