



AUS-SPEC

Infrastructure Specifications

0259 Landscape - Maintenance



0259 LANDSCAPE – MAINTENANCE

IMPORTANT: This document has been adapted from the NATSPEC suite of specification templates for use in the MidCoast Council area by both Council and industry. NATSPEC regularly updates the base templates (currently in April and October each year), and Council may incorporate changes into its version of AUS-SPEC from time to time. To assist in highlighting any changes made by Council to the NATSPEC templates, the following conventions are used.

- See ANNEXURE M at the end of this document which contains (where practical) MidCoast Council customisations (also known as 'office master' text). References to the Annexure are to also be inserted at relevant clauses in the main body of the document.
- Where content is added to the main body of the document, it is to be shown **in brown text like this**.
- Where content is deleted or excluded from the main body of the document, it is to be shown ~~struck through like this~~. Such clauses are to have no effect.

Where there is a conflict between main body text and MidCoast Council specific clauses, Council's specific clauses shall prevail.

1 GENERAL

1.1 RESPONSIBILITIES

General

Requirement: Provide landscape maintenance of the contract area during the **Defects Liability Period and (if applicable)** maintenance period.

Performance

Extent of maintenance:

- Weeding of lawn, garden bed areas, and pavement.
- Supply and spreading of fertiliser to lawn, garden bed areas and pots.
- Supply and installation of mulch to existing garden bed areas and pots.
- Pruning, trimming and tree surgery.
- Adjustment of tree stakes and ties.
- Insect and disease control of lawn, shrubs and trees.
- Mowing and edge trimming to all lawn areas including collection and removal of clippings.
- Diagnosis of cause of dead or failed plants and recommendations for corrective actions.
- Replacement of dead or failed plants and lawns.
- Maintenance of irrigation systems.
- Removal of rubbish and debris in garden areas.
- Removal of leaves, mulch and organic debris from pavement and drains.
- Keeping a log book of maintenance activities.
- Providing monthly reports.

Maintenance period: As required by any DA consent conditions or REF recommendations.

Maintenance procedures: As documented, and to the **SELECTIONS Maintenance schedule**.

Particular procedures: As required by any DA consent conditions or REF recommendations.

Procedure for additional works: As required by any DA consent conditions or REF recommendations.

1.2 THE SITE

Record drawings

~~Availability~~

Site restrictions

Site limitations: Comply with the following restrictions on the use of the site: As required by any DA consent conditions or REF recommendations.

Entry permits: Make available, to persons entering designated secure areas, valid entry permits. Make sure these persons comply with conditions of entry.

Designated secure areas: As required by any DA consent conditions or REF recommendations.

Conditions of entry: As required by any DA consent conditions or REF recommendations.

Secure areas

Secure area visitors: At least 10 working days before entry is required, submit the full name, address, and date and place of birth of persons required to enter designated secure areas.

- Purpose of submission: Review by Superintendent.

Protection of persons and property

Temporary works: Provide and maintain required guards, fencing, footpaths, signs and lighting.

Accessways, services: Do not obstruct or damage footpaths, drains and watercourses or other existing services in use on or adjacent to the site.

Property: Do not interfere with or damage property which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

Rectification

Accessways, services: Rectify immediately any obstruction or damage to footpaths, drains and watercourses or other existing services in use on or adjacent to the site. Provide temporary services whilst repairs are carried out.

Property: Rectify immediately any interference or damage to property which is to remain on or adjacent to the site, including adjoining property encroaching onto the site, and trees.

1.3 GENERAL CONDITIONS

Contract

~~Form of contract~~

Payment

Payment period

Bond: As required by Council's Development Engineering Handbook.

Expenditure of the bond: By the principal upon unsatisfactory maintenance for any related purpose, including to employ others to carry out such work.

Contractor and staff

~~Minimum Qualifications and/or Affiliation with Association~~

Representative: Nominate a senior partner/personnel experienced in maintenance nursery practices and horticulture, to be responsible for taking and carrying out instruction, and reporting to the principal.

Special instructions

Priority: If instructed by the principal attend to certain areas and procedures as a priority. Obtain approval for additional costs.

Notice

Inspection: Provide two days' notice of the following operations:

- Application of herbicide.
- Application of fertiliser.
- Each site maintenance visit.
- Work affecting public access or amenity, excluding public road closures which are to comply with 1101 Traffic management worksection.

Water restrictions: Provide immediate notification of any new restrictions that affect performance of maintenance in accordance with the Contract.

