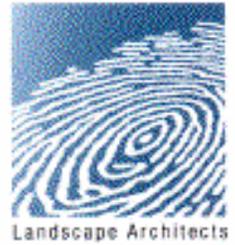


SITE IMAGE



## **LANDSCAPE DESIGN REPORT**

**Forensic & Prison Hospitals**

**Long Bay Correctional Complex**

**Number: LA 550**

**Issue 3**

**Prepared For :** Multiplex Constructions (NSW) Pty Ltd

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## 1.0 Introduction

This report has been developed as an indication of the extent of landscape works for this bid submission only.

The proposed development looks to extend and redevelop the current hospital facilities within the Long Bay Correctional Facility. The landscape component of these works seeks to:

### Forensic Hospital

- Provide a park setting for the built structures to sit within.
- Use the organic expression of the landscape to contrast against the 'rigidity of the system' it exists within
- Develop a series of outdoor meeting areas within the unsecured park setting for patients use
- Develop vistas from the secure courtyards into the unsecured area that provide visual stimulation and relief to patients.
- Provide pedestrian access through the park setting that is organic in form
- Extend street tree planting along Anzac Parade to the extent shown in accordance with Council's street tree masterplan.

### Prison Hospital

- Provide a planting strategy that supports the organisational configuration of the external spaces
- Provide way finding mechanisms that support the external walkways
- Provide a series of viewing courtyards for inmates to look out from within their cells. These viewing courtyard will be generated from similar elements including, as appropriate, turf mounding, low hedging and specimen trees

## **2.0 Existing Site**

The existing sites for these two facilities may be generally described as:

### **Forensic Hospital**

Located on the grounds of the existing Prison Hospital, the site will extend west and south beyond the current walled perimeter of this facility towards Anzac Parade and adjoining open grassland.

### **Prison Hospital**

This facility is to be constructed to the east of the existing MMTC facility where an array of Maintenance and Industry Facilities currently exist.

Existing trees, significant or otherwise, will not be impacted upon in the construction of each facility where possible. Existing trees will be incorporated into any soft landscape works outside the perimeter wall of each facility.

### **3.0 Landscape Design**

#### **3.1 Forensic Hospital**

The setting for the forensic hospital seeks to take on a park like quality, where the built form is to be subservient to the organic expression of this space. In the development of this setting the following considerations have been made:

##### **Building Surrounds**

These precincts have been developed to provide the buildings with a means of entry into the broader park setting of the landscape. This has been achieved by extending the building form into the landscape using formally arranged plant materials.

These precincts, and the plants they contain, have been designed in a manner that do not compromise security or possess inherent anti-social qualities (ie. Toxic sap, thorns, etc)

Plants will be low growing and while some will eventually require trimming it is the intention that no plant would be maintained at a height greater than 750mm.

No tree planting will occur in these zones, as the proximity to building facades may offer potential access to roof areas.

##### **Central Open Space**

The peripheral placement of the buildings, with the exception of the north-west quadrant, provides for an expansive unsecured open space precinct that has been developed as a traditional park type setting.

Within this space the ground plane will be shaped to form irregular undulations and mounding of turf, with the pedestrian footpaths weaving amongst the undulations to each of the buildings and others access points. The turf mounds will also be utilised to absorb grade differences across the site and aide in development of hydraulic requirements.

Across the undulating lawns will be informally arranged native canopy trees (with no hanging points) that, along with the undulating topography, will assist in providing visual interest from the secure courtyards. In addition a broad flat area of turf will be provided for active recreation.

##### **Pedestrian Circulation**

An organic network of pathways links the buildings through the open space. The alignment of these pathways have provided the opportunity to develop outdoor "meeting" areas for patient use. The intersections of the pathways and their entry into the park are marked by clusters of canopy trees (with no hanging points) and mass planting. The use of these markers at intersecting points aides in developing a rhythm through the space as well as providing opportunity for the creation of a series of differing outdoor experience within the bounds of the broader whole. For example, turf mounding may dominate the landscape in one precinct, while in another the dappled shade cast from a cluster of trees may become the dominant entity.

##### **Secure Courtyards**

The landscape treatment of these secure court yards is to consist only of turf and paving. As required by the brief a BBQ will be provided within a separate secured enclosure. The intent of providing minimal interest within the courtyard is to enhance the visual experience beyond the perimeter of its confines.

Natural turf is proposed as the porous ground treatment in these courtyards.

##### **Vegetable Garden**

A vegetable garden is to be provided within close proximity to the Long Stay Facility for residents to utilise and become involved with.

**Sterile Zone**

The sterile zone to the site is to comply with the security requirements for the complex.

**Site surrounds** (beyond the perimeter wall)

Supplementary landscape works including occasional tree planting, low mass planting and turf will be carried out in the general vicinity of the existing car park and its extension, as well as the JHO, FH Entry, Sally Port and Pharmacy buildings. A simple linear retaining wall and associated mass planting will also be constructed to the northern perimeter of the JHO building to accommodate grade differentials in this area.

