BESIX Watpac

# REF Construction Management Plan

**N225**

**St. George Hospital Stage 3 – Refurbishment Works**

**4 December 2024**

## *Revision History*

| Version | Date | Revision Description | Project/Site Manager Sign off |
|---|---|---|---|
| 00 | 01/11/24 | Revision 0 – Draft issue for REF | |
| 01 | 04/12/24 | Revision 1 – Updated as per comments | |
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# REF Construction Management Plan

# 1 Introduction

## 1.1 Overview

The St George Hospital is located on Kensington Street, Kogarah, within the Georges River Council Local Government Area (LGA) on Bidjigal Country. The hospital site is approximately 12 kilometres south of the Sydney CBD and has an area of approximately 5.16 hectares.

The hospital is located in a cluster of health and education uses within the Kogarah town centre. It comprises a number of buildings associated with the hospital campus situated around an internal road network.

This CMP accompanies a Review of Environment Factors that seeks approval for the refurbishment of the existing St George Hospital. For a detailed project description refer to the full Project Description section in the REF prepared by Ethos Urban.

## 1.2 REF Construction Management Plan Application

This Construction Management Plan has been developed by BESIX Watpac's project team, to provide a high-level description for construction and management of the St George Hospital Refurbishment works.

The Preliminary REF Construction Management 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 PCA. The CMP will then remain a 'live' document reflecting the site delivery parameters for the duration of the project.

## 1.3 SEARs Reporting

The following section is being responded to the current Preliminary Construction Management Plan:

| Item | SEARS Requirement | Relevant Section of Report |
|---|---|---|
| General Requirements | Details of construction and decommissioning including timing | Section 1.8 |
| General Requirements | Identify appropriate servicing arrangements for the site. | Entire Report |
| 25.0 | If staging is proposed, provide details of how construction and operation would be managed and any impacts mitigated. | Section 1.8 |

## 1.4 Scope of Work

BESIX Watpac is the designated Principal Contractor for the refurbishment of the existing St George Hospital, which involves the following works:

- Internal refurbishment works within existing hospital buildings.
    - Burt Nielson Wing Level 1 – Fluoroscopy
    - Burt Nielson Wing Level 2 – Paediatrics and CYF
    - Clinical Services Building & Services Block Ground Floor – Back of House
    - Ward Block Level 2 – Multi-faith, Patient Transit and AAU

- Tower Ward Block Level 4 – Renal
- Tower Ward Block Level 6 – Surgical
- Prichard Wing Various Levels – Sexual Health, Antenatal and Gynaecology
- Acute Services Building Level 7 – Palliative Care

- Minor extension for a new Clinical Waste building within the hospital campus and new covered walkways
- Services upgrade/ modification works & new services installations including but not limited to lighting, hydraulics, mechanical, fire and stormwater and drainage
- Demolition of existing buildings within the hospital campus and wider precinct
- Civil & Landscaping works adjacent to Belgrave Street for continuation of the Ambulatory Care main entry forecourt area

