

Our ref: SSD-41306367-PA-19

Paul Kotronakis
Project Director
Department of Education NSW
C/o School Infrastructure NSW
Level 8, 259 George Street
SYDNEY, NSW 2000

Attn: Greg Smith (gregory.smith174@det.nsw.edu.au)

21/06/2024

**New Primary School at Gregory Hills (SSD-41306367)
Landscape Management Plan, Condition D29**

Dear Mr Kotronakis

I refer to your Landscape Management Plan seeking satisfaction of the Planning Secretary under condition D29 of SSD-41306367. I also acknowledge and thank you for your response to the Department request for additional information.

I note the Landscape Management Plan:

- was reviewed by the Applicant, and no issues were raised to the Department;
- contains the information required by condition D29; and
- has been submitted prior to the commencement of any operations.

I also note that the Department approved the revised Landscaping plans, Dwg nos. GH_LA-SSDA_1000 to 1005, Revision 9 dated 31 October 2023, on 1 May 2024 as per condition B33 of SSD-41306367 under PA-14.

Accordingly, as nominee of the Planning Secretary, I am satisfied the Landscape Management Plan, Revision 1 dated 17 June 2024, prepared by Urban Grounds and Gardens, is prepared in accordance with condition D29 of SSD-41306367.

I remind you to remove 'RPT' from the design drawings referenced under Section 1.2 of the Landscape Management Plan and re-submit it to the Department for information.

Please note that if there are any inconsistencies between the approved Landscape Management Plan and the conditions of consent, the conditions will prevail.

Also, please make the Landscape Management Plan available for public access on the project website as per condition A22.

If you have any questions, please contact Jeremy martin at jeremy.martin@dpie.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shiraz Ahmed', with a long horizontal flourish extending to the right.

Shiraz Ahmed
Team Leader - Social Infrastructure Projects
Infrastructure Management

As nominee of the Planning Secretary



Gregory Hills Public School

LANDSCAPE MANAGEMENT PLAN

Job Number: 129058

Prepared for
LIPMAN

Prepared by
Ben Lanigan

Urban Grounds and Gardens

ABN 65617882729

Unit 5/4 Gladstone Road

Castle Hill

REV	Description	Initial	Date
1	For Approval	BL	17/06//24

0. Contents

0. Contents	2
1. INTRODUCTION.....	3
1.1. Project Background	3
1.2. This Report and Author	3
1.3. The Role of this Landscape Management Plan	3
1.4. Areas to which this Plan Applies	3
1.5. Landscape Maintenance Responsibility	3
1.6. Landscape Management Principles	4
2. PROPOSED PLANTING SPECIES AND DESIGN COMPLIANCE.....	5
2.1. Mass Planting Areas and Carpark.....	5
2.2. Planting Schedule	5
3. SPECIFIC LANDSCAPE MANAGEMENT ACTIVITIES.....	7
3.1. TPZ zone, internal planting within hardstand and boundary planting.....	7
3.2. Soil Management	7
3.3. Soil Management for Trees	7
3.4. Fertilising, Composting and Mulching.....	9
3.5. Pruning	9
3.6. Weeding.....	9
4. IRRIGATION, DISEASE AND INSECT CONTROL	11
4.1. Irrigation	11
4.2. Disease and Insect Control	11
5. PROTECTIVE MEASURES	11
5.1. Erosion, Contamination and Sedimentation Control	11
6. MONITORING AND REPORTING.....	12
Appendix 1. Maintenance Schedule	13
Appendix 2. Reference Documents	15

1. INTRODUCTION

1.1. Project Background

This Landscape Management Plan has been prepared to fulfill the minister's condition AHIP no.110808 DA condition D29 of the approved Building development at **Long Reef Circuit Gregory Hills**.

Condition D29 state:

Prior to the commencement of any operation, the Applicant must prepare a Landscape Management Plan to manage the revegetation and landscaping on-site (including the Cumberland Plain Woodland) and submit it to the satisfaction of the Planning Secretary. The plan must:

- a) describe the ongoing monitoring and maintenance measures to manage revegetation and landscaping;
- b) be consistent with the Applicant's Management and Mitigation Measures at Appendix C of the supplementary information to SSD-41306367-Mod-2 dated March 2024; and
- c) outline the management measures for weed removal and planting maintenance including:
 - i. all priority weeds within the conserved Cumberland Plain Woodland shall be removed within 1 year of commencement of works, using standard bush regeneration techniques to support the recovery of this remnant.
 - ii. all ongoing weed removal shall be undertaken within the Cumberland Plain Woodland for a minimum of 5 years by a suitably qualified Bush Regeneration Contractor to support the plants within this zone.

1.2. This Report and Author

Urban Grounds and Gardens, has been commissioned by Lipman Constructions, to produce a Landscape Management Plan (LMP) for the above mentioned development. This LMP has been written by Ben Lanigan, Construction Manager of Urban Grounds and Gardens.

