

6 Grand Avenue, Rosehill
SSD-55522478

LANDSCAPE MANAGEMENT PLAN (INCORPORATING WEED MANAGEMENT PLAN)

Report Ref: **240528_CON_RPT_LMP01**

Prepared for



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1.0 INTRODUCTION

1.1 Project Background

This Landscape Management Plan has been prepared to fulfill the minister's condition B61 and B62 of the approved Warehouse development at Rosehill. Condition B61 and B62 state:

B61. Prior to the commencement of operation of the development, the Applicant must prepare a Landscape Management Plan to manage the landscaping works on-site, which is consistent with the Landscape Masterplan prepared by Geoscapes, dated 24th March 2025 (Rev. N). The plan must:

- (a) detail locally native species to be planted on-site;
- (b) describe the monitoring and maintenance measures to manage existing and planted vegetation;
- (c) include mechanisms to replace any trees that do not survive; and
- (d) be consistent with the Applicant's Management and Mitigation Measures at Appendix 2.

B62. The Applicant must:

- (a) not commence operation until the Landscape Management Plan is approved by the Planning Secretary;
- (b) implement the most recent version of the Landscape Management Plan approved by the Planning Secretary; and
- (c) maintain the landscaping and vegetation on the site in accordance with the approved Landscape Management Plan required by condition B61 for the life of the development.

1.2 This Report and Author

Geoscapes Pty Ltd, has been commissioned by Vaughan Constructions, to produce a Landscape Management Plan (LMP) for the above mentioned development. This LMP has been written by Kiana Capule, Project Landscape Architect and approved by Ben Gluszkowski, Director of Geoscapes and Registered Landscape Architect #5868.

Geoscapes prepared the original approved landscape visual impact assessment (230119_SSD_RPT_VIA01 [F] 08.03.24) and landscape Modification 2 design drawings (230119_SSD_DWG_SSD [N] 24.11.25; drawing no's SSD-00 to SSD-11). More recently landscape construction documentation have been produced (LCON-000 to LCON-601). These documents detail landscape treatments to the site, and should be read in conjunction with this report.

1.3 The Role of this Landscape Management Plan

The site comprises a single building housing 10 warehouses, along with associated offices, hardstand, and parking areas. Given the site's proximity to sensitive visual receivers at Rosehill Gardens Racecourse, the inclusion of effective visual screening through landscape planting is a key component of the development.

The visual bulk and scale of the built form can be softened through the use of native tree and shrub species. As such, the ongoing management of landscaped zones is essential to ensure both immediate and long-term visual mitigation. In addition to their visual benefits, the use of endemic native plantings will also provide small-scale habitat opportunities for local bird and animal species.

1.4 Areas to which this Plan Applies

This plan will apply to all landscape areas within the site boundary, the largest areas of landscaping are located along the north, east and west boundaries with smaller areas of landscaping along the south driveway and boundary.

1.5 Landscape Maintenance Responsibility

The Landscape Contractors engaged by Vaughan Constructions, will hold the first level of responsibility for the implementation of the Landscape Management Plan. The on-going, day-to-day implementation, monitoring and reviewing of the LMP will be undertaken by the estate management.

1.6 Landscape Management Principles

The following landscape management principles have been identified as being consistent with the approved SSD Landscape Design Drawings:

- Maintain the integrity of the topsoil capping layer (over contaminated soils)
- Minimise environmental impacts that may result from landscape management activities and utilise environmentally sustainable practices. Disturb only the minimum area necessary.
- Control dust with best management principles.
- Water sprays and/or covers would be employed for material stockpiles, particularly during adverse weather conditions, to minimise dust generation.
- Stockpiles should be covered overnight.
- Mark clearance boundaries prior to commencement of construction to ensure that there is no unnecessary removal of vegetation.
- Strengthen, enhance and promote local character with the incorporation of native and endemic plant species.
- A low water use, low maintenance approach with the use of native species.
- Provide clear site lines for trucks and vehicular users.
- Provide a safe environment, minimising potential risks to people, buildings and property.
- Best practice landscape maintenance in landscaped areas.
- Target noxious weeds and feral animals through the use of integrated pest management approaches.
- Appropriately fund, plan and manage landscape maintenance to provide sufficient resource to achieve a long term quality landscape.