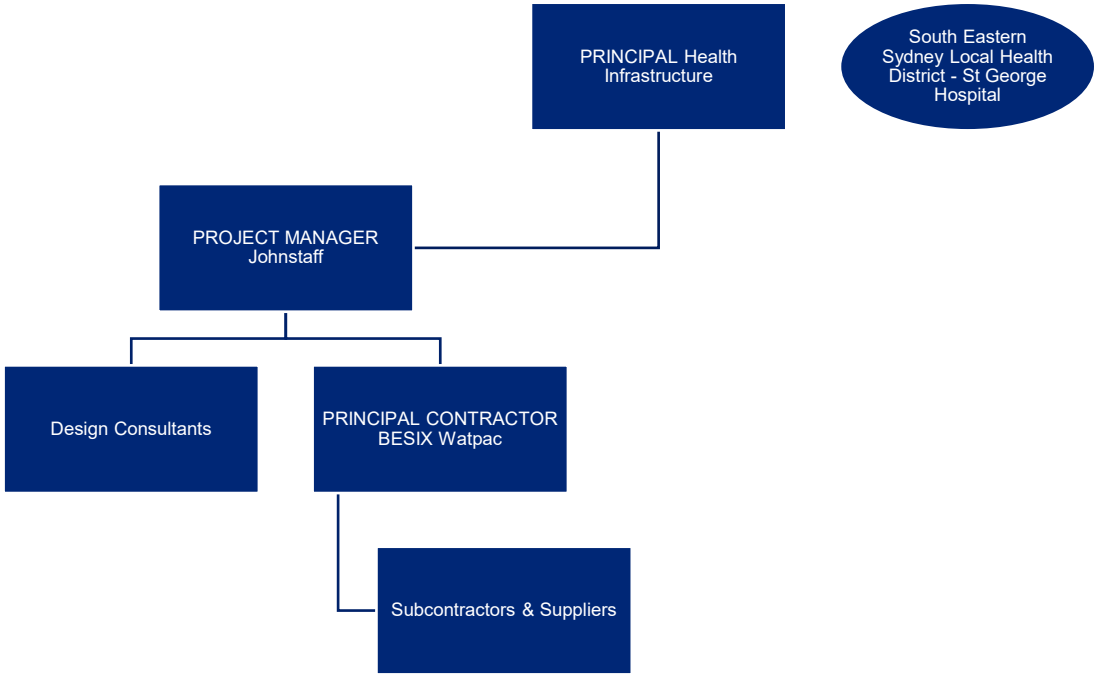
## 1.5 Site location

The below plan indicates the site location:


## 1.6 Key Participants & Stakeholders

| | |
|---|---|
| CLIENT | Health Infrastructure<br>Tim Shoolman – 0416 739 836 |
| CLIENT REPRESENTATIVE | Johnstaff<br>Steve Watts – 0404 390 987 |
| PRINCIPAL CONTRACTOR | BESIX Watpac |

## 1.7 Organizational Chart




## 1.8 Proposed Phasing and Key Milestones

The works as described above are proposed to be undertaken in a staged approach for each location. This is because each scope item is geographically separate from other work locations.


Source: SCT Consulting and Jacobs, 2024

Works for the development are expected to commence in the first quarter of 2025 (Q1 2025) and finish by the first quarter of 2027 (Q1 2027). The schedule for each work item can be seen below:

***Redevelopment works schedule***

| Works | Program | Comments |
|---|---|---|
| Refurbishment | Q1 2025 – Q4 2025 | Works outlined will be staged |
| Extension for a new Clinical Waste building | Q1 2026 – Q3 2026 | Works will be completed in parallel with civil and landscaping works |
| Services upgrade works & new services installations (i.e. lighting, hydraulics, mechanical, fire, stormwater and drainage) | Q1 2025 – Q3 2026 | Works will be completed in parallel with civil and landscaping and refurbishment |
| Demolition of existing buildings | Q1 2026 - Q1 2027 | Works outlined will be staged |
| Civil & Landscaping works adjacent to Belgrave Street | Q1 2026 - Q1 2027 | Works will be completed in parallel with extension of the Back Of House for the Clinical Waste building |

The timeline of the proposed development works is shown below:

***Development timeline***

| Works | Q1 2025 | Q2 2025 | Q3 2025 | Q4 2025 | Q1 2026 | Q2 2026 | Q3 2026 | Q4 2026 | Q1 2027 |
|---|---|---|---|---|---|---|---|---|---|
| *Stage 3 Main works (Previously approved)* | | | | | | | | | |
| Refurbishment | | | | | | | | | |
| Extension for a new Clinical Waste building | | | | | | | | | |
| Services upgrade works & new services installations (i.e. lighting, hydraulics, mechanical, fire, stormwater and drainage) | | | | | | | | | |
| Demolition of existing buildings | | | | | | | | | |
| Civil & Landscaping works adjacent to Belgrave Street | | | | | | | | | |

Whilst refurbishment is happening, management of decanting the hospital buildings will be managed with the hospital directly in a staged approach. Ongoing hospital operations will be managed via:

- Disruptive Works Notices (DWNs) provided to the Principal's Representative where works would affect hospital activities. Notice will be provided in advance of such operations so that appropriate arrangements can be put in place to minimise disruption.
- Consultation between users and stakeholders and Project team will be managed through the Principal's Representative and Principal Contractor. Subject to how the Principal's Representative wishes us to interface with Users and Stakeholders, we will provide briefings on upcoming activities so that users are properly informed. Works will be planned and staged to keep disruption to a minimum.

