



Preliminary Construction Management Plan

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1 Introduction

1.1 Executive Summary

Health Infrastructure NSW (HI) is the applicant for the proposed Stage 2 Redevelopment of Nepean Hospital in Penrith Local Government Area (LGA).

The proposal is State Significant Development (SSD) for the purposes of the Environmental Planning and Assessment Act 1979 (EP&A Act) and clause 14(a) of Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) as it involves development for the purposes of a hospital with a capital investment value in excess of \$30 million.

The Stage 2 Redevelopment seeks to deliver significantly enhanced acute services, as well as a new campus main entry and drop-off area. It complements the recent Stage 1 Redevelopment (SSD 8766) approved in February 2019 and due for completion by early 2022.

The proposed Stage 2 Tower will be located west of, and connected to, the Stage 1 Tower. Portions of the North Block (north section) will be demolished with the remaining sections of the North Block (to the south of the Stage 2 Tower) to remain operational.

Departments to be provided in the Stage 2 Tower include:

- Front of House, including retail
- Education and Training Centre
- Transit Lounge
- Medical Imaging
- Interventional Radiology
- Intensive Care Unit and Close Observation Unit
- In-Centre Dialysis and Renal Inpatient Unit
- Paediatric In-patient Unit
- Plant areas
- Clinical Support areas
- Kitchen.

The Stage 2 Redevelopment project scope includes:

- The Stage 2 Tower, being predominantly a 7-storey building, with roof plant
- Demolition of parts of the existing North Block and other satellite buildings directly within the Stage 2 Tower footprint (excluding other buildings already approved under the Stage 1 SSD consent)
- Demolition of the Total Asset Management (TAM) facility
- Reconfiguration of the loading dock area and back of house functions
- Landscaping and other associated at-grade works within the Stage 2 Tower's immediate vicinity
- Barber Avenue upgrade and access road to the Stage 2 Tower's forecourt, port cochere, and front of house area.

The Stage 2 Redevelopment's SEARs was issued by the Department of Planning, Industry and Environment on 22 April 2021.

In preparing this report, the following SEARs General Requirements, Key Issues, and Agency's Advice letters have been addressed. The table below sets out the reference or location of these matters within this report.

General Requirement or Key Issue or Agency Advice	Reference / Location within this report
General Requirements - <ul style="list-style-type: none"> a description of any proposed construction or operational staging including relevant timing and dependencies details of construction and decommissioning including timing an estimate of new jobs that would be created during the construction phase of the development. 	<ul style="list-style-type: none"> Section 1.2 Section 2.1 Section 4.1 Section 4.2 Section 4.3 Section 4.7 Section 7.3
SEAR 5 - analysis of the impacts of the traffic generated during construction of the proposed development, including: <ul style="list-style-type: none"> construction program (duration and milestones) measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction. 	<ul style="list-style-type: none"> Section 4.1 Section 4.3 Section 4.5 Section 4.6 Section 7.1 Section 7.3
SEAR 10 - details the proposed construction hours and provide details of, and justification for, instances where it is expected that works would be carried out outside standard construction hours.	<ul style="list-style-type: none"> Section 4.2 Section 4.3 Section 6.2 Section 7.1 Section 9
SEAR 13 - Assess impacts of staging where it is proposed and detail how construction works, and operations would be managed to ensure public safety and amenity on and surrounding the site.	<ul style="list-style-type: none"> Section 4.3 Section 4.6 Section 7.1 Section 7.3 Section 7.4 Section 9

1.2 Project Overview

In November 2016, the NSW Government announced a new major redevelopment project for Nepean Hospital, Stage 1. Stage 1 was to deliver a new clinical tower to cater for expanded hospital services for the Nepean Blue Mountains Local Health District (NBMLHD). Subsequently, the NSW Government announced additional funding to allow Stage 2 of the redevelopment to proceed.

In October 2020, the concept design for a second stage, Stage 2, was unveiled. The design provided for a new integrated clinical tower with Stage 1 and included the expansion and upgrade of essential clinical services including: a new front of house; education and training facilities; medical imaging and nuclear medicine services; interventional radiology services; an intensive care unit; renal dialysis unit; paediatrics inpatient unit; and substantial loading dock and public realm upgrades.

The Stage 2 Redevelopment seeks to deliver significantly enhanced acute services, as well as a new campus main entry and drop-off area. This will provide for a total transformation of the current Nepean Hospital campus. The proposal is expected to generate up to 830 jobs over the construction phase.

Extensive consultation and planning with clinical staff and the community will continue through 2021/22 to ensure the best design outcomes for Stage 2.