Reporting

Monthly report: Submit regular reports by the last Friday of each month, to the SELECTIONS, MAINTENANCE REPORT, Monthly reports schedule and as follows:

- General status of the works.

- Soil test results included as required for the fertilising programs.
- Any plant replacement requirements.
- Irrigation operation schedules and water consumption.

Incident reports: Report immediately, verbally and confirmed in writing, any disturbance or incidence affecting or likely to affect the scheduling of the works.

Log book

Records: Log the following on a weekly basis:

- Description, time and method of application of toxic material.
- Maintenance work details.
- Inclement weather to verify inability to carry out work within the specified time frame.

Availability: Upon request.

Replacement plants

Species: Provide written certification that all plant material is true-to-species and type, and free of disease and fungal infection.

Coordination with others

Other contractors: Coordinate work with other contractors to minimise conflicting activities and delays. If disturbances to planned works are unavoidable, make arrangements to work around them.

2 PRODUCTS

2.1 FERTILISER

General

Type: Proprietary fertilisers, delivered to the site in sealed bags and marked to show manufacturer or supplier, weight, fertiliser type, N:P:K ratio, recommended uses and application rates.

Fertiliser schedule

Fertiliser key	Location	N:P:K ratio	Application rate

3 EXECUTION

3.1 GENERAL

Weeding

Requirement: Remove unwanted broadleaf plants and grasses considered invasive to the locality.

Program:

- Lawns: Quarterly.
- Trees and shrubs: As required for planted, paved and mulched areas to be weed free when observed at fortnightly intervals.

Vigorous ground covers: Keep 200 mm clear from the base of any shrub or tree. Remove as follows:

- Small areas: By hand.
- Large areas: Proprietary herbicides.

Herbicide application: Apply as follows:

- To the manufacturer's recommendations and the material data and safety data sheets.
- When the weather is humid with moderate temperatures and maximum sunlight.
- When the ground has adequate soil moisture.
- Avoid windy days or if rain is likely to follow within 12 hours.

Insect and disease control

Requirement: Control any insects or diseases affecting the lawn and garden bed areas as follows:

- Identify the problem.
- Execute the correct treatment until the problem has been eliminated.
- Apply hazardous material out of normal working hours.
- Protect staff and public from exposure to hazardous materials.

3.2 GRASS SURFACES

Mowing and trimming

Preparation: Remove litter and fallen branches before mowing.

Grass height: Consistent with the growth habit of the grass variety and maintained at 25 mm to 40 mm throughout the year. Do not remove more than one third of the grass height at any one time.

Program: Weekly during the mowing season, November to March, and at fortnightly intervals during April to October. Do not mow during wet conditions.

Raking: Once every month before mowing during the mowing season, rake the grass with a flexible rake. On alternate mowings, adopt a north-south and east-west pattern.

Edges: At the same time as mowing, trim lawn edges to plant beds, pathways, base of trees and other obstacles. Do not damage trees or shrubs.

Clippings distribution: Evenly distribute over the mown areas or remove from the mown areas or site as directed. Do not spread evenly over the planted and mulched areas if these areas are to remain grass and weed free.

Non-selective herbicide: Make sure application does not exceed the area limits of normal manual trimming. Repair any damage from overuse or over spray.

Fertilising

Program:

- Regular application: Each September and April.
- Additional application: Each November and February at reduced rates.

Soil pH adjustment: Apply additional fertilisers and soil conditioners as indicated from soil testing or from the physical soil structure. Maintain a pH range of 5.5 to 6.5.

pH testing program: Two year schedule starting in the first year of the contract, or for the duration of the Defects Liability Period (whichever is greater).

Application: Spread as follows:

- Dry: Crush lumps and broadcast dry material by hand or mechanically when the lawn is dry.
- Spray: Acceptable.
- Prevent fertiliser from leaching to adjoining planted beds, particularly those with sensitive native trees and shrubs.

Topdressing

Topdressing material for established lawns: Weed free imported sandy topsoil to a depth of 5 mm.

Program: as required by DA consent conditions, REF recommendations and approved management plans.

Topdressing material for remediation of depressions or irregularities: Apply coarse or medium texture soil, to AS 4419, suitable for application to turf or grass seeded areas.

Renovation

Established lawns of sandy soil profile: Renovate by dethatching or verticutting.

Program: Annually during the maintenance period, timing the season appropriate to the species, unless required otherwise by any approved management plans.

3.3 TREES AND SHRUBS

Pruning and trimming

General: Prune to reflect the natural growth, flowering and regrowth habit of the individual species.

