Long Bay Prison and Forensic Hospitals
Construction Methodology Plan

Table of Contents

1 Introduction

This section outlines the broad principles, methodologies and systems to be utilised in the delivery of the proposed development of the Forensic and Prison Hospitals located within the Long Bay Correctional Complex.

The project consists of the construction of a new Prison Hospital and Forensic Hospital. These two facilities are located in different areas of the existing Long Bay Correctional Complex and will be managed as two autonomous construction sites, running concurrently, with a common management structure.

The Forensic Hospital is located on Anzac Parade adjacent the main entry gate into the complex. It involves the construction of four new buildings enclosed by a perimeter prison wall with a fifth building outside the wall. The scope also requires the full demolition of the existing Long Bay Hospital.

The new Prison Hospital site involves the construction of 4 new buildings, again enclosed by a perimeter wall. The site has been cleared of all existing buildings by the state.

The location of both construction sites are not linked within the complex. Separate access arrangements need to be made utilising Anzac Parade for the Forensic Hospital site and Calga Ave for the Prison Site.

This document outlines in broad terms, process steps that Multiplex will undertake to maintain the amenity of local residents and the surrounding Environment.

The key factor in this regard are :

- Enviromental impacts, dust, soil erosion and vibration.
- Construction waste removal
- Construction related traffic flows

To facilitate the reading of this report the construction methodology will be broken into two sections, being the Forensic Hospital and the Prison Hospital. All environmental impacts and construction waste related procedures will be unilateral across both projects forming the same procedures.

1.1 The sites

Forensic Hospital:

The Forensics Hospital Precinct involves the construction of four new buildings surrounded by a new 5.5 m high precast concrete wall, around the existing prison hospital, a fifth building located outside the perimeter wall. Two of the buildings are partly located within the area of the existing Ward A Hospital. Negotiations with the State have allowed the Decanting of patients and the subsequent demolition of the building to occur within the first few months of the construction period.

Listed below is a brief description of each of the Buildings:

- Operations Building: The building is a part two level construction that houses the administration, pharmaceutical and security requirements for both hospitals. The floor area of the building is approximately 2800 m2 and is located outside of the Hospitals 5.5m tall perimeter wall. One of the main functions of the building is the "Sally Port"; this facility is used as a search and checkpoint for all vehicles and personnel entering the Hospital.
- Acute Unit 1 & 2: ACU 1& 2 is a 55 bed building constructed on a Slab on Ground with timber framed walls and roof structure. The external walls are brick veneer with an upper level croft of 605 m2 that accommodates the administration requirements of the unit. The ground floor footprint of the building is approximately 105 m long and 56 meters wide.
- Acute Unit 3 & 4: ACU 3& 4 is a 59 bed building of the similar construction type and sizes as described in ACU 1&2.
- Long Stay Unit: The 20 bed LSU is a single floor building built with brick veneer construction techniques. The building is approximately 60m long by 40m wide. This building is designed to house both long term patients and staff facilities.
- Recreational and Rehabilitation Building: The Rec building includes an indoor basketball court, swimming pool, gym, craft and a visitor's centre. With a footprint of 56m long and 40m wide the single level building will be constructed with structural steel and clad in various wall finishes including metal wall sheeting and FC sheeting.

Prison Hospital

The Prison Hospital involves the construction of four new Buildings surrounded by a new 5.5 m high precast concrete wall. The Prison Hospital abuts the existing prison wall on the northern section of the site. The buildings are designed to accommodate prisoners in the convalescing stage of their treatment.
Listed below is a brief description of each of the Buildings:

- Gatehouse Building: The building is the entry point of the Prison Hospital from the Complex. The building is single storey and will be constructed

from a variety of precast and structural block work systems with a steel roof.