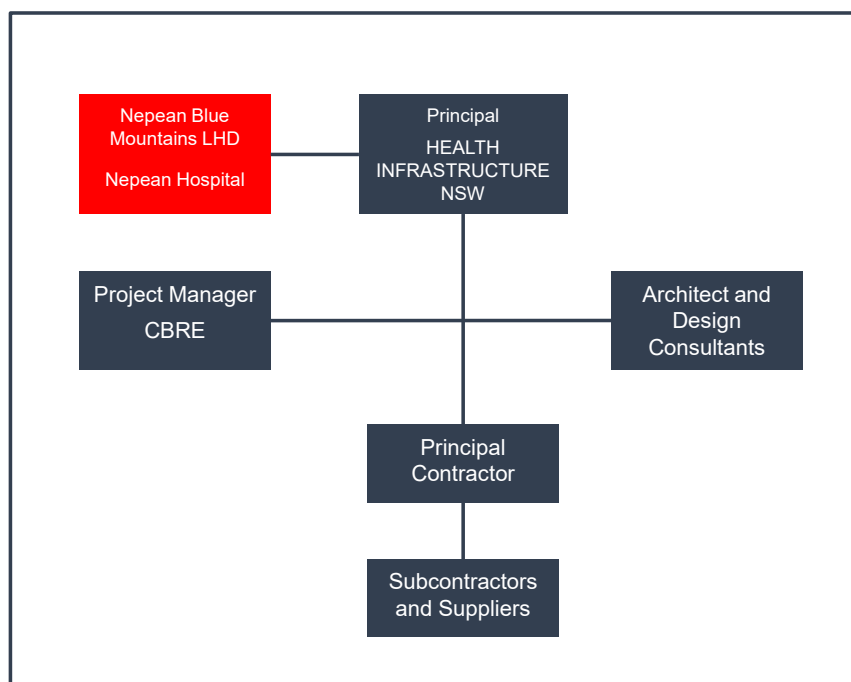
2 The Works

2.1 Proposed Works

The works covered by this Preliminary Construction Management Plan (CMP) has been prepared for the Redevelopment project as follows:

- Demolition, shoring, and bulk excavation works associated with the construction of the Stage 2 clinical tower, Tower 2
- Construction of Tower 2
- Expansion and upgrade of the loading dock and waste management areas
- Public realm external works including a public drop of zone, Barber Avenue upgrade, landscaping, and pedestrian linkages.

2.2 Contractual Structure



2.3 Contact Details

Role/Company	Name/Role	Phone	Email
Principal HEALTH INFRASTRUCTURE	Adrian Timp Senior Project Director	0459 867 006	adrian.timp@health.nsw.gov.au
Client NEPEAN HOSPITAL	Redevelopment Manager Paul Isaac	0417 230 937	paul.isaac@health.nsw.gov.au
Project Manager CBRE	Paul Hunter Project Director	0468 468 454	Paul.Hunter2@cbre.com

3 Construction Management Plan Components

This plan has been prepared for the SSDA application to provide a high-level overview of the delivery of the works. The plan will be further developed by the Principal Contractor to respond to detailed site planning prior to the issuing of a construction certificate by the Private Certifying Authority. The CMP will then remain a 'live' document reflecting the site delivery requirements for the duration of the project.

The Plan covers the following areas of management:

1. Construction Methodology
 - Indicative program
 - Hours of operation
 - Critical construction issues
 - Disruption notices
 - Site inductions
 - Site hoarding, public and property protection
 - Ground works
 - Site amenities
 - Structural works
 - Services and fit-out works
 - Commissioning and handover
2. Legislative and regulatory requirements
3. Environment and amenity
 - Environmental and hazardous materials management
 - Noise and vibration management
 - Dust, sedimentation, and erosion controls
 - Odour control
 - Protection of trees
 - Stormwater management
4. Vehicle access and traffic management
 - Traffic and pedestrian management plan
 - Helicopter management plan
 - Pedestrian protection
 - Major plant
 - Deliveries and materials storage
5. Waste management / recycling principles
 - Storage of dangerous goods
6. Services disconnections
7. Dilapidation reports

4 Construction Methodology

The works will be undertaken by a Principal Contractor. All statements and proposals documented in this Preliminary Construction Management Plan will be further detailed after contract award for the Stage 2 Works – this will ensure alignment with the proposed methodologies and construction staging of the Principal Contractor.

4.1 Indicative Program

The indicative program and key milestones are as follows:

Commencement of demolition	Feb 2023
Commencement of bulk excavation	May 2023
Commencement of sub-structure works for Tower 2	July 2023
Commencement of super-structure works for Tower 2	August 2023
Completion of Tower 2	April 2025
Completion of public realm works	April 2025
Completion of operational readiness	July 2025

4.2 Hours of Operation

The following hours of operation apply to the Works:

- Monday to Friday 7:00am to 6:00pm - works preparation activities permitted from 6:30am
- Saturday 7:00am to 5:00pm
- Sunday No Work

The intention of allowing work preparation activities to begin at 6:30am is to minimise potential conflicts with early hospital shift staff and vehicle movements.

Some work may need to be completed outside of the above hours, such as connecting and disconnecting services to avoid disrupting hospital operations. If required, these activities will be planned in consultation with stakeholders and relevant authorities to ensure all aspects of the works are clearly understood by all parties and to minimise disruption to hospital operations. This may also include works which, for critical hospital operational reasons, are most appropriately carried out outside of main working hours.