# 2 Site Management

## 2.1 Operating Hours

The St George Hospital Refurbishment works working hours will be subject to REF approval, however it is anticipated that the regular site working hours to be:

| | |
|---|---|
| Monday to Friday | 7am to 6pm |
| Saturday | 8am to 1pm |
| Sunday and Public Holidays | No Work |

In addition to regular working hours, there will be occasions where some work may need to be completed outside of the above hours. If required, these activities will be planned in consultation with stakeholders and the Georges River Council to ensure all aspects of the works are clearly understood by all parties and 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.

## 2.2 Identification and Management of Project Risks

During the detailed design and pre-construction phase further analysis of the project documents will need to be undertaken including multiple site inspections 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;
- 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;
- Considerations of the adjacent heritage building (Fire and Rescue NSW Kogarah Fire Station);
- Construction workers access and egress affecting daily hospital operations and the local road, cyclists and pedestrian network;
- Ensuring residents are well supported through appropriate management and notification of construction activities;
- Working around children;
- Unauthorised access to the construction site; and

- Additional construction traffic, construction works and associated vehicles on site.

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

## 2.3 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

## 2.4 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 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 during monthly PCG meetings, to ensure alignment with proposed preferred methodologies and construction stages and to ensure that the safety of the public and staff is maintained at all times during the works.

## 2.5 Site Amenities and Access

The site amenities and compounds erected will accommodate lunch, bathroom, and change facilities for the duration of the project.

Access routes to the works will be articulated in the Traffic Management Plan (TMP). Details of which will be provided to all of the subcontractors prior to appointment so that all persons will be aware of the location of the site and access provisions prior to arriving.

Speed limits, maintenance and safe operation of pedestrian and vehicular traffic, directional signage, loading/unloading locations and arrangements, are set out in the TMP. These will be addressed with each subcontractor as part of the initial appointment process and with every employee as part of their site-specific induction process.

The Principal Contractor will ensure that workers do not unduly obstruct any roads, drain or watercourse, nor damage existing fences or gates.

All visitors will be either escorted onsite by an inducted member of the project or inducted by the site staff prior to going onsite. Right of entry provisions will be implemented, and any required notifications of entry advised to appropriate parties.

## 2.6 Vehicle Access

All vehicles entering the site are to be registered and are to obey displayed speed limits. Vehicles are to abide by all road traffic authority regulations; these regulations are enforced.

Trucks and earthmoving equipment in particular must be maintained. Subcontractors are to ensure that the wheels, tracks and body of all constructional plant are free of weeds, mud or concrete slurry before entering or leaving the Site. This is a mandated access requirement.

There is to be no parking of any construction workers within 200m of the hospital.

Further than 200m from the hospital, Vehicles are not to be parked on grassed areas (unless specifically authorised), on any roadway, footpath or traffic island, in any breezeway or under any building not nominated as a designated general car park.

Wearing of seat belts is mandatory.

## 2.7 Site Maintenance and Cleaning

Each area will be maintained in a clean and tidy manner. The Principal Contractor will maintain sufficient material on-site to effectively manage the works and will ensure that materials are stacked out of the way of access pathways and in a safe and secure manner.

Subcontracts contain provisions specifically to address the maintenance of required housekeeping standards including keeping work areas clear and clean and contributing to whole of site cleaning activities as may be required from time to time.

Housekeeping will be critically and formally reviewed on a daily basis.

Cleaning will be undertaken progressively and by all on-site to maintain standards. Waste material will be deposited in bins provided for the purpose.

