# SYDNEY FLIGHT TRAINING CENTRE

28-30 Burrows Road, St Peters, NSW

# Landscape Management Plan

Revision	Date	Approved by
IFC – Issued For Construction	08.05.2024	Tim Williams

This document should be read in conjunction with the following:

- Development Consent SSD- 47601708, in particular conditions B24-27 and B29 inclusive, which this landscape management plan is consistent with.
- Arboricultural Impact Assessment & Tree Protection Management Plan prepared by Canopy Consulting, dated 30 September 2022
- Remediation Action Plan prepared by JBS&G, dated 19 September 2023
- Landscape Architecture Construction Certificate package prepared by MODE, dated 10 November 2023
- Landscape Plans prepared by Habit8 dated 21 February 2023



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### EXECUTIVE SUMMARY

The following Landscape Management Plan (LMP) details the strategies and methods required to manage the landscaping works on-site, to the satisfaction of the Planning Secretary.

This LMP details the monitoring and maintenance measures to manage landscaping works in accordance with both general landscape requirements and the development consent SSD- 47601708, in particular conditions B24-27 and B29 inclusive, which this landscape management plan is consistent with.

# COMPLIANCE TABLE

Consent Condition	Description	Worksection
B29	The plan must:	
	(a) detail the species to be planted on-site incorporating locally native	4.1
	species;	
	(b) describe the monitoring and maintenance measures to manage	3, 4.3
	landscaping works; and	
	(c) be consistent with:	3.3 + Refer
	(i) conditions B24 to B27, inclusive;	Arboricultural
		Impact
		Assessment &
		Tree Protection
		Management Plan
	(ii) the Landscape Plans included in the RTS; and	
	(iii) the Applicant's Management and Mitigation Measures at	Refer
	Appendix 2.	Arboricultural
		Impact
		Assessment &
		Tree Protection
		Management Plan
B30	The Applicant must:	
	(a) not commence operation until the LMP is approved by the Planning	-
	Secretary;	
	(b) prior to the commencement of operation, implement the most recent	-
	version of the LMP approved by the Planning Secretary; and	
	(c) maintain the landscaping and vegetation on the site in accordance	3, 4.2, 4.3
	with the approved LMP required by condition B29 for the life of the	
	development.	

#### LANDSCAPE MAINTENANCE

#### 1 GENERAL

### 1.1 **RESPONSIBILITIES**

#### General

Requirement: Provide landscape maintenance of the contract area during the 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.
- Pest and disease control of plants and lawns.
- 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.
- 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.

### 1.2 THE SITE

#### Protection of persons and property

Temporary works: Provide and maintain required guards, fencing, footpaths, signs and lighting. Accessways and services: Do not obstruct or damage footpaths, drains and watercourses and other existing services in use on or adjacent to the site.

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

#### Rectification

Accessways and services: Rectify immediately any obstruction or damage to footpaths, drains and watercourses and 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 trees and property which are to remain on or adjacent to the site, including adjoining property encroaching onto the site.

#### 1.3 GENERAL CONDITIONS

#### **Maintenance Bond**

Bond: Equal to one month's maintenance.

Expenditure of the bond: By the principal upon unsatisfactory maintenance, to employ others to carry out such work.

#### Contractor and staff

Representative: Nominate a senior partner/personal 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 before starting the works.

#### Notice

Inspection: Give at least two working days' notice of the following operations:

- Application of herbicide.

- Application of fertiliser.
- Each site maintenance visit.
- Work affecting public access or amenity on the Thursday of the week before the work is planned.

Water restrictions: Provide immediate notification of any new restrictions that affect maintenance.

#### Reporting

Monthly report: Submit regular reports by the last Friday of each month to 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 confirm in writing, any disturbance or incidence affecting or likely to affect the scheduling of the works.

#### Records

Log book: Record 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**

Plant species: Submit the supplier's certification as evidence that plants are true to the required species and type, and free from diseases, pests and weeds at the time of delivery.

#### 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

Description: Proprietary fertilisers, delivered to the site in sealed bags 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
Provide fertilisers appropriate to the plant type and situation.			To manufacturer's specification.

#### 3 EXECUTION

#### 3.1 GENERAL

#### Weeding

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

- Lawns: Monthly, and as required to maintain the general lawn condition.
- 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.
- When the weather is humid with moderate temperatures and maximum sunlight.
- When the ground has recommended soil moisture.
- Avoid windy days or if rain is likely to follow within 12 hours.

#### Pest and disease control

Requirement: Control any pests 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 from 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.

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

Clippings distribution: Remove from site

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.

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

Topdressing 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 verti cutting.

#### 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.

Shruba: Drupa after flowering

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 rate.

Micro nutrients: Apply 1 kg of urea in 20 litres of water per 100 m<sup>2</sup>, 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.

#### **Existing Trees to be retained**

General: All trees identified for retention within the site are to be retained and protected throughout the life of the development. The trees are to be protected and maintained in accordance with the recommendations of the Arboricultural Impact Assessment & Tree Protection Management Plan prepared by Canopy Consulting, dated 30 September 2022

#### 3.4 WATERING

#### Grass and planted areas

Generally: Maintain a vigorous healthy appearance.