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

4.3 Construction Impacts

Expected number of construction workers

The expected number of construction workers will depend on the construction methodology chosen by the successful construction contractor. However, the table below is provided to give an indicative estimate of numbers of construction workers likely to be employed for each key stage of the works.

Stage	Stage Scope	Approx. Workers*	Indicative Commencement Dates**	Indicative Completion Dates**
Stage 1	Stage 1 will encompass the following scope of works: <ul style="list-style-type: none"> • Pre-construction works, design development, certification, and approvals • Demolition of existing north block and satellite buildings • In-ground onsite services. 	150 - 200	Quarter 1 2023	Quarter 2 2023
Stage 2	Stage 2 will encompass the following scope of works: <ul style="list-style-type: none"> • Pre-construction works, design development, certification, and approvals • Bulk Excavation • Remediation works • Remaining in-ground services including gas, HV, sewer, water, etc. • Piling. 	150 – 200	Quarter 2 2023	Quarter 3 2023
Stage 3	Stage 3 will encompass the following scope of works: <ul style="list-style-type: none"> • Design development, certification, and approvals • Installation of in-situ concrete structural works from Level 0 and up to Level 8 including the construction of columns, walls and suspended slabs, lifts, stairways, and service riser shafts • Installation of Blockwork associated with structural activities • Installation of Structural steel • Installation of the roof structure of the building. 	250 – 300	Quarter 4 2023	Quarter 1 2024
Stage 4	Stage 4 will encompass the following scope of works: <ul style="list-style-type: none"> • Design development, certification, and approvals • Services – The installation and commissioning of all building services including gas, electrical, hydraulic, pneumatic tube, medical gas, stormwater, sewer, and all mechanical equipment such as ductwork, cooling towers and lifts • Finishes – All internal partitions, joinery, FF&E and medical equipment • Façade – This includes all the terracotta tiles, metal cladding, brickwork and all associated external framing • Building commissioning. 	500 – 550	Quarter 1 2024	Quarter 3 2025
Stage 5	Stage 5 will encompass the following scope of works: <ul style="list-style-type: none"> • Design development, certification, and approvals • Pavements • Footpaths • Soft and hard landscaping • Roads, kerbs and gutters • External lighting and associated external services • Signage • Any other external works. 	100 – 150	Quarter 2 2025	Quarter 3 2025

* Approximate worker numbers noted above are indicative at a 'point in time' and are not to be confused with total aggregated worker jobs for the entire duration of the project.

** Dates noted above are indicative and may be impacted by weather and obtaining necessary approvals.

Construction Worker Parking Demand, Road Occupation and Work Zones, and Internal Vehicle Circulation

Similar to the above comment, the construction impacts associated with parking demand, work zones, and vehicle circulation, will also depend on the construction methodology chosen by the head contractor. For this preliminary construction management plan (CMP), the following principles have been noted. This will be further reviewed by Health Infrastructure once a detailed Construction Management Plan (including traffic management measures) is provided by the Principal Contractor.

Mitigation measures will be adopted during the construction phase to minimise impacts on the surrounding transport network, ensure activities occur in a safe manner, and avoid delays to the construction program. The following measures will be outlined further in the contractor's CMP and are to include, but not be limited to the following:

- Truck loads must be covered during transportation (once exiting from the main construction compound).
- Establishment and enforcement of appropriate vehicle speed limits (10km/h on site and 30km/hr on Barber Avenue). These speed restrictions may be reviewed depending on weather conditions, or safety requirements.
- Accommodating construction worker parking demand on site where reasonably practicable. Or, where not practicable, within the surrounding streets, and the two multi-storey car parks. The tenderers will be requested to provide a transport logistics management plan that will encourage workers to use public transport, or car-sharing arrangements.
- Construction workers / vehicles who must use Barber Avenue will be inducted regarding safe use of the roadway, and the importance of quiet arrivals / departures from the site.
- All activities, including the delivery of materials are not to impede traffic flow along local roads, highways, or any side roads.
- Materials will be delivered, and spoil removed, during normal construction hours.
- Trucks and other vehicles are to avoid idling and queuing alongside sensitive receivers such as the Barber Avenue private hospital. There will be a requirement that trucks arriving early morning, must not idle prior to the construction site approved commencement time.
- Deliveries must be planned and managed to ensure a consistent and minimal number of trucks arrive at site at any one time.
- Council and / or the NBMLHD will be notified of any planned disruption to local roadways and footpaths.
- Vehicles entering, exiting, and driving around the site will be required to give way to pedestrians at all times. Unless absolutely necessary all vehicle movements will be in a forward direction.
- Should temporary road closures or adjustment to kerb side restrictions be required at any stage during the construction period, then approval of these closures / adjustments would be obtained separately through the normal project approval process.
- Traffic management and traffic controllers will be in place at all times to maintain the safety of campus visitors, staff and patients.
- All construction work zones are to be either on hospital grounds or on Barber Avenue (note. Barber Avenue is to always remain operational). No other areas that are external to the hospital grounds / campus are to be affected by construction activities other than for the presence of traffic controllers at Parker Street, as required.
- Any areas and property reliant upon access and / or circulation from Barber Avenue will be under traffic control to ensure access is maintained during any construction works.