## 2.8 Dilapidation Reports and Existing Services Survey

Prior to commencing work on the site, the Principal Contractor will carry out a detailed dilapidation survey to identify and record salient features of the existing conditions on and adjacent to the site, of the adjacent buildings, and along the roadway around and leading to the site.

A narrative and photographic record will be produced and copied to the Principal's Representative for record purposes. A copy of this report will be maintained on-site by the Project Manager for the duration of the works.

Prior to commencing any construction work the Principal Contractor will undertake a review of the existing services information, consult with any existing building and maintenance services information, carry out 'Dial Before You Dig' investigations then physically pothole to identify existing in ground services where the works will be carried out. The Principal Contractor will then prepare an overlay drawing of those services and maintain that drawing in the induction room, noting that the induction procedures will address working with or near existing services.

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 hospital 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 upon with the Principal prior to the investigations proceeding.

## 2.9 Disruptive Works Notices

Disruptive Works Notices (DWNs) will be provided to the Principal's Representative where works would affect hospital activities. Notice will be provided in advance of such operations so that appropriate arrangements can be put in place to minimise disruption.

Any planned disruptive works to hospital operations will be managed through the process of Disruptive Works Notices (DWNs). For such stoppages, the DWN will describe the applicable works, timetable, issues, and risk management plans.

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

# 3 Construction Methodology

This plan has been compiled for a REF application to provide a high-level overview of the delivery of the SGH Stage 3 Refurbishment 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 PCA. The 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:

   a. Operating Hours
   b. Identification and Management of Project Risks
   c. Legislative and Regulatory Requirements
   d. Site Fencing, Public and Property Protection
   e. Site Amenities and Access
   f. Vehicle Access
   g. Site Maintenance and Cleaning
   h. Dilapidation Reports and Existing Services Survey
   i. Disruptive Works Notices

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

- Traffic Control
- Pedestrian Management
- Parking
- Deliveries and Material Storage
- Signage

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
- HAZMAT and Site Remediation

# 4 Traffic Management

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

## 4.1 Traffic Control

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 major considerations 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 on 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.

## 4.2 Pedestrian Management

Separation of the public and construction activities is an essential part of the methodology.

Temporary barricades will be placed in areas to control public access points around the site perimeter. the Principal Contractor will select routes that are logical and easy to follow and provide signage to inform and direct the public through paths of travel to currently-operational areas, and to foster good relations.

Pedestrian management will be via the use of Traffic Controllers.

## 4.3 Parking

No Contractors and Subconractors parking will be allowed within 200m of the hospital campus. Tools and materials will be stored on site so that workers do not need to bring these to site on a daily basis. Contractors and Subcontractors are encouraged to use public transport, carpooling, and active transport. These requirements will form part of the site inductions.

## 4.4 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 buildings or fire protection equipment.

## 4.5 Signage

Way-finding signage will be erected to direct workers to the site and site office which will also be appropriately and clearly signed.

We will ensure hoardings are not compromised and that the subcontractors and suppliers are fully conversant with site access rules (point of entry, go and no-go zones). This will be achieved through the procurement processes, subcontract start-up meeting, and at employee inductions.

# 5 Environment

## 5.1 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.

Environmental measures including shaker grids, sedimentation fences and catch drains will be installed in the locations identified on the project Sedimentation Control Plans and constructed in accordance with the CEMP, amended from time to time to meet the demands of an emerging construction program. The environmental controls will be maintained for the duration of the works.

Subcontractors are to conduct their works in accordance with the requirements as set out in the contract documents and BESIX Watpac's EMP. A copy of the EMP is maintained in the Site Office. All subcontractors must make themselves aware of the content and comply fully with all conditions contained therein.

The transport, storage and use of fuels, oils, chemicals and other potential contaminants are to be such as to prevent leaks and spills direct to the environment. This includes minimising on site holdings and storing materials in bunded areas. In the event of a spill, and where it is safe to do so, the subcontractor is to take all practical steps to contain the spill.

