

Operational Landscape Management Plan

**New Maitland Hospital
Landscape Maintenance**

November 2021



MULTIPLEX

New Maitland Hospital Operational Landscape Management Plan

November 2021

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1.0 Introduction

1.1 Objectives

The objective of this Operational Landscape Management Plan is to outline to the Client HNELHD , the methods and maintenance requirements to establish a healthy and visually aesthetic landscape in and around the New Maitland Hospital.

1.2 Identify Management Zones

The three main management zones present on the hospital grounds consist of:

- Internal courtyard gardens
- External gardens and turf areas
- Bush regeneration and revegetation areas

1.3 Identify Actions and Tasks Required

The tasks and frequencies required to achieve a high-quality landscape to the hospital and its surrounds are in outlined in the Technical Specification BBE-LSA-SPC-001 rev 03. These tasks and frequencies assist in the management of the landscaping and revegetation on site to ensure a quality finish and meet certifying requirements.

A planting establishment period of 52 weeks commencing from the date of Practical Completion.

A maintenance program outlining proposed maintenance regime and frequencies is outlined below.



Figure 1.1 Internal Courtyard Gardens



Figure 1.2 Internal Courtyard Gardens



Figure 2.1 External Gardens



Figure 2.2 External Gardens and Turf Areas



Figure 2.3 External Gardens and Grass Areas



Figure 2.4 External Gardens and Turf Areas



Figure 3.1 Bush Regeneration and Revegetation Areas



Figure 3.2 Bush Regeneration and Revegetation Areas

2.0 Landscaping Works

2.1 Courtyard Gardens

There are five courtyard gardens within the new Maitland Hospital. These gardens are fully irrigated and provide a pleasant environment for the staff, patients and visitors to the hospital.

Maintenance requirements consist of the following:

- Watering
- Weeding and rubbish removal
- Pruning
- Disease and pest control
- Fertilising
- Irrigation

Weeding and Rubbish Removal

Remove by hand or approved method for all rubbish and weed growth that may occur or re-occur throughout the works area. Remove all weed and grass growth from around the base of all plantings. This shall be executed regularly so that at weekly intervals at least the areas may be observed in a completely clean and tidy condition free from rubbish and weeds.

Pruning

Undertake required pruning of shrubs and ground covers to create desirable forms, encourage compact bushy growth. Prune using procedures and practices that minimize adverse effects using equipment and tools that are clean and well maintained. All pruning shall be carried out by qualified horticulturalist.





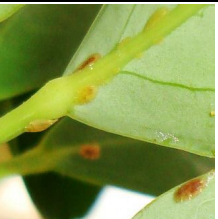
Disease and Pest control

Herbicide, insecticide and/or fungicide spraying, if considered necessary, shall be carried out in accordance with manufacturer's directions, at the contractor's expense ensuring that shrubs and ground covers are maintained in a healthy and vigorous condition and growth rate is not compromised. The contractor must advise what type of chemical is intended for use before such work is carried out.

The client shall report any incidence of insect attack or evidence of disease amongst plant material.

All indoor planters and pots are to be visually inspected for the presence of persistent and damaging insect pests or diseases on a weekly basis.

Due to the 'indoor' nature of the courtyard gardens particular consideration and awareness should be given to the following pest and diseases.

| Spider Mite | Aphid | Whitefly | Mealybugs | Scale |
|---|---|---|--|---|
|  |  |  |  |  |

Fertilising

Fertilizer shall be supplied and applied evenly to all landscape areas to ensure optimum plant growth, health and disease resistance through the provision of all essential macro and micronutrients commonly required by plants and thereby prevent any symptoms associated with nutrient deficiencies.

Irrigation

Regularly inspect, monitor and adjust irrigation and watering system to ensure proper operation and coverage and rectify any leaks, blockages or breakages in a timely fashion. If required, undertake pressure testing or flushing to identify and/or address any system malfunction. If vandalism or breakage occurs, the contractor shall notify the Superintendent for advice on costs of repairs.

Irrigation system program to suit the following:

- The precipitation requirements of the individual zones/stations with regard to types of plants.
- The infiltration rate of the soil/medium and associated physical factors seasons, evaporation, exposure, topography and local authority restrictions.
- An allowance for adjustment or shut down during and after periods of prolonged heavy rains.
- To co-ordinate water supply and to confirm watering regime against Federal and State Government legislation and restrictions at the time.

Equipment maintenance:

- Check all components for proper operation.
- Repair or replace damaged component with equivalent parts.
- Flush any dirt or foreign matter from the system and clear all blockages.