4.4 Critical Construction Issues

The Nepean Hospital Redevelopment will be undertaken within a live health care environment including all Hospital buildings and facilities on the Nepean Campus. The Principal Contractor is responsible for the staging and sequencing of construction works to minimise the impact to the operations of the Nepean Hospital Precinct.

Key principles include:

1. The Nepean Hospital Precinct and all facilities will continue to be an operating hospital environment for the duration of the Works.
2. Separation of Construction Works from Hospital Operations to ensure:
 - a) The safety of hospital staff, visitors, patients, and visitors.
 - b) Segregation of construction activities to minimise impacts to hospital operations.
3. Enabling the continuation of hospital operations – All existing hospital facilities will continue to operate at full capacity during the delivery of Stage 2. Hospital operations should not be disrupted during the Works. This is to be undertaken through proper and considered staging and sequencing proposals for the works.
4. Early Notice of Disruptions – where disruptions (noise, vibration, dust, services shut-downs, closure of pedestrian or vehicle paths/access points, etc. are necessary) early notice will be provided in accordance with the LHD Disruption Notice process. Greater than 10 days' notice will be required for technical or extensive disruptions. The Principal Contractor will allow appropriate time to prepare, review and submit appropriate disruption notices. Consultation will occur with the Nepean Hospital LHD and all other relevant stakeholders to confirm an acceptable time / date / methodology for disruptions. Disruptions may be required to be completed out of normal working hours.
5. Infection Control – ensure the infection control of the hospital is maintained. This includes external construction works on the campus and any locations of construction in the existing hospital environment. The infection control of existing facilities must not be compromised by construction works.
6. Provision of temporary services/measures to support disruptions – where major disruptions are required to the Hospital such as service shut-downs, or change of entry points, temporary arrangements such as alternative entry points, back up services, etc. will be provided to facilitate the continued operation of the hospital.
7. Maintaining the compliance of all existing facilities – where the works interface with existing buildings, the Principal Contractor is to ensure the compliance and occupation of all existing facilities is always maintained.

4.5 Disruption Notices

Any planned disruptions to hospital operations 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 Principal Contractor to the Project Manager and hospital stakeholders for approval.

4.6 Site 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 NBMLHD's project team to ensure the strategies proposed by the Principal Contractor aligned with the requirements of the Hospital.

The project induction will identify project specific safety and emergency procedures, and address key controls, including:

- Working in a live hospital environment and maintaining business continuity for the hospital

- Infection control
- Access protocols within the existing hospital campus including identifying the travel path for emergency vehicles
- Access to and from site, and out of bounds areas.
- Disruptive works procedures and protocols
- Working around children rules and legislation
- Working adjacent to existing clinical spaces
- Smoking, drug and alcohol site rules
- Working adjacent to local residential and business properties, including minimising disruptions to local parking and access
- Minimising disruption to hospital parking and access for staff.

4.7 Site Hoarding, Public and Property Protection

The general principle is to separate construction areas of work from 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 specifics 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 WorkCover 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 regularly throughout the construction phase to ensure alignment with proposed methodologies and construction staging to ensure that the safety of the public and staff is always maintained.

4.8 Ground Works

Following initial site establishment (including works compound, site hoarding / fencing, and sediment & erosion controls), stabilisation measures will be installed followed then by the demolition of buildings, and bulk / detailed excavations.

The bulk excavation works will be completed in zones to control and minimise the impacts of dust, noise, and vibration. Any locations susceptible to wet conditions will be minimised and appropriately managed during this phase of the project.

4.9 Site Amenities

Site amenities and compounds erected will accommodate lunch, toilet, and change facilities for the duration of the project. Contractor and sub-contractors will be advised during site inductions that there is no parking within the Nepean Hospital site, or within the adjacent streets. To minimise impact on street parking, contractors and sub-contractors will be encouraged to use public transport or car share.

NSW Covid guidelines and Covid management plans will be followed to ensure a safe work environment is provided for all contractors and sub-contractors.

4.10 Structural Works

The Stage 2 Tower is designed as an 7-storey high tower (including roof structures). The building has been designed as structurally independent of the Stage 1 Tower.

- Foundations: The structure of the new building is to be supported on piled foundations founded into rock.
- Sub-structure: All tower slabs have been designed as post-tensioned slabs. The slab on ground has been designed as a reinforced concrete slab and has been designed for construction loading.
- Superstructure: The superstructure consists of a reinforced concrete braced frame with columns generally following 8.4m x 8.4 grids. The floor levels in Stage 2 Tower match the Stage 1 Tower and have been designed to act independently of Tower 1. The link to the existing North Block has a gradual ramp as there is minor differences in floor levels.

Concrete deliveries associated with the structure will be undertaken with full coordination, development, and input from the Project Manager to ensure that truck movements do not interfere with hospital operations.

