

711 HUNTER STREET, NEWCASTLE

LANDSCAPE MAINTENANCE PLAN

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE LANDSCAPE DA PLANS.

14 AUGUST 2023
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PREPARED FOR ST HILLIERS

URBIS

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1. LANDSCAPE ESTABLISHMENT AND MAINTENANCE

1.1. GENERAL

The purpose of the Landscape Maintenance Plan is to provide the maintenance staff of 711 Hunter Street with a guide on how to maintain the landscaping and the soil specific for the project.

It is intended as a guide only. Further information might be required to expand on deeper knowledge of the vegetation on site. Maintenance of the landscape vegetation should be adaptive and adjusted in response to what is learned on site and the current and always evolving industry best practice. All planting areas are to be maintained to ensure plants survival.

Refer to Urbis Landscape DA Plans for the Ground Floor, Level 5 Podium Communal Open Space, Façade Planters and Level 17 outdoor seating area for the extent of the landscape areas.

The work contained in this section comprises the establishment maintenance of all works executed under this contract. The Establishment Maintenance period begins at the Practical Completion of the Nature Based Solutions install. Maintain the contract areas for a period of 12 months.

Maintenance of the works prior to the date of Practical Completion shall not be included in this period.

If the maintenance period is extended, it is the Clients responsibility to meet the capital and maintenance costs of elements that require refurbishment.

Promptly make good any defects or damage resulting from defective construction, materials or workmanship to the complete satisfaction of the Superintendent during this period. The cost of replacement is the responsibility of the Contractor. In the event of any failure to rectify defective work the Superintendent may instruct that the work be carried out by another company, the cost of which will be charged to the Contractor.

Stolen items and plants are not included into the establishment maintenance. It is the Contractors responsibility to source and plant or place them in coordination with the facility management.

It is the Contractors responsibility to highlight areas or items which may require additional maintenance management to the facility management. These include emptying of rubbish bins, general regular cleaning etc.

Prior to the Handover allow for a clean up to presentation standard of the entire landscape works area.

1.2. TASKS

Maintain garden beds, façade planters, and green roofs to ensure healthy and vigorous tree, shrub and groundcover growth. Maintain shrub and groundcover areas to encourage a mass planting effect and to be free of large weeds.

Tasks which are required on a 12-month interval are to be complete prior to the end of maintenance compliance inspection. This includes all timber surfaces to be recoated with protective treatment as specified.

The Landscape Contractor shall maintain the contract areas by the implementation of industry accepted horticultural practices for 12 months. The landscape maintenance works shall include, but not be limited to, the following:

- Stakes and Ties;
- Pruning / Hedging;
- Weeding;
- Fertilising;
- Mulching
- Plant Replacement
- Litter Collection

- Insect and pest control;
- Mowing;
- Watering / Irrigation and
- Soil Testing;

1.2.1. Stakes and Ties

- Adjust/replace failed tree stakes and/or ties where required;
- Remove all stakes and ties from trees when no longer required and once plants are self-supporting;
- Ensure all ties are loose to allow free tree movement. Rectify if this is not the case;
- Any replacement ties to be hessian and fitted loosely to allow free tree movement and avoid ring barking.

1.2.2. Pruning / Hedging

- Use appropriate horticultural techniques when pruning trees, shrubs and groundcovers within garden beds;
- Trees shall be pruned in accordance with AS4343-2007 “Pruning of Amenity Trees” and best horticultural practice;
- Do not remove more than 10% of the trees live foliage without approval from the Project Manager;
- Maintain a clear trunk height of 1800mm if view or passive surveillance is required;
- Prune plants to prevent overhang of adjacent paths and roads;
- Prune all trees when limbs and branches hang lower than 3m over walkways;
- Prune out dead or diseased leaves and branches when discovered;
- Use sharp and clean pruning equipment;
- Prune deciduous trees during the dormant season (May to August) to facilitate the following:
 - To enhance the natural growth and shape of the plant.
 - Maintain proper sightlines for pedestrian and/or vehicular circulation.
 - To eliminate diseased or damage growth.
- Maintain hedging plantings in accordance with each species type to the best of ability. Consideration should be given to the physical assets on site (i.e. building or window obstruction). It is recommended that hedging plants be maintained by regular light tip pruning during the establishment period to ensure the tightening up of the lateral branches.
- Where plantings are located near or below window seals, maintain the hedge to at least 50-100mm below the window seal height, being conscious that height and shape consistency needs to be uniform across each podium to the best of ability.
- Where possible, maintain all vegetation off the façade of the building up to 50-100mm to protect the integrity of the building materials and allow maintenance access if required.
- Prune shrubs during the growing season. Do not prune shrubs into ball shapes, and do not prune off lower branches. Allow shrubs to spread and form masses to minimise weed growth below the shrubs.