Program generally: Spring and Summer and on a spot basis as required.

Shrubs: Prune after flowering.

Hedge trimming: Schedule trimming at times that maintains the character and design of hedges. Allow up to three times per season.

Tip pruning:

- Purpose: To encourage development of new shoots during the active growing season.
- Method: Removal of the top 25 mm or growing tip of each branch.
- Restriction: Do not remove buds before the flowering season in those plants that have terminal flowers.

Radical pruning:

- Purpose: To maintain a hedge or formal shape or when a particular problem, growth habit, damage, or disease requires branch removal.

Tree pruning:

- Purpose: to eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner.
- Maintain sight lines to signs and lights.
- Maintain visibility for personal security.

Tree branch removal:

- To AS 4373.
- Give notice and engage a suitably qualified arborist.

Fertilising

Fertilising program: Base the program on soil testing results.

Soil testing: Test soil as follows:

- At the start of the contract.
- Take samples from a cross section of planting beds.

Soil pH adjustment: Apply additional fertilisers and soil conditioners as indicated from soil testing or from the physical soil structure. Maintain a pH range of 5.5 to 6.5.

Program:

- Regular application: Each September and March.
- Sensitive native species: Apply fertiliser at an appropriate dosage.

Trees:

- Fertiliser type: Appropriate to the species, determined by a suitably qualified person or in accordance with any approved management plans.
- Dose: Appropriate to the species, determined by a suitably qualified person or in accordance with any approved management plans.
- Application: Apply pill to the root zone to the supplier's recommendations, or (if not specified) at a distance from the trunk equal to the spread of the foliage. Make holes 400 mm deep to take the pill, equally spaced around the plant and backfill with sand.

Micro nutrients: Apply 1 kg of urea in 20 litres of water per 100 m², through a hose proportioner every four weeks during Summer.

Stakes and ties

Generally: If plants are not self-supporting or if stakes are damaged, stake or re-stake the plants as follows:

- Drive three hardwood stakes placed diagonally with the first stake on the opposite side to the prevailing winds.
- Do not single stake large plants.

Removal: If plants are robust with well developed systems and no longer require support, remove stakes and ties.

Plant replacements

General: Before replacement, diagnose cause of plant failure and report findings. If failure is due to species incompatibility with site conditions, recommend alternative species. Replace all evergreen plants that have died or lost 50% of their normal foliage cover. Provide replacement plants as follows:

- Of the same species and variety (or approved alternative) and of the closest commercially available size.

- With a balanced root system in relation to the size of the plant and conducive to successful transpiration. Inspect the root conditions of plants by knocking plants from their containers.
- Without signs of having been stressed at any stage during their development due to inadequate watering, excessive shade/sunlight, suffered physical damage or have restricted habit due to growth in nursery rows.
- Grown in final containers for not less than twelve (12) weeks.

3.4 WATERING

Grass and planted areas

Generally: Maintain a vigorous healthy appearance.

Application rates: Soak to a depth of 150 mm for grass areas and 300 mm for planting. Avoid frequent dampening of the surface. Allow the surface of the soil to partially dry out between waterings. Confirm soaked depth and record in the log book.

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

Water restrictions: Coordinate the water supply and conform to legislation and restrictions applying at the time.

Hand watering

General: Manually water all lawn and planting areas in the absence of an irrigation system or until the proposed irrigation system is fully operational.

Irrigation

Irrigation system program: Adjust 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, of seasons, evaporation, exposure, topography, local authority restrictions.
- Adjustment or shut down during and after periods of prolonged heavy rains.
- Water supply and watering regime of legislation and restrictions applying at the time.

Equipment maintenance: Conform to the following:

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

System maintenance: Conform to the **Irrigation system maintenance schedule**.

Programming

Automated systems: Program to coincide with optimum periods of water pressure and water absorption.

Public access: Do not inconvenience persons occupying the site by water spray or by blocking normal pedestrian or traffic flow.

3.5 MULCHING

General

Clean up: Remove all mulching materials from lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.

Requirement: Maintain a minimum depth as follows:

- 75 mm for organic mulch.
- 50 mm for inorganic mulch.

Top up: Areas of excessive wear with mulch to match existing.

Organic mulch

~~Existing material: Not used~~

Inorganic mulch

~~Existing material: Not used~~

Appearance: Keep mulched areas clean and tidy with no soil disturbance evident on the surface of the mulch.