4.11 Services and Fit-out Works

Logistics and materials handling during the works will be managed within the defined construction site boundary. Site deliveries will be directed to the site access gates and will not be allowed to idle within the public areas of the campus.

Internal trades will include joinery, doors, partitions, painting, way finding, etc. Services trades will include lifts, electrical lighting and emergency egress systems, fire hydrant systems and stormwater.

4.12 Commissioning and Handover

At completion of the main trade works the building will be commissioned and all compliance items tested and documented to allow for occupation.

5 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:

- State Significant Development Approval conditions prepared by DPIE
- 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
- Australian Standard 2601-2001: Demolition of Structures
- Code of Practice for the Safe Removal of Asbestos (NOHSC:2002(2005))
- Guide to the Control of Asbestos Hazards in Buildings and Structures (NOHSC:3002(1988))
- Resource and Recovery Act 2001
- Environmental Planning and Assessment Amendment Act 2017
- NSW Heritage Act 1977
- Local Government Act 1993
- Soil Conservation Act 1938
- Threatened Species Conservation Act 1995 and Regulation
- Biodiversity Conservation Act 2016
- Native Vegetation Conservation Act 1997
- Australian Standard 4970-2009: Protection of Trees on Development Sites.

6 Environment and Amenity

6.1 Environmental and Hazardous Materials Management

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 be a stand-alone 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 Principal Contractor will be monitored throughout the Works.

6.2 Noise and Vibration Management

Note: This section is to be read in conjunction with the Noise and Vibration Report appended to the SSD application prepared by the Noise and Vibration project consultant.

Noise from the construction site shall not exceed the limits set out in the Interim Construction Noise Guidelines, Environmental Protection Authority (EPA), and Australian Standards. No machine work will occur outside of the approved working hours unless approval has been given through the Disruption Notice process and as per the conditions of consent.

The noise and vibration from the use of any plant equipment and/or building services associated with the project shall not give rise to 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 Principal Contractor will be responsible for the management, compliance, and statutory supervision of all equipment, such as making sure all trucks and machinery involved in the project 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 an updated Noise and Vibration Management Plan prepared by the Principal Contractor. 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 that 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
- Ensure construction methodologies adopted minimise the impact of noise, dust, and vibration.

6.3 Dust, Sedimentation and Erosion Controls

As a minimum, the erosion and sedimentation controls will be designed, installed, and maintained in accordance with the requirements of the project Civil Engineer.

To control dust, water will be sprayed where necessary at the source and surrounding areas to prevent airborne dust particles migrating into the surrounding environment. Management of dust is to be developed by the Principal Contractor and agreed by the project stakeholders.

Additional precautions that will be implemented during the project include covering of all haulage trucks and stockpiles with tarpaulins and monitoring of weather conditions (including wind). It will be of utmost important that management and contingency plans are developed to prevent any foreseeable impacts from dust, including dust monitoring meters.

The Principal Contractor will develop a strategy 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.

6.4 Odour Control

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

6.5 Protection of Trees

Note: This section is to be read in conjunction with the Biodiversity Assessment and the Arboriculture Assessment Report appended to the SSD application prepared by the project consultants.

The Principal Contractor undertaking the project 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 project.

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

The Principal Contractor will be required to submit for approval to the Project Manager a comprehensive plan regarding how it plans to manage and protect any retained trees during construction, including the use of tree protection measures such as barriers and protectors.

6.6 Stormwater Management Plan

Note: This section is to be read in conjunction with the Civil Engineering Report appended to the SSD application prepared by the project consultant.

Measures will be employed at each stage, and on the site overall, to control soil erosion during construction. These measures will be in accordance with the principles, as described in Managing Urban Stormwater: Soils & Construction (4th edition, Landcom, 2004).

The existing drainage system for the hospital campus will be cleaned out to remove sediments prior to commencing construction on site.

The site will be continually cleaned of rubble to minimise possible sediment flow during rainfall periods. Stormwater kerbs and drainage lines will have sediment controls in the form of hay bales, sedimentation socks or similar (to be approved by the project Civil Engineer).

Stormwater grate inlets surrounding works areas will be covered with geotextile fabric to allow water to enter drains whilst retaining sediments. All drainage control devices will be regularly checked particularly during heavy rainfall periods.

All trucks exiting the construction site will be washed down prior to entering the hospital campus and public road networks.

7 Vehicle Access and Traffic Management

Note: This section is to be read in conjunction with the Traffic and Accessibility Report appended to the SSD application prepared by the project Parking and Traffic consultant.

Traffic flows resulting from the construction works have been assessed by the Traffic Engineer for impacts on the local road network and internal hospital roads. Identified impacts and appropriate mitigation will be included in the Construction Traffic Management Plan. All works access to the site for construction vehicles will be strictly in accordance with the approved Construction Traffic Management Plan.

For any major site operations, pre-planning, consultation with all local stakeholders and implementation of dedicated traffic management responses will be required.