Raintree Consulting prepared the original Aboricultural impact assessment report reference No - 9622 and Taylor Brammer Landscape architects prepared the original landscape documentation for landscape design drawings (GH-LA-SSDA 1000 to GH-LA-SSDA-1005). 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 new school comprises of 44 General Learning Areas. Administration, staff hub and amenity building areas. Library, communal and canteen areas. Sports court, outdoor play space and COLA area. 3 Kiss and drop areas located on Wallarah Circuit and onsite parking. The visual appearance and scale of the built form can be reduced with the retention of native trees with TPZ and shrub species. Using endemic native planting will also provide a small habitat for native birds and animals.

1.4. Areas to which this Plan Applies

This plan will apply to all landscape areas within the site boundary, these are:

Walarah Circuit boundary and street tree works
Long Reef Boundary and school open space internally.

1.5. Landscape Maintenance Responsibility

Urban Grounds and Gardens, 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 LIPMAN.

1.6. Landscape Management Principles

The following landscape management principles have been identified as being consistent with the approved SSD Modification Landscape.

Design Drawings:

- 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 are to 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 use of native endemic planting in all landscape areas and for any replacement plantings.
- 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.

2. PROPOSED PLANTING SPECIES AND DESIGN COMPLIANCE

2.1. Mass Planting Areas and Carpark

All landscape design compliance was completed by Talyor Brammer. This design is comprised of native shrubs and trees and deciduous tree specimens.

2.2. Planting Schedule

BOTANICAL NAME	COMMON NAME	QUANTITY	POT SIZE	SPACING	HEIGHT X WIDTH	NATIVE	PERIMETER	STREET FRONTAGE	CARPARK	ENTRY	GENERAL	BIO RETENTION BASIN
SHRUBS AND PLANTS WOODLAND PLANT SPECIES												
TREES												
<i>Acacia floribunda</i>	Gossamer Wattle	4	300 pot	As Shown	3m x 6m	Y						
<i>Brachychiton populneus</i>	Kurrajong Tree	14	400L	As Shown	15m x 8m	Y						
<i>Casuarina glauca</i>	She Oak	36	300 pot	As Shown	15m x 8m	Y						
<i>Eucalyptus crebra</i>	Narrow Leaved Ironbark	2	300 pot	As Shown	16m x 12m	Y						
<i>Eucalyptus tereticornis</i>	Forest Red Gum	1	300 pot	As Shown	25m x 15m	Y						
<i>Eucalyptus moluccana</i>	Grey Box	2	300 pot	As Shown	25m x 15m	Y						
<i>Melaleuca decora</i>	White Feather Honey Myrtle	7	300 pot	As Shown	10m x 5m	Y						
<i>Melaleuca quinquenervia</i>	Broad-Leaf Paperbark	3	300 pot	As Shown	12m x 4m	Y						
<i>Melaleuca styphelioides</i>	Prickly leaf paperbark	9	300 pot	As Shown	10m x 8m	Y						

SHRUBS												
<i>Bursaria spinosa</i>	Sweet Bursaria	10	150mm	As Shown	4m x 3m	Y						
GRASSES AND GROUNDCOVERS												
<i>Brachycome angustifolia</i>	Rock Daisy	3	150mm	4/m2	0.4m x 0.3m	Y						
<i>Brachycome multifida</i>	Cut-leaved Daisy	39	150mm	4/m2	0.3m x 0.3m	Y						
<i>Dianella ionifolia</i>	Flax Lily	183	150mm	4/m2	1m x 1m	Y						
<i>Dianella revoluta</i>	Black Anther Flax Lily	183	150mm	4/m2	0.4m x 0.4m	Y						
<i>Hardenbergia violacea</i>	Purple Coral Pee	359	150mm	4/m2	3 x 2m	Y						
<i>Lomandra multiflora</i>	Mat Rush	839	150mm	4/m2	0.5m x 0.5m	Y						
<i>Scandelia aemula</i>	Fan Flower	12	150mm	4/m2	0.5m x 1m	Y						
<i>Viola hederacea</i>	Native Violet	159	150mm	4/m2	0.15m x 1m	Y						

GENERAL PLANTING												
EVERGREEN TREES												
<i>Allocasuarina littoralis</i>	Narrow She Oak	2	300 pot	As Shown	10m x 5m	Y						
<i>Allocasuarina tortulosa</i>	Forest She Oak	5	300 pot	As Shown	15m x 5m	Y						
<i>Elaeagnus reticulata</i>	Blueberry Ash	5	300 pot	As Shown	8m x 6m	Y						
<i>Angophora floribunda</i>	Rough Bark Apple	16	300 pot	As Shown	18m x 10m	Y						
<i>Angophora subvelutina</i>	Broad Leaved Apple	4	300 pot	As Shown	20m x 10m	Y						
<i>Backhousia myrtifolia</i>	Grey Myrtle	1	300 pot	As Shown	7m x 4m	Y						
<i>Casuarina cunninghamiana</i>	River Oak	1	300 pot	As Shown	15-30m	Y						
<i>Callistemon viminalis</i>	Weeping Bottlebrush	6	300 pot	As Shown	8m x 4m	Y						