1.2.3. Weeding

- Weed garden areas both by hand and by spraying, monthly in winter and fortnightly in summer (monthly for areas accessible by ropes);
- Use appropriate herbicide and/or manual weeding methods to control weeds in garden bed areas;
- Apply herbicides in accordance with regulation rates and manufacturer's recommendations and Safety Data Sheets;
- Spray only in calm wind conditions;
- Do not allow herbicide spray to drift onto adjacent planting, or houses;
- Use of biodegradable herbicide is mandatory;
- Where landscape and revegetation treatments or existing turf, grasses and plants to be retained are poisoned due to overspray, they shall be replaced by the Contractor with plants of the same species, size and quality;
- Do not spray when rain is imminent;
- Immediately bag hand pulled weeds and remove from site.

1.2.4. Fertilising / Fertigation

- Apply fertilisers to garden and turf areas to maintain healthy growth;
- Apply fertilisers to trees that contain all natural ingredients. Use a deep root pressurized injection system (where possible) or utilise a slow release tablet buried approximately 150mm into soil profile;
- Apply fertiliser to garden areas every 3 months or more frequently as needed;
- Apply 2SPEC fertiliser to turf areas twice per annum or more frequently as needed;
- In mixed planted areas (shrubs, groundcovers and perennials) use multi-purpose fertilisers. Acceptable products include Sure Start 14.4-0.4-4 + Microbes, Wetters, Humic and Kelp / Native Plant Food 9.2-2.3-5.7
- Determine the need for slow or rapid release fertiliser requirements based on inspection of garden and turf areas and seasonal factors;
- Use appropriate fertiliser for site situation and plant species;
- Fertigation can be used to apply fertiliser solutions through an irrigation system;
- Avoid applying fertiliser to root ball and base of main stem.

1.2.5. Mulching

- Maintain organic mulch to keep a consistent 75mm depth across all garden beds at ground level. Top up as necessary;
- Keep mulch 50mm away from tree and shrub stems at bases to minimise fungal infections;
- Provide a 50mm depth of gravel mulch to all podium garden beds annually in May. Mulch type is to match what is already in the garden bed in question;

- Keep mulch within the boundaries of garden beds;
- Maintain a consistent and uniform mulch finished surface level across garden beds.

1.2.6. Plant Replacement

- Inform the Project Manager of any failed, damaged or stolen plants within one week;
- Replace failed, damaged or stolen plants as soon as practically possible (typically within two weeks);
- All replacement plants will be subject to a 12-week establishment period;
- All replacement planting is to match the specified type as listed on the drawings;
- Contact the Project Manager with a quote for replacement planting;
- All replacement planting is to incorporate the necessary ground preparation and protection required to ensure sound establishment and long term performance. For example; adequate herbicide treatment, tree guards, mulching, weeding etc.;
- A 100% success rate of all replacement plants is expected.
- The contractor is liable for any plant replacement due to herbicide overspray.

1.2.7. Litter Collection

- Remove litter to maintain the site in a clean, litter free and presentable state at all times;
- Undertake a litter inspection and removal of the entire scope area weekly;
- Inform the Project Manager of litter considered to be outside the scope of these works. e.g. builders rubbish.

1.2.8. Insect and Pest Control

Avoid spraying:

- if ever possible;
- in wet weather;
- if wet weather is imminent;
- if target plants are still wet after rain;
- in windy weather; and
- if adjacent desirable species are too close to the target plants to be avoided.