1.7 Report Structure

This report is to be read in conjunction with the following documents:

- Landscape Documentation for State Significant Development - SSD-55522478; 230119_SSD_DWG_SSD [N] 24.11.25, prepared by Geoscapes Landscape Architects Dwg No's SSD-00 to SSD-11.
- Landscape Visual Assessment for State Significant Development - SSD-55522478; 230119_SSD_RPT_VIA01 [F] 08.03.24, prepared by Geoscapes Landscape Architects.
- Landscape Construction Drawings Dwg No's LCON-000 to LCON-601 and LSP-01
- Remediation Action Plan (RAP) prepared by JBS&G.
- Long-Term Environmental Management Plan (LTEMP) prepared by JBS7G.
- Construction Environmental Management Plan (CEMP).

Section 1.0 provides an introduction to the LMP
Section 2.0 describes the general site conditions
Section 3.0 describes the design compliance
Section 4.0 describes specific landscape types
Section 5.0 describes management activities common to all landscape areas
Section 6.0 describes protective measures for trees and vegetation
Section 7.0 monitoring and reporting
The report is structured into two main maintenance categories:

1. Specific Landscape type – Those maintenance activities that are specific to particular landscape type. The specific landscape types at this site are:

Planting Beds - These are planted with native grasses or groundcovers; and mass planting areas -These may be composed of single species plantings or mixes which may include trees shrubs and groundcovers.

2. All areas of the site – Those maintenance activities that apply to all areas of the across the site. These activities include:

- a. Disease and Insect Control
- b. Irrigation

1.8 Intensity of Use

A key factor in the frequency and types of landscape maintenance activities required for particular areas is the intensity of their use.

Planting Zones

The planting areas at the site are generally areas of low activity as they are fully mass planted.

Areas of mass planting are not generally susceptible to compaction from pedestrian usage, therefore, heavier textured soils can be used.

2.0 GENERAL SITE CONDITIONS

2.1 Contaminated Soils

Asbestos-impacted areas have been identified on-site. Portions of the contaminated material have been excavated and appropriately capped in accordance with the Remediation Action Plan (RAP). All contractors and site personnel must review the RAP and the Long-Term Environmental Management Plan (LTEMP) in conjunction with this Landscape Management Plan (LMP).

Copies of the LMP, RAP, and LTEMP must be stored in a clearly identified and accessible location (e.g., the site manager's office) and must be read by all staff and contractors assigned to work in areas where contaminated soils may be present.

A clean, imported topsoil capping layer has been applied to landscaped areas, with depths ranging from 100 mm to 1 metre. All maintenance activities must be undertaken in accordance with the site's Occupational Health & Safety (OH&S) Manual. Particular care must be exercised during any excavation or digging works. The depth of the demarcation layer should be confirmed and respected to prevent exposure to underlying contaminated materials.

2.2 Soil

The site was previously used for industrial purposes as a tile manufacturing building. Review of 1:100,000 'Sydney' Geological Survey of NSW

Sheet 9130 (1983) indicates the site and surrounds are underlain by Quaternary aged sediments including silty to peat quartz sand, silt and clay and man made fill potentially consisting of dredged estuarine sand and mud, demolition rubble industrial and household waste. This was confirmed by Geo-technical site testing carried out by JBS & G.

TOPSOIL

All topsoil is to be imported as per the RAP report.

DRAINAGE

Surface run-off at the sealed areas of the site is expected to enter the local stormwater system via collection drains located at the site. The final discharge location of the stormwater system is expected to be Parramatta River. Any surface water collected in the unsealed areas of the site are expected to infiltrate through the geology and contribute to the underlying groundwater system. ALL GARDEN BED AREAS SHOULD HAVE POSITIVE DRAINAGE.

2.3 Existing Vegetation

All existing trees within the area of the construction site should be protected as per the Arborist report and AS 4970 Protection of trees on development sites.

3.0 PROPOSED PLANTING SPECIES AND DESIGN COMPLIANCE

3.1 Mass Planting Areas and Carpark

All landscape areas will be mass planted with trees, shrubs and groundcovers which are predominately native. However, some exotic species are used along north landscape setback of the site to provide visual interest and in particularly shady areas. These are listed in the schedule within section 3.2 and also within the landscape documentation. They are intended to create layered planting to visually break up the dominance of the build form. The density of planting should ensure that once established, weed infiltration is reduced. There also proposed planting to the upper levels in planter boxes to enhance office spaces.