Watering program: In spring and summer a minimum of two complete waterings a week unless there has been sufficient natural rainfall. In autumn and winter a minimum of one complete watering a fortnight unless there has been sufficient natural rainfall.

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

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

Requirement: Manually water all lawn and planting areas in absence of an irrigation system or until the proposed irrigation system is fully operational. Avoid frequent dampening of the surface. Allow the surface of the soil to partially dry out between waterings.

#### 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:

- 100 mm for organic mulch.
- 100 mm for inorganic mulch.

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

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 working order. Remove all organic debris.

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

#### 4 SELECTIONS

#### 4.1 PLANTING SPECIES

#### Plant Species Schedule

# (As per MODE Landscape Architecture Construction Certificate package, dated 10.11.2023)

		PLANT	ING SCHE	DULE			
PLANT			DIMENSIONS				
CODE	BOTANIC NAME	COMMON NAME	POT SIZE (MIN.)	HEIGHT	SPREAD	DENSITY( /m <sup>2</sup> )	QUANTITY
				1	1		
TREES							
BA	Brachychiton acerifolius	Illawarra Flame Tree	100Ltr	12000	6000	AS SHOWN	
BI	Banksia integrifolia	Coastal Banksia	100Ltr	8000	4000	AS SHOWN	
CUP	Cupaniopsis anacardioides	Tuckeroo	100Ltr	8000	4000	AS SHOWN	
EE	Elaeocarpus eumundii	Eumundi quandong	100Ltr	8000	3000	AS SHOWN	1
EH	Eucalyptus haemastoma	Scribbly Gum	200Ltr	12000	8000	AS SHOWN	1
EP	Eucalyptus punctata	Spotted Gum	200Ltr	25000	8000	AS SHOWN	
ER	Eucalyptus robusta	Swamp Mahogany	200Ltr	25000	8000	AS SHOWN	
SHRUBS	Callistemon citrinus	Crimson Bottlebrush	140mm	1500	500	10	1
CWA	Calistemon citrinus Calistemon citrinus 'White Anzac'	White Anzac	140mm 200mm	2000	1500	2	
DEX				2000	2000	2	4
	Doryanthes excelsa	Gymea Lily	200mm			1	
DS SSF	Dilwynia sieberi	Prickly Parrot-pea	140mm	1500 3000	600 2000	2	1
WFR	Syzygium australe 'Southern Form'	Syzygium Southern Form	200mm			2	2
WFK	Westringia fruticosa	Coastal Rosemary	200mm	2000	2000	1	1
GROUNDCOVER	5						
DR	Dichondra repens	Kidney Weed	140mm	200	500	4	38
IN	Isolepis nodosa	Club-rush	140mm	1000	800	4	48
LLT	Lomandra longifolia 'Tanika'	Tanika Mat Rush	140mm	300	300	4	3
PA	Poa affinis	Tussock Grass	140mm	1000	700	4	47
PMM	Pittosporum tobira 'Miss Muffet'	Miss Muffet	140mm	1500	1000	4	46
TA	Themeda australis	Kangaroo Grass	140mm	1500	500	4	88
ИН	Viola hederacea	Native Violet	140mm	100	400	4	34
VINES		•	•				
HS	Hibbertia scandens	Guinea Flower	140mm	200	500	4	38
HV	Hardenbergia violacea	Purple Twining Pea	140mm	100	400	4	37

The tree species, pot size and diversity/number of replacements is generally in accordance with the Indicative Planting Schedule included within the Landscape Plans prepared by Habit8 dated 21 February 2023.

#### 4.2 MAINTENANCE REPORT

#### Monthly reports schedule

Item	Action
Plant material	Replace failed plants
	Additional planting
	Treat for disease or pest attack
	Tree surgery
	Fertilising generally
	Fertilising for specific nutrient deficiencies
	Thin out planting
	Pruning/trimming
Turf	Returfing
	Seeding
	Treat for disease
	Topdressing
	Weeding
	Mowing/trimming
Soil	Erosion/bank stabilisation

Item	Action	
	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	
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 – 26 week Maintenance Period – Repeat weeks 1 to 13

WEEK					
	(Sept, Oct, Nov)	(Dec, Jan, Feb)	(Mar, Apr, May)	(Jun, Jul, Aug)	
1	Water, Mow and trim lawns	Water, Mow lawns; weed	Water, Mow lawns	Water, Weed	
2	Water, Weed; trim and adjust trees and shrubs	Water, Weed; mow lawns, trim and adjust trees and shrubs	Weed; mow lawns, trim and adjust trees and shrubs	Mow and trim lawns Trim and adjust trees and shrubs	
3	Water, Mow and fertilise lawns; treat plant material for insects and disease	Water, Mow lawns; weed; treat plant material for insects and disease	Water, Mow and trim lawn	Water, Weed	
4		Water, Weed; mow and trim lawns; issue maintenance report	Weed; mow lawns; issue maintenance report	Mow lawns; issue maintenance report	
5	Water, Fertilise all trees and shrubs in garden beds; mow and trim lawns	Water, Mow lawns; weed	Water, Mow lawns	Water, Mow lawns	

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