If significant quantities of potential contaminants are proposed to be used during the project, the subcontractor is to provide a management proposal and as a minimum an on-site spill kit. All spills and clean-up actions conducted are to be reported to the BESIX Watpac and an environmental incident report is to be completed for site and environmental records.

All waste generated during the project is to be disposed of in accordance with relevant legislation.

Subcontractors are to minimise waste generation and recycle waste materials where possible as set out in the EMP. Work sites are to be kept free of general litter at all times. Under no circumstances is waste, including surplus soil, to be disposed of on Principal land without the express written approval of BESIX Watpac.

## 5.2 Noise and Vibration

Note: This section is to be read in conjunction with the Noise and Vibration Impact assessment appended to the REF prepared by Acoustic Logic.

To minimise nuisance caused by construction activities, BESIX Watpac will ensure the Principal, their Representative and their stakeholders are fully briefed on the proposed works. The timing of any works which could cause possible disruption Principal operations or infrastructure can only be completed at times approved by the Principal.

No work will be performed outside the agreed hours without the prior authorisation of the Principal's Representative and will account for respite periods as stipulated in the REF approval.

Through these processes the Principal Contractor aim to minimise the direct impact and assist the Principal's Representative with user expectation management.

To manage noise and vibrations created by machinery, operating times will be considered to minimise disruption to surrounding properties. Vibration generated by equipment will be managed by placing rubber mats or springs between the equipment and the floor or wall (for example, in boiler rooms, with commercial mixers, in refrigeration motors and exhaust equipment). the site inductions will address the issue of noise and vibration control and the work practices will comply with the relevant Australian Standard, eg AS 2436-2010 “Guide to noise and vibration control on construction, demolition and maintenance sites”.

Vibration management strategies include:

- Conduct a survey of properties in the immediate precinct of the site including notes together with a photographic record of existing conditions
- Ensure equipment and machinery is operated and maintained in accordance with industry standards
- Conduct any blasting, rock breaking, drilling or piling activities under strictly controlled conditions.
- Construction activity is by nature noisy, hence noise mitigation measures that will be considered include:
- Fit mufflers/silencers to pneumatic tools (e.g. breakers)
- Use residential-grade mufflers on major items of plant
- If impact piling is adopted, place a resilient pad (dolly) between the hammer head and the pile
- Enclose the hammer head and the top of the pile in an acoustic screen
- Substitute impact piling for bored piling or hydraulic piling
- Conduct construction activities between the approved hours of work of 6:30am to 6:30pm Monday to Saturday
- Operate and maintain plant, equipment and machinery in accordance with acceptable industry standards and turned off when not in use
- Power generators used for after-hours lighting are positioned and acoustically treated, as far as practical, to minimise noise emissions.
- BESIX Watpac will notify the Principal in advance if any of the following activities are to be undertaken on Site and are likely to disturb occupants within the adjacent facilities:
  - Impact drilling concrete, floors or masonry
  - Chasing into walls
  - Use of explosive powered tools
  - Electric sawing of any material
- Any noisy activity that may need to take place outside normal (Monday-Friday 6:30am to 6:30pm) business hours
- Out of Hours Work – BESIX Watpac will provide at least five days’ notice to the Principal prior to requiring access to the Site out of the access hours. A minimum of two personnel must be present on site when work is being conducted outside the access hours.

## 5.3 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.

## 5.4 Protection of 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.

## 5.5 Stormwater Management Plan

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

## 5.6 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.

## 5.7 Dust, Sediment and Erosion Controls

Note: This section is to be read in conjunction with the Sediment and Erosion Management Plant appended to the REF prepared by Meinhardt.

Note: This section is to be read in conjunction with the Air Quality report appended to the REF prepared by Prensa.

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.

## 5.8 HAZMAT

Note: This section is to be read in conjunction with the HAZMAT report appended to the REF prepared by Prensa.

Site management controls including protocols to manage unexpected finds will be implemented during the demolition works. No intrusive investigations were conducted in the buildings to be demolished as the buildings are in operation. Therefore sampling of materials in the demolish buildings will be required. If contamination is identified a site remediation/management Strategy should be developed.