3.6 INCIDENTAL WORKS

Supplementary works

General: Execute the following:

- Removal of waste from maintenance work.
- Removal of leaf litter fortnightly during leaf fall.
- Wash paving on completion of herbicide application.

Furniture, signage and barriers

Scope: All fixed and movable features noted in the record drawings.

Furniture and pots:

- Move and relocate as required for maintenance of the area.
- Repair or replace items damaged by the maintenance contract staff.

Signage: Maintain sight line visibility.

Drains

General: Inspect and clean all drainage structures and pit covers and make sure they are in proper working order. Remove all organic debris.

Frequency: As required so that all overflow drains are cleared when observed at fortnightly intervals.

4 SELECTIONS

4.1 SCHEDULE OF RATES

These schedules assume the contract is tendered on a Schedule of Rates basis. For private development works use of this schedule is optional, at the Superintendent's discretion.

Schedule of rates schedule

Item	Unit	Quantity	Rate	Total
Preliminaries/establishment (one off cost)	item			
Mowing and edge trimming	item			
Watering	item			
Irrigation repair	item			
Manual watering	item			
Fertiliser: Lawn	m ²			
Fertiliser: Garden/pot	m ²			
Fertiliser: Trees	no			
Weeding	item			
Insect and disease control	item			
Pruning and trimming	item			
Plant replacement: In lawn areas: 150 mm	no			
Plant replacement: In lawn areas: 5 litre	no			
Plant replacement: In lawn areas: 15 litre	no			
Plant replacement: In lawn areas: 25 litre	no			
Plant replacement: In lawn areas: 35 litre	no			
Plant replacement: In lawn	no			

Item	Unit	Quantity	Rate	Total
areas: 75 litre				
Plant replacement: In lawn areas: 100 litre	no			
Plant replacement: In lawn areas: 200 litre	no			
Plant replacement: In garden areas: 150 mm	no			
Plant replacement: In garden areas: 5 litre	no			
Plant replacement: In garden areas: 15 litre	no			
Plant replacement: In garden areas: 25 litre	no			
Plant replacement: In garden areas: 35 litre	no			
Plant replacement: In garden areas: 75 litre	no			
Plant replacement: In garden areas: 100 litre	no			
Plant replacement: In garden areas: 200 litre	no			
Staking and tying	item			
Mulching: Pine bark graded	m ³			
Mulching: Pine flake	m ³			
Mulching: Crushed gravel	m ³			
Lawn renovation	item			
Topdressing	m ³			
Incidentals (including protective clothing)	item			

Labour rates schedule

Item	Ordinary time \$ per hour	Overtime \$ per hour
Additional labour charge: Labourer	\$	\$
Additional labour charge: Tradesman	\$	\$

4.2 MAINTENANCE REPORT

Monthly reports schedule

Item	Action
Plant material	Replace failed plants
	Additional planting
	Treat for disease or insect attack
	Tree surgery
	Fertilising generally

Item	Action
	Fertilising for specific nutrient deficiencies
	Thin out planting
	Pruning/trimming
Turf	Returfing
	Seeding
	Treat for disease
	Topdressing
	Weeding
	Mowing/trimming
Soil	Erosion/bank stabilisation
	Additional soil
	Soil conditioner
	Weeding
Mulch	Top up mulch
Rubbish removal	Generally remove bottles, paper, cigarette butts etc.
	Remove leaf, litter from path and paved areas
Irrigation	Replace parts
	Repair
	Clean out
	Adjust
	Clean out subsurface drains
Paving and pathways	Repair dips, hollows, irregularities
	Remove stains and graffiti
	Replace sections of uplift
	Clear main pathway drains of debris
	Weeding
Infant playground	Make sure that all play structures are secure and in working order
Fencing	Repair fencing
Bench/seat	Repair loose or damaged parts
Bollard	Reinstate in original position
Lighting	Replace blown lamps and damaged diffusers
Barriers	Replace broken or dislocated palings or rails

4.3 MAINTENANCE PROCEDURE

Maintenance schedule

WEEK	SPRING (Sept, Oct, Nov)	SUMMER (Dec, Jan, Feb)	AUTUMN (Mar, Apr, May)	WINTER (Jun, Jul, Aug)
1	Mow and trim lawns	Mow lawns; weed	Mow lawns	Weed
2	Weed; trim and	Weed; mow lawns,	Weed; mow lawns,	Mow and trim lawns