3.2 Planting Schedule

Ground Floor Plant Schedule							
Code	Botanical Name	Common Name	Mature Height	Spacing	Install Size	Native	Quantity
Trees							
ACA IMP	<i>Acacia implexa</i>	Hickory Wattle	10m	As Shown	75L	✓	16
ACA PAR	<i>Acacia parramattensis</i>	Parramatta Wattle	12m	As Shown	75L	✓	19
BAC CIT	<i>Backhousia citriodora</i>	Lemon Myrtle	8m	As Shown	75L	✓	13
ELA EUM	<i>Elaeocarpus eumundi</i>	Quandong	8-15m	As Shown	75L	✓	7
ELA RET	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	9m	As Shown	75L	✓	11
EUC CRE	<i>Eucalyptus crebra</i>	Narrow-Leaved Ironbark	15-20m	As Shown	75L	✓	9
EUC EUG	<i>Eucalyptus eugenioides</i>	Thin-Leaved Stringybark	15-20m	As Shown	75L	✓	13
EUC FIB	<i>Eucalyptus fibrosa</i>	Red Ironbark	15-20m	As Shown	75L	✓	12
EUC MOL	<i>Eucalyptus moluccana</i>	Grey Box	15-20m	As Shown	75L	✓	11
EUC TER	<i>Eucalyptus tereticornis</i>	Forest Red Gum	15-20m	As Shown	75L	✓	14
TRI LUS	<i>Tristanopsis laurina 'Luscious'</i>	Water Gum	8m	As Shown	75L	✓	23
WAT FLO	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	10-15m	As Shown	75L	✓	11
Shrubs							
ACM min	<i>Acmena smithii 'Minor'</i>	Dwarf Lilly Pilly	3m	1.25m Ctrs	200mm	✓	148
ALP nut	<i>Alpinia nutans</i>	Dwarf Cardamom	1-1.5m	As Shown	200mm		69
ASP aus	<i>Asplenium australasicum</i>	Birds Nest Fern	1m	As Shown	200mm	✓	70
BUR spi	<i>Bursaria spinosa</i>	Blackthorn	1.5-4m	As Shown	200mm	✓	12
CAL lit	<i>Callistemon viminalis 'Little John'</i>	Bottlebrush	0.75-1m	As Shown	200mm	✓	70
CAL orb	<i>Calathea orbifolia</i>	Prayer Plant	0.9m	As Shown	200mm		44
CAL swe	<i>Callistemon 'sweet burst'</i>	Bottlebrush	0.9-1.2m	As Shown	200mm	✓	88
CAL whi	<i>Callistemon citrinus 'White Anzac'</i>	White Bottlebrush	1m	As Shown	200mm	✓	108
COR alb	<i>Correa alba</i>	White Correa	1.5m	As Shown or 1m Ctrs	200mm	✓	79
DIL sie	<i>Dillwynia sieberi</i>	Prickly Parrot-Pea	2m	As Shown	200mm	✓	31