DECIDUOUS TREES												
<i>Brachychiton acerifolius</i>	Flowers Flame Tree	9	400L	As Shown	12m x 6m	Y						
<i>Pyrus calleryana 'Chanticleer'</i>	Ornamental Pear	14	400L	As Shown	11m x 5m	N						
<i> Zelkova serrata</i>	Japanese Elm	17	400L	As Shown	13m x 10m	N						

SHRUBS												
<i>Aeonium arboreum 'Zwartkop'</i>	Black Rose Succulent	5	150mm	As Shown	1m x 0.50m	N						
<i>Banksia spinulosa 'Bush Candles'</i>	Halpin Banksia	10	150mm	As Shown	0.5m x 1.5m	Y						
<i>Breynia cernua</i>	Apple Berry	14	150mm	As Shown	2m x 1m	Y						
<i>Casuarina glauca 'Coastal II'</i>	Casuarina sheppii	26	150mm	As Shown	0.1m x 1m	Y						
<i>Coriaria fruticosa 'Rubra'</i>		56	150mm	As Shown	1.5 x 1m	Y						
<i>Doryanthea excelsa</i>	Gymea Lily	16	150mm	As Shown	3m x 4m	Y						
<i>Oryzanthus diosmifolius</i>	Rice Flower	12	150mm	As Shown	1.5 x 1.5	Y						

Landscape Management Plan Gregory Hills Public School



GROUNDCOVERS											
<i>Achillea millefolium</i> 'Terracotta'	Yarrow	359	150mm	4/m2	0.5 x 0.5m	N					
<i>Bergenia cordifolia</i>	Elephant's Ears, Saxifrage	56	150mm	4/m2	0.6 x 0.5m	N					
<i>Bidens ferulifolia</i> 'Campfire'	Biden's Campfire	11	150mm	4/m2	0.5 x 0.5	N					
<i>Lomandra 'Little Con'</i>	Mat Rush	96	150mm	4/m2	0.3 x 0.3m	Y					
<i>Clematis armandi</i>	Evergreen Clematis	359	150mm	4/m2	9 x 1m	Y					
<i>Alysa australis</i>	Australian Bugle	56	150mm	4/m2	0.5 x 3m	Y					

GRASSES											
<i>Carex appressa</i>	Tall Sedge	839	150mm	4/m2	1m x 1m	Y					
<i>Dianella caerulea</i>	Blue Flax Lily	183	150mm	4/m2	1m x 2m	Y					
<i>Festuca glauca</i>	Blue tussock	240	150mm	4/m2	0.4 x 0.4	N					
<i>Juncus usitatus</i>	Common Rush	183	150mm	4/m2	1.2m x 1m	Y					
<i>Lomandra confertifolia</i>	Mat Rush	839	150mm	4/m2	0.4m x 0.7m	Y					
<i>Lomandra longifolia</i>	Mat Rush	839	150mm	4/m2	1m x 0.6m	Y					
<i>Microlaena stipoides</i>	Weeping Grass	240	150mm	4/m2	0.6m x 0.3m	Y					
<i>Poa labillardierei</i> var. <i>labillardierei</i>	Tufted Grass	574	150mm	4/m2	0.8m x 0.3m	Y					
<i>Rydosperma coespitosum</i>	Wallaby Grass	240	150mm	4/m2	0.70 x .30	Y					
<i>Themeda triandra</i>	Kangaroo Grass	574	150mm	4/m2	0.5m x 0.5m	Y					

BIO-RETENTION BASIN											
<i>Austrostipa stipoides</i>	Coast Spear Grass	600	150mm	4/m2	0.8 x 0.8m	Y					
<i>Bolboschoenus caldwellii</i>	Marsh Club Rush	600	150mm	4/m2	1 x 0.6m	Y					
<i>Carex appressa</i>	Tall Sedge	600	150mm	4/m2	0.60 x 0.60	Y					
<i>Floris nodosa</i>	Knobby Club Rush	600	150mm	4/m2	1m x 0.60m	Y					
<i>Gnaphalium</i>	Sew Sedge	600	150mm	4/m2	1m x 1m	Y					
<i>Juncus usitatus</i>	Sedge	600	150mm	4/m2	1m x 0.60m	Y					
<i>Lomandra longifolia</i>	Mat Rush	600	150mm	4/m2	1m x 1m	Y					

3. SPECIFIC LANDSCAPE MANAGEMENT ACTIVITIES

3.1. TPZ zone, internal planting within hardstand and boundary planting.

Mass planting areas vary in appearance from mass plantings of single species (eg. Lomandra sp., Dianella sp.) to 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. All 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 there be failures the original species specified on the landscape plans must 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. Lower branches are to be removed as per APZ requirements. 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.

