



Lot 201, Horsley Logistics Park Horsley Park, NSW 2175

LANDSCAPE MANAGEMENT PLAN (LMP)

Prepared by	Site Image NSW Pty Ltd
Prepared for	ESR
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1.0 Scope

Please refer to landscape plans for scope.

Relevant Landscape Drawings:

SI-LA-201-000-05
SI-LA-201-101-04
SI-LA-201-102-04
SI-LA-201-103-05
SI-LA-201-104-05
SI-LA-201-105-04
SI-LA-201-501-03
SI-LA-201-701-01
SI-LA-201-LS01-01

Note: these plans do not cover any revegetation works, those works are covered by a separate contractor.

Relevant Conditions of the Development Consent:

B2.(a) – Refer to section 2.3 Plants and the relevant landscape drawings listed above.

B2.(b) – Refer to the various sections of this document for the monitoring and maintenance measures to manage the landscape works.

B2.(c) – Refer to section 2.1, 3.3 and others for reference to the Applicant's Management and Mitigation Measures.

B2.(d) – Refer to the relevant landscape drawings for scope. Refer to the various sections of this document for the monitoring and maintenance measures to manage the landscape works, including that of the landscape buffer.

B3.(d) – Refer to the section 2.1 that states that the landscaping and vegetation must be maintained for the life of the development.

2.0 Maintenance Activities

2.1 Generally

The Landscape Contractor shall rectify defects during installation and that become apparent in the works under normal use for the duration of the contract Defects Liability Period (DLP).

After the DLP, the implemented landscape treatments must be managed for the life of the development as per this Landscape Management Plan as stated in Condition B3.(d) of the Development Consent. Identified Asset protection zones are to be maintained in perpetuity to the requirements of Appendix 4 of Planning for Bushfire Protection 2019, as stated in the Applicant's Management and Mitigation Measures.

The landscape maintenance works shall include, but not be limited to, the following:

- Replacing failed plants;
- Pruning;
- Insect and pest control;
- Fertilising;
- Maintaining mulch;
- Mowing;
- Watering;
- Weeding;
- Rubbish removal; and
- Cleaning of the surrounding areas.

2.2 Logbook

Keep a Maintenance Logbook recording when and what maintenance work has been done and what materials, including chemical materials, have been used.

The records shall show when and where identified chemicals were used and why.

Submit the initial logbook for inspection prior to Practical Completion and again at the end of the Defects Liability Period as a prerequisite for granting Practical and Final Completion Certificates.

Record all major events and activities in the logbook.

Make the logbook available for inspection on request.

2.3 Plants

Trees, shrubs and groundcovers shall at all times display healthy vigorous growth. Spent flower heads or stalks shall be removed immediately following flowering.

Replace failed plants: A "failed" plant may not mean complete death of soft tissue but failure due to poor growth, appearance, or unacceptable time for plant to re-establish new growth following damage or vandalism.

Replacement plants shall be in a similar size and quality and identical species or variety to the plant that has failed.

Replacement of plants shall be at the cost of the Landscape Contractor unless advised otherwise. If the cause of the failure is due to a controllable situation then correct the situation prior to replacing plants.

Failure of a plant shall be at the sole discretion of the Landscape Architect.

Refer to drawing SI-LA-201-000 for the plant schedule and the relevant landscape drawings for information, including quantities, species and expected mature height of the proposed landscaping within the 4m wide area identified in figure 6.

2.4 Pruning

Whatever pruning work is requested by the Landscape Architect shall be performed, including any pruning of damaged growth or miscellaneous pruning considered as beneficial to the condition of the plants.

Pruning works within the APZ to be carried out to as per Section 3.3 Management Requirements.

All pruning works shall be undertaken in a manner equal to acceptable horticultural practice.

2.5 Spraying

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 logbook 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.

2.6 Fertilising

Fertilise gardens with a proprietary slow release fertiliser applied in accordance with the manufacturer's directions and recommendations. Record in the logbook all relevant details of fertilising including:

- Product brand / manufacturer's name,
- Fertiliser / product name,
- Application quantity and rate, and
- Date of application and location.

2.7 Stakes and Ties

Adjust and replace as required to ensure plants remain correctly staked. Remove those not required at the end of the planting establishment period (Defects Liability Period).

2.8 Mulched Surfaces

Maintain the surface in a clean, tidy and weed free condition and reinstate the mulch as necessary to ensure correct depth as before specified.

2.9 Mowing and Top Dressing

Mow the turf to maintain a grass height of between 30-50mm. Do not remove more than one third of the grass height at any one time. Remove grass clippings from the site after each mowing.

Top dress to a maximum of 10mm as necessary to fill depressions and hollows in the surface.

2.10 Irrigation and Watering

Maintain the irrigation system to sure that each individual plant receives the required amount of water to maintain healthy and vigorous growth, adjust and rectify as required.

Provide additional watering, if necessary.

2.11 Erosion Control Measures

Where necessary, maintain the erosion control devices in a tidy and weed free condition and reinstate as necessary to ensure control measures are effective where deemed necessary.

2.12 Weeding and Rubbish Removal

During the plant establishment period remove by hand, rubbish and weed growth that may occur or re-occur throughout all planted, mulched and paved areas.

The contractor shall target weeds that are capable of producing a major infestation of unwanted plants by seed distribution.

Whenever possible, time weed removal to precede flowering and seed set.

Weeding and rubbish removal works within the APZ to be carried out to as per Section 3.3 Management Requirements.