DOR exc	<i>Doryanthes excelsa</i>	Gynea Lily	2m	As Shown	200mm	✓	73
IND aus	<i>Indigodera australis</i>	Austral Indigo	2.5m	As Shown	200mm	✓	18
KUN amb	<i>Kunzea ambigua</i>	Tick Bush	2m	As Shown	200mm	✓	16
LEP for	<i>Leptospermum laevigatum</i> 'Foreshore'	Tea Tree	0.5m	0.5m Ctrs	200mm	✓	506
LEP pin	<i>Leptospermum</i> 'Pink Cascade'	Pink Cascade Tea Tree	0.8m	As Shown	200mm	✓	81
LIS str	<i>Lissanthe strigosa</i>	Peach Heath	1m	As Shown or 0.75m Ctrs	200mm	✓	25
OZO dio	<i>Ozothamnus diosmifolius</i>	Rice Flower	0.5-1.2m	As Shown	200mm	✓	22
PHI xan	<i>Philodendron xanadu</i>	Philodendron	0.75m	As Shown	200mm		35
PHO cro	<i>Phormium tenax</i> 'Croce di Malta'	New Zealand Flax	1.2m	As Shown	200mm		41
WES blu	<i>Westringia fruticosa</i> 'Blue Gem'	Coastal Rosemary	1-1.5m	0.75m Ctrs	200mm	✓	112
WES gre	<i>Westringia fruticosa</i> 'Grey Box'	Coastal Rosemary	0.45m	As Shown	200mm	✓	54
Grasses & Groundcovers							
ANI gol	<i>Anigozanthos</i> 'Gold Velvet'	Kangaroo Paw	0.5-0.6m	4/m2	140mm	✓	168
ANI rub	<i>Anigozanthos</i> 'Ruby Velvet'	Kangaroo Paw	0.4m	4/m2	140mm	✓	133
ARI ram	<i>Aristida ramosa</i>	Purple Wiregrass	1.2m	5/m2	Tubestock	✓	639
ASP ela	<i>Aspidistra elatior</i>	Cast Iron Plant	0.5-1.2m	3/m2	140mm		555
BRA ang	<i>Brachyscome angustifolia</i> 'Brasco Violet'	Native Daisy	0.15m	3/m2 or 3/Lm	140mm	✓	342
DIA cas	<i>Dianella caerulea</i> 'Cassa Blue'	Native Flax	0.5m	5/m2	140mm	✓	1326
DIA lon	<i>Dianella longifolia</i>	Flax Lily	1.5m	5/m2	Tubestock	✓	632
DIA jes	<i>Dianella revoluta</i> 'Little Jess'	Black-anther Flax Lily	0.75m	5/m2	Tubestock	✓	1235
DIA sil	<i>Dianella</i> 'Silver Streak'	Flax Lily	0.4-0.5m	5/m2	Tubestock	✓	462
DIC mic	<i>Dichelachne micrantha</i>	Short-Hair Plume Grass	1.2m	5/m2	Tubestock	✓	742
GRE gol	<i>Grevillea jubiperina</i> 'Gold Cluster'	Grevillia	0.4m	3/m2 or 2/Lm	140mm	✓	477
HAR min	<i>Hardenbergia</i> 'Mini Meema'	Dwarf Purple Coral Pea	0.3-0.6m	3/m2 or 2/Lm	140mm	✓	511
HIB dif	<i>Hibbertia diffusa</i>	Wedge Guinea Flower	0.3m	5/m2	140mm	✓	904
JUN usi	<i>Juncus usitatus</i>	Common Rush	1.2m	5/m2	Tubestock	✓	49
LIR ame	<i>Liriope muscari</i> 'Amethyst'	Lilyturf Amethyst	0.4m	5/m2	140mm		823
LOM fil	<i>Lomandra filiformis</i>	Wattle Mat-Rush	0.5m	5/m2	Tubestock	✓	360
LOM lon	<i>Lomandra longifolia</i>	Spiny-Head Mat-Rush	1.2m	5/m2	Tubestock	✓	1155
LOM win	<i>Lomandra confertifolia</i> 'Wingarra'	Mat Rush	0.3-0.4m	5/m2	Tubestock	✓	1834
MIC sti	<i>Microlaena stipoides</i>	Weeping Grass	0.7m	5/m2	Tubestock	✓	358
MYO yar	<i>Myoporum parvifolium</i> 'Yareena'	Creeping Boobialla	0.1m	3/m2 or 2/m2	140mm	✓	321
OPH jap	<i>Ophiopogon japonicus</i>	Dwarf Lilyturf	0.1-0.3m	5/m2 or 3/Lm	Tubestock		973
PEN cre	<i>Pennisetum alopecuroides</i> 'Cream Lea'	Swamp Foxtail Grass	0.6m-1.5m	5/m2	Tubestock	✓	905
POA kin	<i>Poa poiformis</i> 'Kingsdale'	Tussock Grass	0.45m	5/m2	Tubestock	✓	821
POA lab	<i>Poa labillardieri</i>	Tussock Grass	1.2m	5/m2	Tubestock	✓	185
PRA pur	<i>Pratia purpurascens</i>	White Root	0.1m	3/m2	140mm	✓	458
SPA wal	<i>Spathiphyllum wallisii</i>	Peace Lily	0.6m-1m	3/m2 or 2/Lm	140mm		184
THE aus	<i>Themeda australis</i>	Kangaroo Grass	1.5m	5/m2	Tubestock	✓	539
VIO hed	<i>Viola hederacea</i>	Native Violet	0.1m	3/m2 or 2/Lm	140mm	✓	257
WAH gra	<i>Wahlenbergia gracilis</i>	Australian Bluebell	0.2m	5/m2	Tubestock	✓	690