Operation:

- Ensure by adjustment or replacement of components, that the overall operation of the system is efficient and operational for the entire planting establishment period.

Supervision:

- Prevent excessive use of water.

Programming Automated systems:

- Check that they are programmed to coincide with optimum periods of water pressure and water absorption.

Public access:

- Do not inconvenience persons occupying the site by water spray or block normal pedestrian or traffic flow.

2.2 External Gardens and Turf Areas

The New Maitland Hospital grounds are surrounded by extensive gardens and turfed areas. The gardens feature a mixture of both native and exotic species of grasses, shrubs and trees.

Turf areas feature couch lawns and hydro seeded areas.

Both gardens and turf areas contain irrigated and un-irrigated areas.

Maintenance requirements consist, but not limited to, the following:

Watering

Weeding and rubbish removal

Mulched surfaces

Mowing

Pruning
Soil pH Correction
Disease and pest control
Fertilising
Green waste removal

Watering

All planted areas shall be adequately watered to keep them healthy and growing vigorously. The minimum acceptable watering requirement shall equal 25mm of natural rainfall or its applied equivalent, or a combination of both, during each period of one week, except in periods of heavy rain. Vary the watering requirement to suit seasonal conditions and maintain healthy plant material.

Site inducted watercarts, hoses and sprinklers are to be utilized to supplement and in areas of no irrigation.

Timing: Water at times of day to minimize water evaporation loss. Do not water during the hottest period of summer days.

Water restrictions: Coordinate the water supply and confirm the watering regime against Federal and State government legislation and restrictions at the time

Weeding and rubbish removal

Weekly rubbish collection and removal from site combined with fortnightly weeding will be executed to leave a clean and tidy site.

A combination of hand weeding and herbicide spraying will be used to obtain desirable results. Herbicide, if considered necessary, shall be carried out in accordance with manufacturer's directions.

Mulched surfaces

Maintain the surface in a clean and tidy condition and reinstate as necessary in accordance with original specification to all garden areas at the end of the maintenance period. The minimum depth of mulch at the completion of the plant establishment period is 75mm.

Mowing

Mow to maintain the grass height within the required range. Mow turf grass when air temperatures are below 32 degrees Celsius, and soil is below field capacity. Remove all litter, sticks, rocks and debris before mowing.

Ensure clean cutting. Alternate the mowing direction at each cut. Remove grass clippings from site after each mowing.

Prior to top dressing, mow the grass and remove clippings. Incorporate fertilizer into the top dressing material and mix evenly. Spread top dressing to a maximum depth of 10mm while filling depression and unevenness. Work top dressing into grass and water in thoroughly.

Pruning

Undertake required pruning of shrubs and ground covers to create desirable forms, encourage compact bushy growth, improve visibility and safety and create clearance appropriate to street signage and planting in close proximity to overhead power lines or balconies and windows. Undertake pruning using procedures and practices that minimize the adverse effects of pruning on the tree, shrubs and groundcovers. All pruning shall be carried out by qualified Arborist or Horticulturalists.

Soil pH Correction

Maintain soil pH in a range that is conducive to healthy plant growth and prevent toxicity or nutrient deficiencies caused by extreme pH ranges. Soil should be tested if plant growth is observed to be stunted, discoloured and after large amounts of fertilizer are used. Use appropriate soil conditioners to rectify soil pH as per manufacturers recommended rates.

Disease and Pest Control

Herbicide, insecticide and/or fungicide spraying, if considered necessary, shall be carried out in accordance with manufacturer's directions, ensuring that shrubs, groundcovers and turf are maintained in a healthy and vigorous condition and growth rate is not compromised. The contractor must advise what type of chemical is intended for use before such work is carried out.

All landscape areas including trees are to be visually inspected for the presence of persistent and damaging insect pests or diseases as part of regular landscape maintenance duties.

Fertilising

Fertilizer shall be supplied and applied evenly to all landscape areas to ensure optimum plant growth, health and disease resistance through the provision of all essential macro and micronutrients commonly required by plants.

Fertilizer is to be applied to all areas at quarterly intervals as per the attached Maintenance Manual. (Appendix 1)

Green Waste Removal

All green waste generated by maintenance work shall be contained within the immediate work area, and shall not leak into adjacent areas, or outside the site. All debris shall be contained and removed from site to a legal recycling depot location using suitable closed waste containers and vehicles.

2.3 Bush Regeneration and Revegetation Areas

The new Maitland hospital surrounds contain areas of existing remnant forest and vegetation, most notably "Spotted Gum Ironbark Forest" and "Hunter Lowlands Red Gum Forest".