2.13 Urgent Works

Notwithstanding anything to the contrary in the Contract, ESR's Property Manager and/or the appointed Facilities Manager may instruct the Landscape Contractor to perform urgent maintenance works that place the completed contract works at risk.

If the Landscape Contractor fails to carry out the work within seven (7) days of such notice, ESR's property manager and/or appointed facilities manager reserves the right without further notice to employ others to carry out such urgent and specified work and charge the cost to the Landscape Contractor.

Such work shall include but not limited to the inspection and clearing of drains in the pavement and gardens.

2.14 Completion

A final inspection shall be made by the ESR's Property Manager, Landscape Contractor and Landscape Architect before the completion of the Plant Establishment Maintenance Period (Defects Liability Period).

Any items requiring rectification shall be repaired before completion of the relevant works and finally approved prior to certification.

2.15 Periodic Review

A periodic review of the Landscape Management plan shall be conducted every 12 months by ESR's Property Manager.

2.16 Failure to Comply

In the event of a failure to comply with the requirements of this Landscape Management Plan, it will be the responsibility of ESR's Property Manager to contact the landscape contractor. Outstanding works to be rectified within three business days.

2.17 Southern Landscape Buffer

The 21m wide landscape buffer located on the southern boundary is to be monitored and maintained in accordance with Travers Bushfire & Ecology Vegetation Management Plan 327-335 Burley Rd Horsley Park, June 2016. Including but not limited to weed management and monitoring at frequencies described in the report.

3.0 Appendices

3.1 Relevant Standards

All landscape works shall be carried out in accordance with the following Australian Standards:

AS 1628 Water supply – Metallic gate, globe and non-return valves
AS 2033 Installation of polyethylene pipe systems
AS 2129 Flanges for pipes, valves and fittings
AS 2303 Tree stock for landscaping use
AS 2698 Plastic pipes and fittings for irrigation and rural applications – Polyethylene micro-irrigation pipe
AS 2845 Water supply – Backflow prevention devices
AS 3500 National plumbing and drainage code
AS 4373 Pruning of amenity trees
AS 4454 Composts, soil conditioners and mulches
Noxious and environmental weed control handbook by the NSW Department of Primary Industries
NATSPEC GUIDE Specifying Trees – a guide to the assessment of tree quality

3.2 Maintenance Schedule

Table 7.2	ACTIVITY	FREQUENCY						ACTION
		D	W	2W	3W	M	3 or 6M	
1	Logbook	+		+		+		Daily, Weekly, Monthly Complete a logbook entry every day at site and at least every two weeks. All actions listed below require a logbook entry. Upon request, make the logbook available for inspection. Submit copies of new entries in the logbook to ESR's Property Manager on a monthly basis. Please note that more frequent, short, occasional inspection should result in less maintenance work when problems are observed earlier than they might otherwise have been seen.
2	Plant replacement			+		+		Inspect and replace failed plants within 2 weeks of observation of failure. Match species, size (original) and location of new with old.
3	Mulch			+		+		Inspect and replace mulch deficiencies within 2 weeks of observation. Prior to placing new mulch aerate the soil by fork turning to a depth of at least 100mm, roughly level the soil and then place mulch. Do not disturb major plant roots while aerating soil.
4	Erosion control			+				Inspect every two weeks and repair ground, soil and mulch immediately. Maintain erosion control device as necessary.
5	Stakes and ties			+				Inspect every two weeks, adjust and/or replace as necessary but remove as plants mature and are able to support themselves.
6	Weed and rubbish removal			+				Inspect and remove immediately upon observation. Leave no waste on site. Dispose of waste material at a designated waste disposal site.
7	Pruning			+				Inspect every 2 weeks and prune as necessary to remove dead wood, improve plant shape and promote healthy vigorous new growth.
8	Spraying			+				Inspect every 2 weeks and action as necessary. Do not spray if other non-chemical methods will satisfy the need to remove insects. Spray for disease control only when absolutely necessary.
9	Urgent works		+					Complete within 1 week (7 days) of notification. Inspect and clear drains.
10	Planting and fertilising			+			3m+	Inspect every 2 weeks and remove spent flowers and dead stalks as they become apparent. Fertilise gardens every 3 months or other frequency in accordance with fertiliser manufacturer's directions.
11	Watering	+		+				Water when and where necessary every day at site and at least every 2 weeks generally. Do not allow soil and plants to dehydrate. Allow for prolonged rain, windy and dry periods. Water in the early morning or late afternoon to avoid excessive evaporation during the heat of the day.
12	Mowing, top-dressing and edging			+		+	6m+	Summer fortnightly. Winter monthly. Top-dress 6 monthly.

It shall be the responsibility of ESR's Property Manager to coordinate these actions and the responsibility of the appointed Facilities Manager/Landscape Maintenance Contractor to carry out these actions.

3.3 Management Requirements

The following are the requirements to be **maintained** in perpetuity as stated in Appendix 4 of Planning for Bushfire Protection 2019 for all identified Asset Protection Zones as stated in the Applicant's Management and Mitigation Measures.

Trees:

- tree canopy cover should be less than 15% at maturity;
- trees at maturity should not touch or overhang the building;
- lower limbs should be removed up to a height of 2m above the ground;
- tree canopies should be separated by 2 to 5m; and
- preference should be given to smooth barked and evergreen trees.

Shrubs:

- create large discontinuities or gaps in the vegetation to slow down or break the progress of fire towards buildings should be provided;
- shrubs should not be located under trees;
- shrubs should not form more than 10% ground cover; and
- clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass:

- grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
- leaves and vegetation debris should be removed.