Upper Levels Plant Schedule (GF Mezz, Level 1 & Level 1 Mezz)						
Code	Botanical Name	Common Name	Mature Height	Spacing	Install Size	Quantity
Shrubs						
ALP nut	<i>Alpinia nutans</i>	Dwarf Cardamom	1-1.5m	As Shown	200mm	26
PHO cro	<i>Phormium tenax</i> 'Croce di Malta'	New Zealand Flax	1.2m	As Shown	200mm	8
Groundcovers						
ASP ela	<i>Aspidistra elatior</i>	Cast Iron Plant	0.5-1.2m	3/m2 or 2/Lm	140mm	103
LIR ame	<i>Liriope muscari</i> 'Amethyst'	Lilyturf Amethyst	0.4m	5/m2 or 4/Lm	140mm	371
LOM win	<i>Lomandra confertifolia</i> 'Wingarra'	Mat Rush	0.3-0.4m	5/m2	Tubestock	26
OPH jap	<i>Ophiopogon japonicus</i>	Dwarf Lilyturf	0.1-0.3m	5/m2 OR 3/Lm	Tubestock	291
SPA wal	<i>Spathiphyllum wallisii</i>	Peace Lily	0.6m-1m	3/m2 or 3/Lm	140mm	226

4.0 SPECIFIC LANDSCAPE MANAGEMENT ACTIVITIES

4.1 Planting around Hard Stand and Car Parking Areas

A demarcation layer with varying depths has been placed over contaminated soils in all landscaping areas. Refer to demarcation depths plan prepared by Vaughans. As per the RAP & LTEMP the capping layer depth must be maintained at all times, with the intention that following the establishment of landscape planting the soil will bind and erosion of the capping layer will be prevented. In order to achieve this outcome it is crucial that the area is regularly inspected and the following tasks are carried out:

- The area **MUST** be inspected following heavy rain events for erosion of the soil profile. This is particularly important during the establishment phase of plant stock.
- Replace any topsoil lost back to 300mm depth.
- Reinstall any planting, moved / lost and reinstall mulch layer.

Mass planting areas vary in appearance but mostly contain more complex beds containing advanced trees, low and tall shrubs and ground covers. Planting sizes can include tubestock up to super advanced or semi-mature container sizes. The majority of the mass planted beds are planted with native species.

The key differences in the management of native plants are their requirement for low-phosphorous fertilisers and a lower fertiliser rate than exotic species generally. Plants of the Pea group (including Acacias, Daviesia and Pultenaeas) and Casuarinas are also able to fix their own Nitrogen. Natives also have lower water requirements in comparison to exotics and are adapted to the harsher Australian conditions.

Endemic native plants will tolerate site soils without amendment better than exotics, and if fertilisers are added there may be a lesser invasion by exotic weeds.

For the above reasons native plantings make a more sustainable option in respect of the long term landscape management and should their be failures the original species specified on the landscape plans should always be reused before exotic species.

The edges of the beds will be usually defined by a concrete path or concrete kerb. Beds shall be weed free and mulched annually to suppress weed growth and retain moisture content within the soil.

Pruning will be carried out on shrubs and trees that require it according to species to remove the dead and damaged branches and to retain natural shape and to improve health and vigour. Where die-back of plant material has been identified new plants will be planted as soon as possible, using species originally specified or that maintain the character and continuity of the planting.

4.2 Soil Management for Planting Areas

Areas of native mass planting require a sandy loam to clay loam topsoil mix which is suitable for the planting of grasses, woody and herbaceous perennials and trees. The following mix is suitable for plants that do not have high nutrient requirements and are not susceptible to compaction. Note that if phosphorous sensitive natives are used, the phosphorous levels of all components must be checked for suitability. Additional drainage may be required depending on the situation.

The following table outlines suggested components, that may likely meet the physical requirements of the soil for the buffer planting areas:

Sandy loam soil or site won topsoil Composted soil conditioner conforming with AS 4454	70-100% by volume 0-30% by volume	e.g. 8 parts washed sand/2 parts sandy loam/1 part AS 4454 compost
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(Leake and Haeger 2014, p.87)

4.3 Soil Management for Trees

Wherever trees are to be planted it is important to understand whether the existing in situ topsoil can be used as backfill, whether new topsoil, soil mix, soil conditioner or amendments needs to be imported, or if a mix of the above is best.