7.1 Traffic and Pedestrian Management Plan

Prior to construction works commencing, the Principal Contractor will develop a Traffic and Pedestrian 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 in a live hospital environment, and all internal traffic and pedestrian routes are to be maintained throughout all stages of construction.

Key issues for traffic, pedestrian and cyclist management during construction are to be considered in the Traffic and Pedestrian Management Plan, including:

- All loading and unloading of vehicles is expected to occur within the construction site
- Providing safe and uninterrupted access for pedestrians and vehicles accessing the construction site and hospital campus
- Ensuring maximum safety of site personnel, pedestrians, cyclists, commuters, and drivers
- Minimising environmental nuisance and impact because of construction traffic
- Ensuring 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
- Establishing strict scheduling of vehicle movements to ensure there are no vehicles waiting to enter the construction site
- Have no vehicles arriving at the site, without prior arrangement
- No idling of vehicles will be permitted outside of the approved working hours
- Encouraging site workers to utilise local public transport system and car sharing, wherever possible
- Timely and effective implementation of traffic management measures
- always Maintaining access for hospital and stakeholder's deliveries.

7.2 Helicopter Management

Nepean Hospital currently has a helipad located on top of the Barber Avenue multi-storey car park building which is utilised for emergency patient and transfers. Any tower crane locations and other construction operations adjacent the helicopter flight paths will require precautionary measures such as notifying authorities and installing warning / identification lighting. These measures will be included in a Helicopter Management Plan.

Note: On completion of the Nepean Redevelopment Tower 1, a new helipad will be operational, this will also be included in the Helicopter Management Plan.

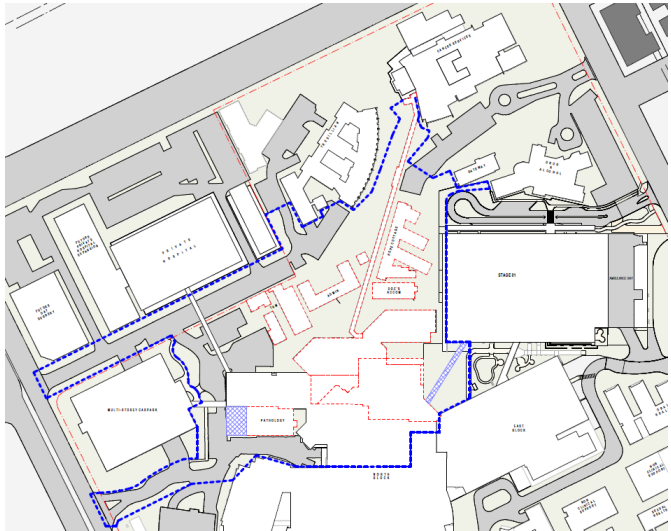
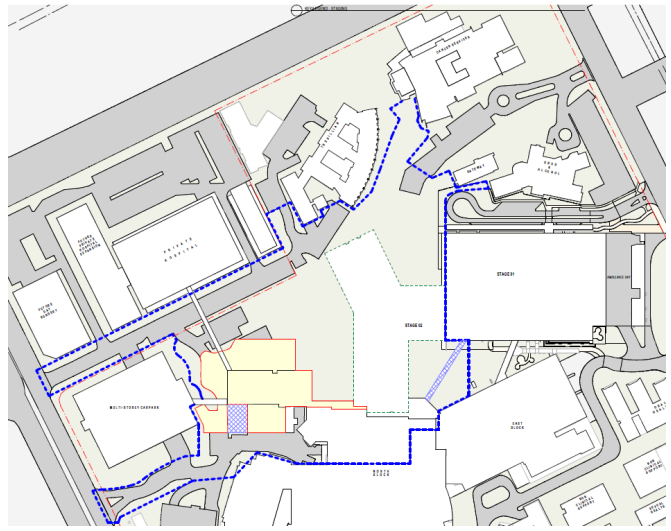
7.3 Public and Pedestrian Protection