Initial weeding and supplement tubestock planting of the ground layer using native ground species found in the adjacent ecological communities will ensure that minimal weed species be able to compete with the native vegetation.

Remnant vegetation surrounding the new Maitland Hospital is deemed RU2 Rural Landscape as per Newcastle Bushfire Report Assessment (Newcastle Bushfire Consulting).

All revegetation works undertaken in these areas should be based on bushland regeneration guide described in Buchanan (1993)

Maintenance requirements consist, but not limited to, the following:

- Watering
- Weeding
- Fertilising
- Pest and disease control
- Litter removal
- Plant replacement

Watering

Watering of tubestock and advanced should be continued as required until all plants are established.

Weather and site conditions will determine the frequency of watering for plants over the maintenance period. Moisture levels and plant health should be monitored weekly during drier periods.

Weeding

Weed removal must be undertaken to remove weed seedlings and regrowth from previous weed removal attempts. Weeds should be controlled not to exceed 10% within the first year of the contract.

Weed removal is required as weeds will dominate and out-compete the planted natives. Appropriate weed disposal is particularly important and offsite disposal essential.

Weeds should not exceed 5% cover at the completion of the maintenance period.

Weeding frequencies as outlined in the attached Maintenance Manual.

Fertilising

Given that locally occurring native species will be planted, the use of fertilizer would generally be likely to be considered unnecessary. A slow release, native fertilizer may be required at the start of the growing season if plants appear deficient or stalled in growth.

Pest and disease control

All plants must be monitored for pests and disease weekly for the first four weeks then monthly thereafter.

Plants significantly affected by pests and disease must be removed, disposed offsite and replaced.

Litter removal

Rubbish and litter should be removed by hand regularly and as per the Maintenance Manual. All litter collected should be removed from the site and disposed of appropriately.

Rubbish is to be removed from the site by hand in order to minimize disturbance to the substrate. Litter should be collected and disposed of appropriately, with particular care given to the removal of noxious weed material from the site.

Materials used in the planting process such as pots and tree guards should be removed and disposed of daily or when no longer necessary.

Plant replacement

In areas where plants have been completely removed as a result of where revegetation has failed, or is suffering from pests and/or disease, replanting must be undertaken each Autumn when temperatures are milder and the risk of frost is reduced, for the first year and annually thereafter.

Plants lost or damaged should be replaced to maintain a 90% survival rate of the planned species and recommended plant densities.

Only healthy tubestock should be purchased and correct planting procedures should negate stock losses.

Asset Protection Zone

The site contains an Asset Protection Zone which requires maintenance of the managed vegetation.

It is recommended that landscaping is undertaken in accordance with appendix 5 of Planning for Bush Fire Protection (2006) and maintained for the life of the development.

Trees should be located greater than 2 metres from any part of the roofline of a building. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 10 metres from an exposed window or door. Trees should have lower limbs removed up to a height of 2 metres above the ground.

The landscaped area should be maintained free of leaf litter and debris. The gutter and roof should be maintained free of leaf litter and debris.

Landscaping should be managed so that flammable vegetation is not located directly under windows.

Ground fuels such as fallen leaves, twigs (less than 6mm in diameter) and branches should be removed on a regular basis, and grass needs to be kept closely mown and, where possible, green.

3.0 Appendix 1 Landscape Maintenance Manual

New Maitland Hospital Maintenance Manual

| MONTH | WEEK | Monitoring | Watering | Fertilising | Litter removal | Weeding | Staking | Planting | Mowing | Irrigation | Pest & disease | Pruning | Mulching | Top dressing | pH correction | APZ | | | |
|-------|------|------------|----------|-------------|----------------|---------|---------|----------|--------|------------|----------------|---------|----------|--------------|---------------|-----|--|--|--|
| Jan | 1 | | | | | | | | | | | | | As required | | | | | |
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| Feb | 6 | | | | | | | | | | | | | | | | | | |
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| Mar | 10 | | | | | | | | | | | | | | | | | | |
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| Apr | 15 | | | | | | | | | | | | | | | | | | |
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| May | 19 | | | | | | | | | | | | | | | | | | |
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| Jun | 23 | | | | | | | | | | | | | | | | | | |
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| Jul | 27 | | | | | | | | | | | | | | | | | | |
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| Aug | 31 | | | | | | | | | | | | | | | | | | |
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| Sep | 35 | | | | | | | | | | | | | | | | | | |
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| Oct | 39 | | | | | | | | | | | | | | | | | | |
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| Nov | 43 | | | | | | | | | | | | | | | | | | |
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| Dec | 48 | | | | | | | | | | | | | | | | | | |
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