Note: All existing grass within the TPZ zone is to stay as is. Originally mulch is shown as a weed suppressant in this area. Gardens shown on drawings are consistent with latest revisions of work to proceed.

3.2. Soil Management

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 planting areas:

Benedicts Smart mix 3 – Native planting mix conforming with AS 4454	No Site won soil for garden works is available for use.	All mass planting areas and trees within tree pit structural zones.
---	---	---

3.3. 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.

To allow for better overall growth of the trees throughout its entire life span, tree planting within the hard stand will follow detail 0502– Rev F from Talyor Brammer which shows structural soil tree pits for trees within hard stand.

In addition to a physical inspection of the soil to be used to assess field texture and structure and drainage capability, soils will 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 will 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 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
--	--------------------------------------	--

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

(Leake and Haege 2014, p.96)

3.4. 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 will be assessed on an annual basis by observation and leaf analysis.

3.5. Pruning

Ground cover and shrubs will 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.

3.6. Weeding

Weeding is often a concern in new areas of mass planted/TPZ zone 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.

- Camden council controls noxious weeds within this LGA and a full list can be found at:

<https://www.camden.nsw.gov.au>

This list defines plants that are classified as weeds and will be removed from the site and not planted in any new works.

This list 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 or nearby 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	

4. IRRIGATION, DISEASE AND INSECT CONTROL

4.1. 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 Urban Grounds and Gardens and designed by Aquadec Irrigation. The Landscape Contractor will co-ordinate the irrigation installation to LIPMAN / Talyor Brammer for 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, Urban Grounds and Garden is to run through the system to ensure that it is operating correctly and instruct the LIPMAN '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 LIPMAN 's representative at the time of completion.

At the completion of the installation the landscape contractor will 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 will be given to the LIPMAN.

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.

4.2. 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.

5. PROTECTIVE MEASURES

5.1. Erosion, Contamination and Sedimentation Control

During construction, all precautions necessary will 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.

6. MONITORING AND REPORTING

General maintenance tasks are described in the Landscape Technical Specification document prepared by Talyor Brammer – GHPS – TAYBRA – XX-DR-L-0600. A Maintenance Schedule for the maintenance period is also included. A log book will be used to record daily/weekly/monthly visits which will be submitted to LIPMAN.

Regular inspections of all landscape areas will be undertaken by Bryce Lambert (Maintenance Manager, Ph. 0415 409 633) and then maintenance teams following handover. This is to ensure that maintenance is carried out according to the plan. Inspections will include the ongoing protection of revegetation works during its establishment period.

Appendix 1. 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 as per Bushfire recommendations. Remove leaf litter from pathways
3. Mulching		✓	✓		Reapply mulch to maintain to a depth of 75mm in areas that are deficient. Soil is to be aerated before placing mulch. After 12 months, mulching will have broken down and is to be topped up to ensure a depth of 75mm. A slow release, low phosphorous fertiliser is to 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 LCC-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 is to be maintained until planting is fully established. Best practice watering is early morning or late afternoon to reduce evaporation.

Cumberland Plain Woodland Tree Protection Zone (TPZ)



CUMBERLAND PLAINS WOODLANDS AREA:

- Weeds are to be manually removed within 1 year of the commencement of works using bush regeneration techniques. It is important for SINSW to note that they need to engage a suitably qualified Bush Regeneration Contractor to support the plants in this zone for 5 years.

Appendix 2. 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

SSDA Conditions Satisfaction Table

Condition	Description	Relevant Report Section
D29(a)	The Landscape management Plan must: (a) describe ongoing monitoring and maintenance measures to management revegetation and landscaping of the Cumberland Plain Woodland	3.6,6, Appendix 1
D29(b)	The Landscape management Plan must: (b) be consistent with the Applicant's Management and Mitigation Measures at Appendix C of the Supplementary Information to SSD-41306367-Mod-2 dated March 2024	1,2,3,4,5,6
D29(ci)	Outline the management measures for weed removal and planting maintenance including: (i) all priority weeds within the conserved Cumberland Plain Woodland shall be removed within 1 year of commencement of works, using standard bush regeneration techniques to support the recovery of this remnant	Appendix 1
D29(cii)	Outline the management measures for weed removal and planting maintenance including: (ii) all ongoing weed removal shall be undertaken with the Cumberland Plain Woodland for a minimum of 5 years by a suitably qualified Bush Regeneration Contractor to support the plants within this zone	3.6