In general, the greater the soil/subsoil depth (the effective root depth) - the larger the tree that can be supported with minimal maintenance. The ideal soil profile for trees will have at least 3 horizons where the "A" horizon is the topsoil, the "B" horizon is Subsoil and the "C" horizon is the Subgrade. The minimum recommended topsoil depth for trees is 300mm with a minimum subsoil depth of 200mm. This will provide the tree with the minimum moisture/nutrient reserve and anchorage capacity.

In addition to a physical inspection of the soil to be used to assess field texture and structure and drainage capability, soils should also be analysed by a soil laboratory for the following properties at a minimum:

- pH
- Salinity (electrical conductivity)
- Cation exchange properties and exchangeable cations
- Major and minor nutrients
- Organic matter (%)

Where tree specimens in container sizes 25 litres or larger are to be planted, the subsoil should also be tested for:

- pH
- Salinity (electrical conductivity)
- Cation exchange properties and exchangeable cations
- Aggregate stability.

The most common amendments used to bring soils up to a standard suitable for plant growth are:

- Lime or dolomite to make acid pH soils more alkaline.
- Lime or Gypsum to enhance exchangeable calcium and eliminate sodicity
- Gypsum to make clay soils more friable
- Composts and/or manures to improve organic matter and nutrients levels
- Single or complete fertilisers often with trace elements to correct a particular deficiency or multiple deficiencies.

It is important that the backfill soil is returned in the layers in which it was excavated so that topsoil with organic content is placed back near the top 300mm of the backfill. If this is not carried out correct anaerobic conditions can occur. Where the existing site topsoil backfill is unsuitable or insufficient it can be made up with:

Sandy loam soil Composted soil conditioner conforming with AS 4454	70-100% by volume 0-30% by volume	e.g. 8 parts washed sand/2 parts sandy loam/1 part AS 4454 compost
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(Leake and Haeger 2014, p.87)

Where the tree pit is deeper than 300mm (usually for trees in containers over 45 litres) and the existing site subsoil is unsuitable or insufficient a topsoil medium low in organic matter is required so that the organic matter does not "sour" at depths where there is less oxygen. It can be made up with a sandy, well-drained medium which contains low organic matter. An example of the components may be:

Sandy loam On-site clay loam or clay topsoil or subsoil Composted soil conditioner conforming with AS 4454	60-80% by volume 20-30% by volume <10% by volume
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(Leake and Haege 2014, p.96)

4.4 Fertilising, Composting and Mulching

To ensure the health and vigour of mass plantings are maintained. All mass planted areas whether native or exotic will perform better when the soil conditions are healthy. Building healthy soils is the key to achieving the long term maintenance goals of mass planted landscape areas. Soil health is primarily achieved with regular applications of organic soil conditioners such as animal manures, decomposed green waste or proprietary blends of compost.

Fertilising and composting are not critical maintenance activities except where there are obvious deficiencies, but should be assessed on an annual basis by observation and leaf analysis.

4.5 Pruning

Ground cover and shrubs should be maintained at a maximum height of 0.5 m along path edges for personal security. Remove dead or dying plant material from mass planted areas on the site as required. This may become necessary as plantings mature, after damage or adverse environmental conditions.

4.6 Weeding

Weeding is often a concern in new areas of mass planted/buffer type landscaping.

A noxious weed is a plant declared to be noxious under the NSW Noxious Weeds Act 1993. Noxious weeds can be agricultural weeds, environmental weeds or have a direct impact on human health.

Environmental weeds are non-local plants that can invade and change natural areas and threaten the survival of native plants and animals. After land clearing, environmental weeds are considered to be the next greatest threat to our indigenous biological diversity. Environmental weeds have the potential to readily invade garden bed areas and potentially impact on the adjacent lands.

In addition to the environmental hazard posed by weeds, weeds occurring in mass planted beds, growing from the base of trees and from pavement can be unsightly and presents an untidy appearance.