Immediately report to the Project Manager any evidence of intensive weed infestation, insect attack or disease amongst plant material. Submit all proposals to apply chemicals and obtain approval before starting this work.

When approved, spray with herbicide, insecticide, fungicide as appropriate in accordance with the manufacturers' recommendations. Record in the service reports all relevant details of spraying activities including:

- Product brand / manufacturer's name,
- Chemical / product name,
- Chemical contents,
- Application quantity and rate,

- Date of application and location,
- Results of application, and
- Use approval authority.

1.2.9. Mowing and Top Dressing

Turf to be mowed on a fortnightly schedule

- Mow the turf to maintain a grass height of between 30-50mm;
- Trim edges to maintain straight lines as required;
- Do not remove more than one third of the grass height at any one time. Remove grass clippings from the site after each mowing;
- Add aeration and top dress to a maximum of 10mm as necessary to fill depressions and hollows in the surface.

1.2.10. Watering / Irrigation

Establishment of landscaped areas will require regular irrigation during the 12-month establishment period. As the landscape becomes established, the irrigation frequency might be reduced to one or two deep waterings per week with additional watering during periods of high temperatures (above 30 degrees). Adjust your watering to reflect weather changes. During the establishment period all trees and shrubs shall be watered by thorough deep watering at least every week during the dry season (usually November to February) to keep the ground moist to a depth of at least 300mm. To keep the plants healthy and vigorous, and to prevent wilting, irrigate approximately 30mm of water per week. Irrigate trees and shrubs longer and less frequently rather than short and frequent events to promote deep root systems. The irrigation system is fitted with a rain sensor, to prevent irrigating during periods of heavy rainfall.

The tree(s) may require large volumes of water to be applied by hand at the time of planting and repeated twice weekly during the initial period (min. 6 weeks). Test, rectify and adjust the irrigation system or watering regime as necessary to maintain optimum soil moisture levels in and around the root plate(s). The root plate (and not the surrounding backfill soil) is the tree's main water source for many months after transplanting. Ensure it is kept moist (but not over watered) at all times.

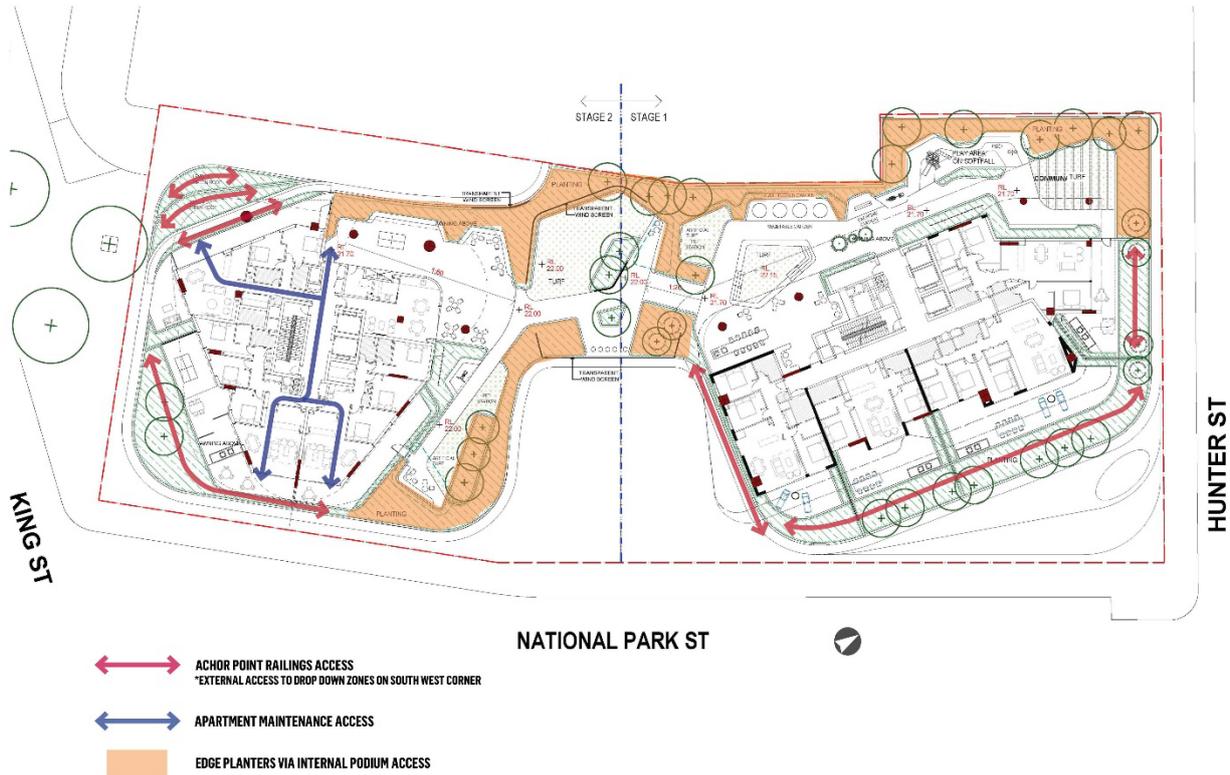
If no irrigation system has been provided, the Contractor is to reasonably provide hand-held or managed temporary sprinklers or the like to ensure that lawn areas and each individual plant receives the required amount of water to maintain healthy and vigorous growth.