WEEK	SPRING (Sept, Oct, Nov)	SUMMER (Dec, Jan, Feb)	AUTUMN (Mar, Apr, May)	WINTER (Jun, Jul, Aug)
	adjust trees and shrubs	trim and adjust trees and shrubs	trim and adjust trees and shrubs	Trim and adjust trees and shrubs
3	Mow and fertilise lawns; treat plant material for insects and disease	Mow lawns; weed; treat plant material for insects and disease	Mow and trim lawn	Weed
4	Weed; topdress, condition lawns and oversow bare patches; issue maintenance report	Weed; mow and trim lawns; issue maintenance report	Weed; mow lawns; issue maintenance report	Mow lawns; issue maintenance report
5	Fertilise all trees and shrubs in garden beds; mow and trim lawns	Mow lawns; weed	Mow lawns	Mow lawns
6	Weed; inspect mulch for deficiencies in cover; check and adjust irrigation	Mow lawns; check and adjust irrigation	Weed; inspect mulch for deficiencies in cover; check and adjust irrigation	Mow and trim lawns; treat for insects and disease; check and adjust irrigation
7	Reinstate mulch as required; treat plant material for insects and disease; mow lawns	Mow lawns; weed	Reinstate mulch as required; mow, trim and fertilise lawns	Weed
8	Weed; inspect condition of paving and furniture; issue maintenance report	Mow and trim lawns; inspect condition of paving & furniture; issue maintenance report	Weed; inspect condition of paving and furniture; issue maintenance report	Mow lawns; Inspect condition of paving and furniture; issue maintenance report
9	Mow and trim lawns	Mow lawns; treat plant material for insects and disease	Mow lawns	Weed
10	Weed; mow lawns	Mow and topdress lawns	Weed; treat plant material for insects and disease	Mow and trim lawns
11	Mow and fertilise lawns; trim and adjust trees and shrubs	Mow lawns; trim and adjust lawns; weed	Mow and trim lawns; trim and adjust trees and shrubs	Prune back trees and shrubs after flowering
12	Weed; mow lawns; treat plant material for insects and disease	Mow, trim & fertilise lawns	Weed	Mow lawns; treat plant material for insects and disease
13	Check and adjust irrigation; mow lawns; issue maintenance report	Check and adjust irrigation; mow lawns; weed; issue maintenance report	Check and adjust irrigation; mow lawns; weed; issue maintenance report	Check and adjust irrigation; weed; issue maintenance report

4.4 IRRIGATION

Irrigation system maintenance schedule

Item	Frequency
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Filters – mainline	Monthly
Electrical source output (auto system)	Monthly
Controller (automatic systems)	Monthly
Operation – progression - Station to Station.	Weekly
Proper activation of valves	Monthly
Proper timing of stations	6 monthly
Proper time and day readings	Weekly
Exterior appearance	6 monthly
Valve operation	6 monthly
Open, close completely (weeping)	Weekly
Sprinkler operation	Weekly
Rotaries – clogged nozzles	2 monthly
Plant obstructed pattern	2 monthly
Arc coverage	2 monthly
Radius adjustment	2 monthly
Pop-up action	2 monthly
Riser seal leaks	2 monthly
Set to grade	2 monthly
Coverage pressure	2 monthly
Rotational speed	2 monthly
Clogged screens	2 monthly
Head damage	2 monthly
Piping	2 monthly
Leaks – broken or cracked pipe	As Needed
Bad solvent welds, bad threaded	As Needed
Connection	As Needed
Clogged pipe	As Needed

4.5 ANNEXURE - REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 4373	2007	Pruning of amenity trees
AS 4419	2018	Soils for landscaping and garden use
MidCoast Council	2019	Development Engineering Handbook

5 ANNEXURE M – MIDCOAST COUNCIL SPECIFIC CLAUSES

M1.	Variations to or non-conformances with Council's AUS-SPEC are to be evaluated with reference to the procedure in Council's <i>Development Engineering Handbook</i> . Acceptance is to be obtained in writing from: <ul style="list-style-type: none"> a) an authorised representative of Council's Director of Infrastructure and Engineering Services, or b) an accredited certifier where they are the Principal Certifier and hold the relevant accreditation category for the type of work. 	Variation procedure
M2.	This specification applies in addition to any development consent (DA) conditions. If there is any inconsistency, the conditions of consent shall	DA conditions

	prevail.	
M3.	Refer to the MidCoast Council <i>Development Engineering Handbook</i> for final inspection, works-as-executed and handover requirements.	Completion

6 AMENDMENT HISTORY

0	14/12/2/20	First Published
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