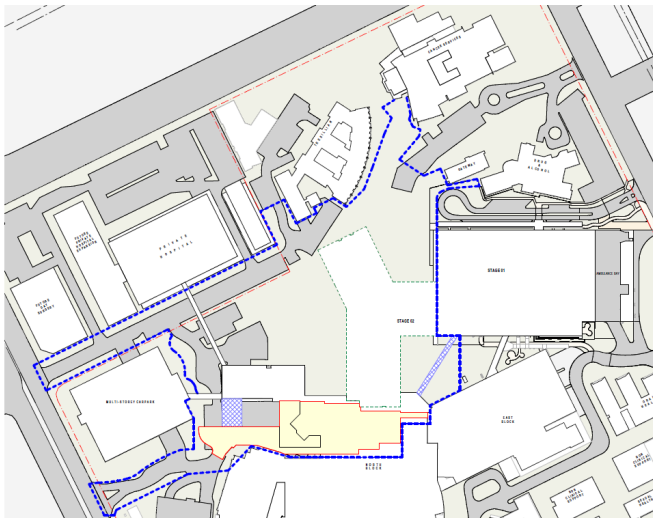
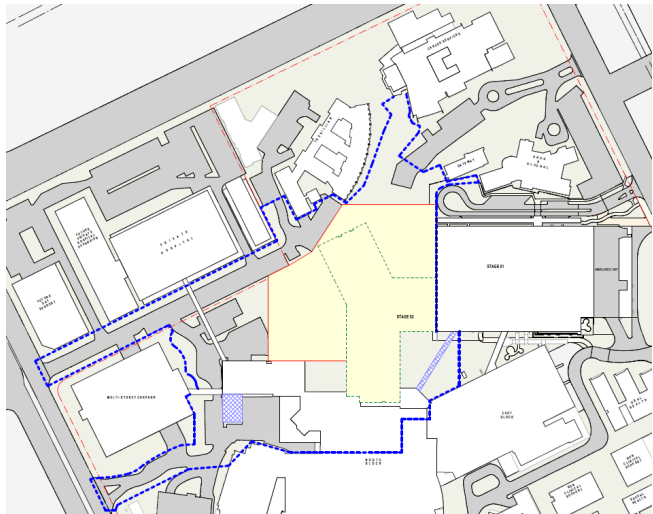
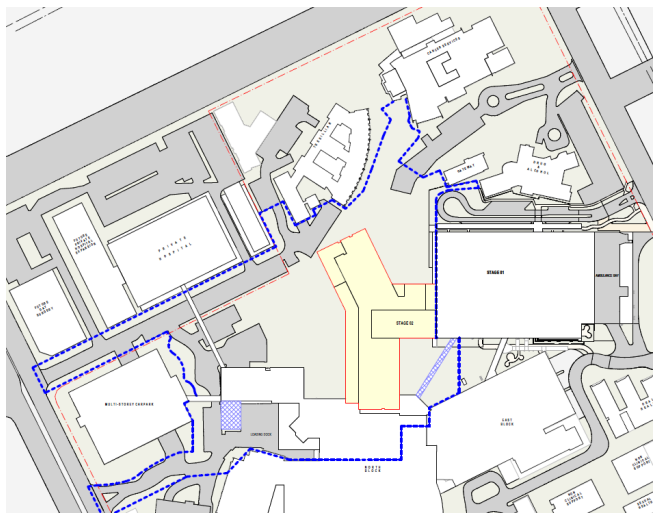
Pedestrian and vehicular movements into and around the campus will either be maintained, or alternate safe routes determined where necessary, and defined by clear signage. If necessary, the Principal Contractor will provide traffic management personnel to guide pedestrians and vehicles safely.

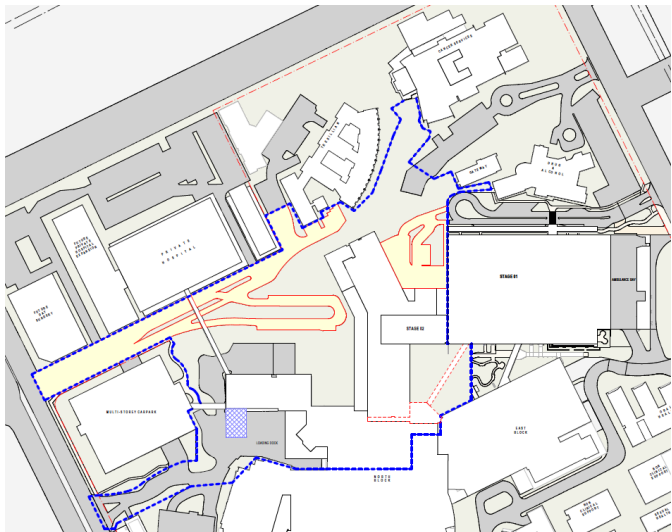
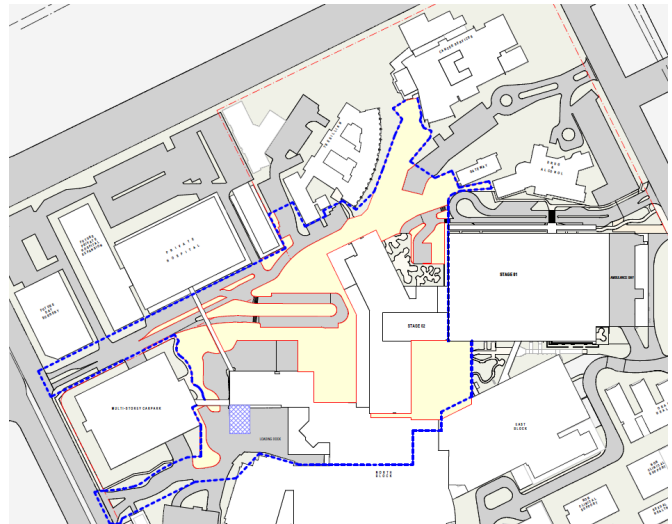
Hoarding appropriate for interaction between pedestrians and construction work (as per Workcover requirements and Australian Standards) will be constructed to prevent unauthorised access to the construction site. The hoarding and fences may be staged to allow for appropriate construction methodologies to be planned.