### 3.2 Prison Hospital

A more structured design approach has been taken in the development of a landscape response to the Prison Hospital site. The constrained arrangement of the built form and its influence over the site, as well as the requirements for contained movement across and through the site have all assisted in the development of this approach. In the development of this setting the following considerations have been made:

**External Walkways**

The covered walkway that dissects the site is edged by areas of turf and low hedge planting in an attempt to articulate this linearity of form into the planting design. Directional use of plant materials at building entries are also employed to assist in the legibility of function.

An ornamental decomposed granite strip is employed on an axis perpendicular to the covered walkway to aide in organising the landscape with the built form.

**Viewing Courtyards**

The use of hedge planting and masonry walls are proposed to limit cross site views. As required by the brief views are to be restricted between the cells and from the cells to the external walkways.

The methodology adopted to mask the restrictive nature of this requirement is to design for a series of "viewing courtyards" that contain elements that fulfil the restricted view access requirements. These courtyards are intended for viewing from the cells only.

As the name suggests the viewing courtyards will incorporate plant elements that provide visual interest and seasonal variation. The ground planes are to be treated with a variety of coloured loose river gravels and turf while masonry screen walls may be coloured to suit the composition of the courtyard. Undulations in the ground plane may also be used to assist in the development of these courtyards.

It is the intention that each of the courtyards will have a unique arrangement or plant species, gravel, turf, shrubs and walls. This has been undertaken to provide a variety in outlook for both patients and staff within the facility.

**Secure Courtyards**

The secure courtyards are to be a mix of hardstand surfaces and turf only. The use of patterns stencilled onto these surfaces for ball games or visual interest will be provided.

All weather seating and a secure BBQ will be provided in accordance with the brief requirements.

**Staff Courtyards**

Staff Courtyards will be screened from patient views and will contain areas of paving and all weather seating.

**Sterile Zone**

The sterile zone to the site is to comply with the security requirements for the complex.

**Site surrounds (beyond the perimeter wall)**

Existing screen planting along the Bilga Crescent and Calga Avenue perimeter will be maintained.

**3.3 Streetscape**

The landscape to the site perimeter is to respond to the qualities of the surrounding district and is to minimise the visual impact of this facility. This aim will be achieved using the following device:

Street tree planting will be undertaken along the eastern side of the Anzac Parade carriage way. Tree species are to be installed as specified in Council's Street Tree Master plan. This will provide for the installation of *Eucalyptus haemastoma* (Scribbly Gum), south of Forrest Street.

In addition planting to the median strip, to the extent shown, will also be carried out.

**3.4 Materials and Construction Methodologies****Plant Species**

Plant species have been selected on the basis of their ability to withstand the existing and proposed site conditions. Native plants are preferred over the use of exotic and where possible endemic varieties will be used. Exotic tree species are proposed for their deciduous quality (allowing winter sun access to northern facades) or for their seasonal display (flower or foliage colour).

Consideration has also been given to select plants that do not contain thorns, spikes, nor toxic sap or bark qualities.

Plant material is proposed to be installed in a manner where row planting or mass planting in groups occurs. This is to facilitate the ease of maintenance.

Plant material will be arranged to ensure that interest is created year round. Rich and contrasting foliage characteristics are proposed.

All species used will be drought resistant, including the turf specified.

Trees proposed for installation shall be advanced in size in order to create an instant impact. It is proposed these specimens will be a minimum size of 100 Litre (between 2-2.5x 1.0M size) in the Prison Hospital and 45L (approx. 0.75x0.50 size) in the Forensic Hospital.

Refer to Appendix A for an Indicative Plant Species List

**Timber Stakes**

No timber stakes will be used to support installed trees.

**Hardstand Areas**

Areas of hardstand, including pathways and gathering spaces will be a coloured concrete or bitumen composite product. No segmental pavers will be used in the construction of these elements.

**Garden Edging**

Edging to gardens is to be spade edge, no timber, steel or plastic edge is proposed.

**Subsoil Drainage**

No subsoil drainage is proposed as this site is located above well drained sandy soils.

**4.0 Irrigation**

To enhance the quality of the plant materials used within this development, it is proposed that a fully automated irrigation system be provided. In order to fulfil industry best practice standards, all planting in planter beds will be irrigated using dripper systems in order to minimise evaporation and run off. Water for irrigation will be supplied from on site stored harvested rainwater. The areas of turf nominated in this development will be watered by retractable impact head sprays at night to limit wind drift and evaporation. Irrigation heads will be mechanically geared to reduce usage noise.

In addition to the aforementioned water saving devices the following points should also be noted:

- the system will be controlled by a fully automated stationer controller, connected to water sensor devices. The water sensors will detect when different zones have sufficient moisture and can override the system to prevent irrigation.
- The use of stationer controller allows different zones of water usage to be controlled. Accordingly a zone not requiring much irrigation can be regulated separately from a zone which may be north facing and require greater irrigation.
- Typically the system will be separated into 3 zones
  - Forensic hospital
  - Common External Areas (ie. Car parks & screen planting)
  - Prison Hospital

## **5.0 Maintenance**

### General

A 52 week defects liability period will be imposed on the installation of all the works commencing from the date of issue of the Certificate of Completion. These works will be carried out by others, not the Landscape contractor, and will require the undertaking of regular maintenance inspections and works during this period to replace any failed plants / finishes as determined to be defective. Following the completion of the defects period the centre management will establish a maintenance team to undertake regular maintenance of the landscape works. These arrangements will ensure the successful establishment and ongoing development of the landscape.