- Visitor, Service and an Administration: The building is a part 2 storey construction. It is founded on a Slab on Ground and will house the administration function of the facility and also serve as the visitors centre. Constructed from precast and load bearing block work with a steel framed roof system.
- Aged and Rehabilitation Building: Constructed in the same methods as outlined above, this building will house all aged and prisoners requiring rehabilitation.
- Mental Health Unit: Constructed in the same methods as outlined above, this building will house all prisoners suffering from ailments due to Mental Health.

2 Construction

2.1 General Methodology

The sites have similar construction methods with the Forensic Hospital domestic in its appearance and construction and the Prison Hospital domestic in its construction with a higher emphasis in security.

2.1.2 Forensic Hospital

The site will be constructed in a north to south direction with all trades sequenced to create continuity and flow of the work force.

Following the initial site establishment and the demolition of Ward A. excavation will commence in stages starting at the Operations Building and working progressively towards the southern end of the site.

During the excavation period the temporary construction haul roads will be constructed in the position of the permanent roads. These roads will be sealed to prevent dust, erosion and allow for the efficient capture of stormwater run off.

Upon completion of the earthworks the construction of the buildings will be in the following stages:-

- In ground services/ foundations
- Casting of the Slab on Ground
- External wall framing
- Roof framing
- Roof sheeting and external brickwork
- Internal wall framing and service rough ins
- Internal wall linings and finishes.
- Soft and hard landscaping

2.1.3 Prison Hospital

Like the Forensic hospital above, works within the Prison Hospital will work in a North to South direction.

Following the site establishment, excavation will take place. There is no demolition required at this site.

Upon completion of the earthworks the construction of the buildings will be in the following stages:-

- In ground services/ foundations

- Casting of the Slab on Ground
- External wall framing and precast elements
- Internal wall block work and framework
- Roof framing
- Roof sheeting and external finishes
- Internal wall framing and service rough ins
- Internal wall linings and finishes.
- Soft and hard landscaping

2.2 Environmental Management

During the construction of the project, several activities have been identified that could impact on the local environment. The following describes in broad terms how Multiplex will manage Environmental issues.

2.2.1 Noise and Vibration

Based on the geotechnical report, the material to be excavated ranges from fill to medium sandstone. This will be excavated by means of ripper, hammer and saws. The use of hammers will be supplemented by means of using the saws so that the rock is unconstrained. This will assist with both noise and vibration control.

2.2.2 Dust

During the demolition and excavation stages of the project, dust will settled by the use of water carts spraying water to prevent dust form starting.

The temporary construction haul roads will also be sealed to prevent trucks causing dust to rise.

During the demolition, excavation and construction phases of the project, an accredited traffic controller will control all truck movements to and from site. They will also provide traffic control and manage pedestrian movement. All trucks leaving the site will be required to have covered loads.

2.2.3 Soil and Erosion

With the assistance form our environmental consultant, silt traps, truck wash bays and the like will be put in place to control all possible soil erosion and to prevent silt form leaving the confines of the sites.

2.2.4 Waste Minimisation and Management Plan

Multiplex Constructions waste management strategy is in accordance with the Waste Minimisation and Management Act. The main focus of the plan is:

- Recovery of material for reuse or recycling. Material to be recovered include timber, brickwork, concrete, steel and aluminium

- Requiring suppliers to minimise packaging.

The site area of the development allows us to install additional 23m³ bins in the materials storage and recycling area as indicated on attached Site Establishment Diagram in Appendix A, inturn this allows a main marshalling area of rubbish collection close proximity to the work force and allows for recycling of building materials.

2.2.5 Construction related Traffic

A separate Traffic Management Plan has been prepared for the Project by Traffix Pty Ltd.

2.2.6 Dangerous Goods.

Dangerous goods are not allowed to be stored on Multiplex Projects. Goods such as Oxy Acetylene, petrol and the like are stored in accordance with NSW Workcover Authority Guidelines and the EPA guidelines.

3 Appendix A

- Site Locality Diagram
- Forensic Site Establishment Plan
- Prison Site Establishment Plan