Fairfield City Council have produced the Fairfield Biodiversity Strategy 2012. This describes Noxious and environmental weeds in the council area. It can be found at:

<http://www.hrcc.nsw.gov.au/>

The list defines plants that are classified as weeds and should be removed from the site and not planted in any new works. It provides a good basis for management and includes many problem garden weeds. However, for control of weeds on the site comply entirely with the New South Wales Weed Control Handbook a guide to weed control in non-crop, aquatic and bushland situations NSW DPI management guide, seventh edition.

A copy of the handbook can be downloaded at the link:

https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0017/123317/weed-control-handbook.pdf

To ensure that environmental and noxious weeds do not reproduce within or spread into mass planted areas and compete with plantings and spread to other areas, weeding and weed control is considered to be a critical maintenance action.

Maintenance Action Required	Frequency
Prevent reproduction of weeds by destroying seedlings and established weeds before seed set or other propagules form. Remove by hand in the first instance (where infestations are low). Ensure that the entire weed including all roots is removed. Dispose of the weeds off site.	2 Weeks or Monthly
Remove by Herbicide application any weeds which cannot be controlled by hand removal. Herbicide application must occur before weed seed set. Non-target species and areas must be reinstated if damaged by herbicide application.	
Herbicide use to be in accordance with regulation rates and manufacturers recommendations. Herbicide use must comply with the requirements of the Noxious and environmental weed control handbook, a guide to weed control in non-crop, aquatic and bushland situations. NSW Department of Primary Industry Management Guide, Seventh Edition.	
After spraying, lop any dead weeds flush with the ground surface and dispose of the cuttings.	2 Weeks or Monthly
Use of bio-degradable herbicide is mandatory	

5.0 IRRIGATION, DISEASE AND INSECT CONTROL

5.1 Irrigation

All landscape areas are to have a subsurface irrigation system to minimise water use and evaporation. The irrigation system to be designed, supplied and installed by an experienced specialist irrigation sub-landscape contractor, nominated by the Landscape Contractor and approved by the Head Contractor or their landscape consultant. After selection they will be required to prepare detailed irrigation plans and specification for approval prior to commencing work. The Landscape Contractor will co-ordinate the irrigation installation to the client / landscape architects approval. Ensure completion of the irrigation system before the commencement of any other landscape works, so as to provide a readily available supply of water to planting areas.

Upon completion of the installation of irrigation works, the Landscape Contractor is to run through the system to ensure that it is operating correctly and instruct the client's representative in the correct operation and maintenance of the system. Manuals, warranties, and a minimum of two programs, summer and winter are to be provided to the client's representative at the time of completion.

At the completion of the installation the landscape contractor must provide complete dimension drawings, based on the approved design plan of the entire irrigation system as executed, clearly indicating the type and location of all sprinkler lines, heads, etc. This is essential to ensure that the irrigation lines and valve boxes can be located for repair and replacement. Works-as-Executed irrigation drawings should be given to the client.

The following principles are to apply:

Maintain adequate soil moisture – match supplemental irrigation water needs to climate conditions and available soil water

Water effectively – apply water so that it reaches the root systems with minimal losses

Encourage extension of the root system – apply water to extremity of root system and beyond

Remove competition for water – maintain mulch around the plants

5.2 Disease and Insect Control

Always consider biological and non-chemical controls in favour of chemical controls in the first instance because the margin for error is far greater with chemicals. For example most insecticide will also harm beneficial insects as well as the target species.

For a comprehensive reference to the identification, diagnosis and control of pests and diseases refer to “What Garden Pest or Disease Is That? Organic and Chemical Solutions for Every Garden Problem” by Judy McMaugh 2000 New Holland.

6.0 PROTECTIVE MEASURES

6.1 Erosion, Contamination and Sedimentation Control

During construction, all precautions necessary should be undertaken to prevent erosion, contamination, and sedimentation of the site, surrounding areas and drainage systems, including but not limited to the following:

- Construction of temporary drains and catch drains
- Diversion and dispersal of concentrated flows to points where the water can pass through the site without detrimental impacts
- Construction and maintenance of silt traps to prevent discharge of scoured material to downstream areas
- Stabilisation of exposed soil surfaces
- Use of erosion and sediment control measures to collect sediment and to reduce flow velocities
- Construction of temporary fencing
- Regular monitoring and maintenance of all erosion and sediment control structures throughout the construction and operational phases of the development to ensure their effective function.