The proposed vehicular and pedestrian routes and controls will be detailed and managed by the Principal Contractor, including obtaining all necessary approvals. The delivery, staging, unloading, and waiting areas will be planned in detail to achieve safety and compliance. Pedestrian controls will be finalised to always provide safe pedestrian routes, including traffic controllers when necessary.

Staging of the project will consider the safety of the public, staff, visitors, and other hospital contractors during the works. To illustrate the envisaged staging for Stage 2, the following staging plans have been produced.

Staging Phase	Staging Concept
Phase 1 <ul style="list-style-type: none"> Demolish satellite buildings and portion of North Block – make good North Block building interface with new façade Demolish Pathology building after decanting into East Block. 	
Phase 2a <ul style="list-style-type: none"> Construction of loading dock (north section) incl. new truck bays, waste area and associated rooms and hard stand areas To note: southern loading dock area remains operational. 	

<p>Phase 2b</p> <ul style="list-style-type: none"> Construction of loading dock (south section) inc. new truck bays, canopy, bulk storage, clean & dirty linen, hard stand areas BOH corridor upgrade works Commissioning. 	
<p>Phase 3</p> <ul style="list-style-type: none"> Establishment of site and site compound Installation of retention wall system Bulk excavation works Sub-structure piling works. 	
<p>Phase 4</p> <ul style="list-style-type: none"> Construct new Clinical Services Building / Tower 2 Commencement of progressive commissioning. 	

<p>Phase 5a</p> <ul style="list-style-type: none"> Construct new internal Road Infrastructure / Civil Works Demolish temporary link between North Block and Stage 1 – make good façade and internal works. 	
<p>Phase 5b</p> <ul style="list-style-type: none"> Remaining external works including hard and soft landscaping and other completion works External Wayfinding completion External Lighting and Security completion Commissioning completion Project complete and Stage 2 fully operational. 	

7.4 Major Plant

The construction works on site will require earthmoving plant during the initial phase of the works. These will include excavators and earth moving trucks.

Concrete pours will be required during the main structure works and these are envisaged to require mobile in-line of boom concrete pumps and be serviced by concrete delivery trucks.

Mobile cranes will be intermittently in operation throughout the project.

The Principal Contractor is to ensure it has an appropriately planned and documented plant strategy to ensure the safety of construction workers, public, hospital staff and visitors.

7.5 Deliveries and Materials Storage

Development and implementation of detailed and well-planned construction delivery and staging programs are to be prepared by the Principal Contractor. During the early phases of the Project, it is envisaged that the site boundary fence will be established at the extreme boundaries of the site to allow the major plant to operate safely and efficiently within the site. These major items of plant include excavators, trucks, piling rigs, and concrete trucks, etc.

Materials are to be staged and stored in such a way as to promote a clear and safe work site. As the project progresses storage areas will require detailed planning by the Principal Contractor. At all times, materials are

to be safely stored within the confines of the site. During loading and unloading, vehicles must not obstruct roads, driveways, emergency routes or fire protection equipment on campus.

8 Waste Management / 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.

8.1 Storage of Dangerous Goods

Dangerous goods (such as petrol, diesel, oxy-acetylene, oils etc.) will be stored in lockable compounds with sufficient ventilation in accordance with relevant codes of practice and standards. Safety data sheets and registers will be required to be maintained for all flammable and potentially harmful liquids by the Principal Contractor.

Geotechnical, contamination and hazmat reports prepared by the Geotechnical and Environmental project consultants will be provided to the Principal Contractor during the procurement phase for the project.

These reports will be used as the basis for identifying and managing the removal of any contaminated materials identified during construction.

An 'Unexpected finds' protocol will be implemented by the Principal Contractor to manage any contaminated materials found.

9 Services Disconnections

During construction works, service disconnection and diversions will be undertaken. In general, the following principles will be adopted when disconnecting services:

- Services impacts on the existing Nepean hospital campus will be undertaken with full coordination, development and input with relevant hospital and authority stakeholders and will only proceed with approval, via a Disruption Notice process, and appropriate consultation with the relevant service providers
- Impacts on the hospital will be kept to the absolute minimum, which may result in 'out of hours' work. Patient, staff, & visitor safety, access and security will be maintained at all times by the Principal Contractor.
- All Service authorities will be consulted prior to construction commencing to ascertain lead times and correct termination locations.
- Dial-before-you-dig and all other necessary non-destructive investigations must be undertaken before any destructive activities occur by the Principal Contractor.
- All termination works will be undertaken in accordance with project design engineers' specification and instructions.
- All termination works will be undertaken by suitably licensed contractors.

10 Dilapidation Reports

Prior to commencing the works on site, and at completion, the appointed Principal Contractor will produce pre- and post-dilapidation reports. The reports shall as a minimum cover the following areas:

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

The full extent of the dilapidation reports will be agreed with the Project Manager prior to investigations proceeding.