1.2.11. Soil Testing

Provide detailed chemical and physical test results of the root plate of each tree and backfill soil 2 weeks prior to the completion of the Establishment Maintenance period. Rectify any identified chemical or physical soil imbalances as per the testing laboratory recommendations prior to the completion of the Establishment Maintenance period.

1.3. SAFETY

- Refer to future architect's drawings for location of safety railings and anchor point. Note: Throughout Design Development phase locations for safety railings and anchor points will be integrated into the design.
- See diagram below for consideration of safe access to edge planting zones. Where safe access isn't possible access. Report any potential hazards or solutions associated with plant maintenance at the upper levels areas to the Project Manager. e.g. anchor defects.



1.4. ESTABLISHMENT MAINTENANCE LOG

Keep a detailed maintenance service report of all activities undertaken including watering regimes and fertiliser applications. This report is to be given to the Landscape Architect and Facility Manager at the completion of the Establishment Maintenance period.

1.5. SITE MEETINGS

- On-site meetings are to be coordinated with the Project Manager and Contractor to ensure all works on site are progressing and to raise any new items or concerns.
- Site meetings are to be coordinated as required.

1.6. ESTABLISHMENT MAINTENANCE TASKS

Task	Standard
Turfed areas	<ul style="list-style-type: none"> • Test, rectify and adjust the watering regimes or water manually regularly as necessary to maintain optimum soil moisture levels in all areas • Fertilize at 3-month intervals • Aerate and top dress at 6-month intervals • Replace bare patches over 1m² immediately • Trim edges to maintain straight lines • Check regularly for pest infection and apply pest treatment • Weed regularly to keep weed infestation to a minimum • Mow regularly as required • Apply 10mm deep clean washed river sand as a top dressing at 6-month intervals
Garden beds	<ul style="list-style-type: none"> • Test, rectify and adjust the watering regimes or water manually regularly as necessary to maintain optimum soil moisture levels in all areas • Replace failed plans immediately • Weed regularly (weekly) • Top up organic mulch at 6-month intervals • Top up gravel mulch as required • Mulched surfaces are to be kept clean and tidy and free of any deleterious material and foreign matter • Check plants weekly of pest and disease infestation • Spray for pests and disease infestations when the pest and fungal attack has been identified • Apply a balance of man-made and natural slow release fertiliser to all planting areas in a 3-month interval. • Check for signs of nutrient deficiencies (yellowing of leaves, failure to thrive), and adapt fertiliser regime to suit. Treat as required • Aerate at 6-month intervals • Clean all leaves of plants which are undercover at a monthly interval
Trees and shrubs	<ul style="list-style-type: none"> • Trees may require up to 50L of water to be applied by hand at the time of planting and repeated twice weekly during the initial period (minimum 6 weeks). Test, rectify and adjust the watering regimes or water manually regularly as necessary to maintain optimum soil moisture levels in all areas • Replace failed plants immediately • Adjust and/or replace stakes and ties monthly. Remove staking and visible guying after 11 months. • Prune shrubs and trees in accordance to the maintenance schedule. In general, shrubs and trees will be tip pruned to ensure a strong, sound form and dense, bushy appearance. Remove of overhanging branches or foliage that prevents proper function of a space e.g. pathways, seating areas, sightlines. Remove branches which are at risk of storm damage • All tree pruning to be carried out by a qualified arborist • Apply root hormone periodically once new roots have begun to grow (fertiliser is unlikely to be effective until new roots are absorbing water). • Clean all leaves of trees and shrubs which are undercover at a monthly interval • Weed regularly (weekly or fortnightly)