### Recurrent works

Throughout the planting establishment period, the Contractor will continue to carry out recurrent works of a maintenance nature including, but not limited to, watering, mowing, weeding, rubbish removal, fertilising, pest and disease control, returfing, staking and tying, replanting, cultivating, pruning, hedge clipping, aerating, renovating, top dressing, and keeping the site neat and tidy.

### Program

The Contractor will furnish a proposed planting maintenance program, and amend it as required.

### Log book

The Contractor will keep a log book recording when and what maintenance work has been done and what materials, including toxic materials, have been used. The log book will be available for inspection on request.

### Replacements

The Contractor will continue to replace failed and damaged plants.

### Mulched Surfaces

The Contractor will maintain the surface in a clean and tidy condition and reinstate the mulch as necessary including gravel surfaces.

### Grassed Areas

The Contractor will commence grass maintenance works at the completion of turfing, and continue to carry out grass maintenance throughout the contract and planting establishment period, maintaining healthy weed free growth.

### Weeding and Rubbish Removal

The Contractor will remove by hand rubbish and weed growth that may occur or re-occur throughout all

planted and mulched areas. This work shall be executed regularly so that at regular intervals the Contract areas may be observed in a completely clean and tidy condition, free from rubbish and weeds.

#### Pruning

The Contractor will carry out whatever pruning work are requested by the Principal, including any pruning of damaged growth or miscellaneous pruning considered as beneficial to the condition of the plants. All pruning works shall be undertaken to approved horticultural practices.

#### Spraying

The Contractor will report any evidence of insect attack or disease amongst plant material. As required the Contractor will spray with insecticide, fungicide or both in accordance with the manufacturers' recommendations. Submit proposal and obtain approval before starting this work.

#### Irrigation

The irrigation system is to be fully operational at all times for the 52 week maintenance period. All timers, piping, filters and fittings are to be replaced immediately on being found to be defective, damaged or non performing to full capability. All costs of replacement or repair of the system is the responsibility of the Contractor.

#### Urgent Works

Notwithstanding anything to the contrary of the Contract, the Contractor may be instructed by the Principal (or representative) to perform urgent maintenance works. Should the Contractor fail to carry out the work within seven (7) days of such notice, the Principal (or representative) reserves the right without further notice to employ others to carry out such urgent and specified work and charge it to the Contractor.

#### Planting

Trees and shrubs shall show signs of healthy vigorous growth. Trees shall be weed free.

#### Completion

A final inspection shall be made before the completion of the maintenance period. Any items requiring rectification shall be repaired before completion of the relevant works are finally approved.

#### Long Term Maintenance.

A requirement of these new facilities is their long term maintenance and upkeep over the full term of the contract. Accordingly a maintenance regime that performs to the parameters set out for maintenance during the defects liability period is required.

## Appendix A: Indicative Plant List

Botanical Name	Common Name	Size at Maturity (height and Spread)	Installed Size
<b>Street Trees</b>			
<i>Eucalyptus haemastoma</i>	Scribbly Gum	5-8.0x 4-6.0M	45L bag
<i>Banksia integrifolia</i>	Coastal Banksia	10-12.0x 3-6.0M	45L bag
<b>Trees</b>			
<i>Elaeocarpus reticulatus</i>	Blueberry Ash	10-12.0x 5-8.0M	75L bag
<i>Banksia integrifolia</i>	Coastal Banksia	10-12.0x 3-6.0M	45L bag
<i>Tristaniopsis laurina</i>	Water Gum	6.0x 5.0M	45L bag
<i>Syzygium luehmannii</i>	Lily Pily	20.0x 10.0M	45L bag
<i>Sapium sebiferum</i>	Sapium	5.0x 5.0M	75L bag
<i>Lagerstroemia indica</i>	Crepe Myrtle	6.0x 7.0M	75L bag
<i>Gleditsia triacanthos</i> 'Shade Master'	Honey Locust	8.0x 8.0M	75L bag
<b>Shrubs and Groundcovers</b>			
<i>Lomandra longifolia</i>	Mart Rush	1.0x 1.0M	150mm pot
<i>Leptospermum flavescens</i> 'Cardwell'	Flowering Tea Tree	0.80x 0.8.0M	150mm pot
<i>Isolepis nodosa</i>	Knobby Club Rush	0.40x 0.30M	150mm pot
<i>Hibbertia scandens</i>	Snake Vine	0.20x 1.0M	150mm pot
<i>Correa alba</i>	White Correa	1.50Mx 1.0M	150mm pot
<i>Correa reflexa</i>	Correa	1.50x 1.0M	150mm pot
<i>Carpobrotus glaucescens</i>	Pig Face	0.20x 1.0M	150mm pot
<i>Westringia fruticosa</i>	Coastal Rosemary	1.0x 1.0M	150mm pot