7.0 MONITORING AND REPORTING

General maintenance tasks are described in the Maintenance Plan as specified in the Landscape Documentation 230119_SSD_DWG_SSD [H] 12.03.24; SSD-10. A Maintenance Schedule for the maintenance period is also included in Appendix B of this report. A log book should be used to record daily/weekly/monthly visits. All maintenance actions should be recorded in the log book and this should be made available upon request.

Regular inspections of all landscape areas should be undertaken initially by the appointed contractor and then estate maintenance teams following handover. This is to ensure that maintenance is carried out according to the plan. Inspections should include the ongoing protection of revegetation works during its establishment period.

8.2 Appendix B - Maintenance Schedule

CATEGORY	TIMEFRAMES / FREQUENCY				Tasks and Specification
	Daily/Weekly	2 Weekly/Monthly	3 to 6 Months	As Required	
1. Weeding and Rubbish Removal		✓			Weed garden areas manually or with approved herbicide. Prior approval required for Herbicide use. Approved Herbicide use to be in accordance with regulation rates and manufacturer's recommendation. Protect plants from overspray and avoid if rain is likely within 12 hour period. Dispose of any waste material using appropriate methods and at designated disposal sites. Maintain weeds for a period of 12 months, with more frequent weeding in the summer months.
2. Leaf Litter Removal		✓	✓		Remove leaf litter from pathways & hardstand areas
3. Mulching		✓	✓		Reapply mulch to maintain to a depth of 75mm in areas that are deficient. Soil should be aerated before placing mulch. After 12 months, mulching will have broken down and should be topped up to ensure a depth of 75mm. A slow release, low phosphorous fertiliser should also be applied.
4. Plant Fertiliser			✓		Fertilise all plants at specified rates based on soil testing results. Prior approval required for fertiliser use. Slow release fertiliser N-P-K ratio – 18:3:10 at manufacturer's recommended rate per plant. Initial fertilising at planting based on soil testing results
5. Pest & Disease Control		✓		✓	Check for incidence of fungal and insect attack. Avoid use of chemical sprays Apply appropriate treatment for fungal and insect attack if necessary subject to approval Prior approval required of chemical to be applied
6. Pruning, Trimming, Stakes and Ties		✓			Remove deadwood, remove suckering roots from rootball, check ties. Improve plant shape and promote new growth. Adjust ties and stakes as necessary. Stakes can be removed once plants are self-supporting. Notify in writing to Management any perceived need for tree structural work. Adjust ties and stakes as necessary.
7. Plant Removal & Replacements		✓			Inspect for failed or dying plants requiring replacement and record probable cause. Replant after dead or failed plant removal. Densities, sizes and species to be in accordance with Landscape Plans LCON-000 and relevant drawing sheet no. Water replacement plantings for a minimum of 12 weeks after planting.
8. Urgent Works	✓				To be actioned within 7 days.
9. Watering	✓	✓			Water as necessary every day especially during periods of hot weather. 2 week interval watering should be maintained until planting is fully established. Best practice watering is early morning or late afternoon to reduce evaporation.

8.2 Appendix C - Reference Documents

The following Australian Standards are referred to in this report:

- AS 1319 Safety signs for the occupational environment
- AS 4373 Pruning of amenity trees
- AS 4454 Composts, soil conditioners and mulches
- AS 4687 Temporary fencing and hoardings
- AS 4970 Protection of trees on development sites

The following documents are referred to in this report:

- Landscape Documentation for State Significant Development - SSD-55522478-230119_SSD_DWG_SSD [N] 24.11.25; prepared by Geoscapes Landscape Architects Dwg No's SSD-00 to SSD-11.
- Landscape Visual Assessment for State Significant Development - SSD-55522478-230119_SSD_RPT_VIA01 [F] 08.03.24, prepared by Geoscapes Landscape Architects.
- Construction Environmental Management Plan (CEMP).
- Noxious and environmental weed control handbook. a guide to weed control in non-crop, aquatic and bushland situations. NSW Department of Primary Industry Management Guide, Seventh Edition.
- Soils for Landscape Development. Selection, Specification and Validation. Simon Leake and ELke Haeger. CSIRO Publishing 2014.
- What Garden Pest or Disease Is That? Organic and Chemical Solutions for Every Garden Problem. Judy McMaugh 2000 New Holland.