	<ul style="list-style-type: none"> • Top up organic mulch at 6-month intervals • Top up gravel mulch as required • Mulched surfaces are to be kept clean and tidy and free of any deleterious material and foreign matter • Check plants weekly of pest and disease infestation • Spray for pests and disease infestations when the pest and fungal attack has been identified • Apply a balance of man-made and natural slow release fertiliser to all planting areas in a 3-month interval. • Check for signs of nutrient deficiencies (yellowing of leaves, failure to thrive), and adapt fertiliser regime to suit. Treat as required • Aerate at 12-month intervals
Irrigation	<ul style="list-style-type: none"> • Adjust irrigation control as required by the respective season • Check irrigation system of possible leaks and sound operation of automatic system monthly • Flush irrigation system at 12-month intervals. • Maintain irrigation component as required by the manufacturers manual
Tree Transplanting	<ul style="list-style-type: none"> • Monitoring / adjusting the irrigation system or watering regime in liaison with the Landscape Contractor, water if required • Test, rectify and adjust the watering regimes or water manually regularly as necessary to maintain optimum soil moisture levels in all areas • Spray for pests and disease infestations when the pest and fungal attack has been identified • Apply fertilize once root growth & water uptake has begun • Wrap trunk/branch to prevent sun scald if necessary due to leaf loss >40% • Prune dieback • Top up soil and mulch • For thin or smooth bark trees, if more than 40% of the foliage is shed due to post-transplant stress then the trunk and branches (greater than 50mm diameter) are to be wrapped with light coloured biodegradable paper or hessian to reduce bark scalding. Wrap from the bottom of the trunk upwards so the layers overlap and thus shed water. • Organise soil testing • Adjust and/or replace stakes and ties monthly. Remove staking and visible guying after 11 months. • Weed regularly (weekly)

DISCLAIMER

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LANDSCAPE MAINTENANCE PLAN

14.08.23

711 HUNTER STREET, NEWCASTLE

This Program of Works is to be implemented in accordance with the Landscape Maintenance Plan

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PROACTIVE IMPROVEMENT REPORT AND QUOTE TO UNDERTAKE WORKS												
Report												
GARDEN BEDS & FAÇADE PLANTERS												
stakes and ties	█	█	█	█	█	█	█	█	█	█	█	█
pruning (ongoing as required)	█	█	█	█	█	█	█	█	█	█	█	█
weeding	█	█	█	█	█	█	█	█	█	█	█	█
fertilising												
top up mulch												
replacement planting (as required)	█	█	█	█	█	█	█	█	█	█	█	█
TURF												
mowing	█	█	█	█	█	█	█	█	█	█	█	█
fertilising												
weeding	█	█	█	█	█	█	█	█	█	█	█	█
top dressing	█											
TREES												
pruning												
fertilising												
mulching	█	█	█	█	█	█	█	█	█	█	█	█
weeding	█	█	█	█	█	█	█	█	█	█	█	█
stakes and ties	█	█	█	█	█	█	█	█	█	█	█	█
LITTER COLLECTION												
litter collection	█	█	█	█	█	█	█	█	█	█	█	█