

Eastern Creek DC – Echidna

Landscape Management Plan

Issue 01

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ARCADIA

Arcadia Landscape Architecture Pty Ltd
ACN 148 994 870
ABN 83 148 994 870
Address: Suite 76, 26-32 Pirrama Road, Pyrmont NSW 2009
Phone: +61 2 8571 2900
Email: sydney@arcadiala.com.au
NATSPEC Subscriber Number: 21026318

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Landscape Management Plan (LMP) has been developed to guide the ongoing care, functionality, and sustainability of the site's landscape elements and environment. It aims to ensure the long-term health and resilience of both the landscape features and the experience of its users. This plan sets out a holistic framework for maintaining hardscape and softscape elements, inclusive of built infrastructure, furniture, irrigation systems, planting, and on-site waste practices.

By outlining clear strategies for maintenance, monitoring, and management responsibilities, the LMP supports ecological integrity, visual amenity, and safety across the site. It serves as a reference document for all stakeholders involved in the management of the landscape, contributing to its continued usability and preservation.

1.0 INTRODUCTION & GENERAL REQUIREMENTS

1 GENERAL

1.1 SCOPE OF DOCUMENT

This document sets out the minimum requirements for the ongoing operational landscape management of the overall site and to address the requirements under **SSDA Condition B44 and B45**.

The Landscape management plan complies to the following:

- (a) is prepared in consultation with Council;
- (b) details the species to be planted;
- (c) describes the monitoring and maintenance measures to manage revegetation and landscaping works;
- (d) is generally consistent with:
 - (i) the Landscape Plans and Landscape Screening provided in the additional response to submissions
 - (ii) the applicant's management and mitigation measures at Appendix 2.

The landscape management plan describes the ongoing monitoring and maintenance measures to manage the landscape across the site. This plan **builds on and aligns with the SSDA deliverables (Landscape Report and Drawings)**, which included a Landscape Maintenance/Management section responding to the EIS/SSDA requirements.

Contractual relationships: Responsibilities and duties of the principal, contractor and contract administrator are not altered by requirements in the documents referenced in this plan of management.

1.2 CROSS REFERENCES

General

This Landscape Management Plan shall be read in conjunction with the landscape architectural plans, specification, scope of works and relevant documentation. Including but not limited to the following:

- Operational Environmental Management Plan, Project Echidna – SSD47320208, Reference: 288255-24(2025)

Layouts of service lines, plant and equipment shown on the drawings are diagrammatic only, except where figured dimensions are provided or calculable.

Before commencing work:

- Obtain all necessary information and approvals
- Coordinate in conjunction with all relevant stakeholders.
- Locate all services by via services search and or physical pot holing

1.3 AIMS

Responsibilities

To maintain all designated areas within the contract boundary for the full duration of the landscape maintenance agreement, in accordance with the approved scope of works across the site.

Scope of responsibilities

- Maintenance of all landscape areas as per specification
- Supply and spreading of fertiliser to all planting areas as per specification
- Pruning, trimming and tree surgery as required or by approved arborist.
- Pest and disease control for planting areas as required. Treat all infestation as soon as practical after identification
- Replacement of dead or failed plants
- Maintenance of irrigation systems as per manufacturer instructions
- Removal of rubbish and debris in garden areas
- Keeping of a log book or equivalent. Ensure updates provided to Project Manager after each visit
- Scheduled maintenance reports to be provided monthly during the initial six-month period, transitioning to quarterly reports thereafter.

Maintenance procedures

All maintenance activities are to be carried out in accordance with approved horticulture and arborist best practices, as detailed in this document.

1.4 TESTING AND REPORTING REQUIREMENTS

- Weed, pest, disease and fungi management (*see Section 2.1 for testing and reporting requirements*)
- Plant health monitoring and reporting (*see Section 4 for testing and reporting requirements*)
- Soil testing and amendment (*see Section 3 for testing and reporting requirements*)
- Irrigation testing (*see Section 6 for testing and reporting requirements*)
- Furniture and fixtures (*see Section 8 for testing and reporting requirements*)
- Drainage monitoring (*see Section 2.3.3 for testing and reporting requirements*)

1.5 NOTICE

The service provider must notify the Superintendent and/or Building manager, as applicable, to arrange inspection of works. A minimum of 48 hours' notice is required.

Public amenity: Where works may affect public access or amenity, notice must be given by the Thursday prior to the week in which the work is scheduled to occur.

Inspection activities are to be programmed accordingly to ensure required approvals do not delay the project or affect other stakeholders.

Inspection schedule

Inspection point / hold point	Approved Release Authority
Any materials to be used in landscape areas must be approved prior to implementation.	Building manager
Addition of fertilizer to garden areas	Building manager/Soil test results (Refer to Section 2.2.2)
Replacement mulch	Building manager
Replacement soil	Building manager/Soil tests to Soil scientist/Engineer
Replacement of Plants	Building manager/Planting schedule
Additional or updating furniture	Building manager
Inspection of the Completion of all fixture and furniture installation	Building manager
Inspection of all lighting fixtures	Building manager

1.6 LOG BOOK

Landscape contractor to complete logbook entry on **each day of site attendance for landscaping works**, and provide a minimum **fortnightly summary of logged entries** of landscaping works. All actions listed below require a logbook entry. Upon request, make the logbook available for inspection. 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.

2.0 LANDSCAPE MANAGEMENT SCOPE

2.1 GENERAL

2.1.1 WEED CONTROL

Prior to installation, soil should be as weed-free as practicable to reduce ongoing weed management requirements.

The service provider shall perform all aspects of weed management in the planting beds necessary to support healthy plant growth and to optimise the appearance of the gardens. In this context, a weed is a plant that has not been specified in the design. The garden beds must therefore be maintained free of non-specified plants. The method of weed control is at the discretion of the contractor but non-chemical methods are preferred. Given that mulch will be maintained at between 30-75 mm, weed proliferation is not expected to be problematic. Any weeds that do emerge from the mulch should be easily removed by hand. Where possible, selective herbicides should be applied where required with care. **Waste** associated to be collected and discarded in accordance with the Building's Waste Management Plan.

Where selective herbicides are deemed necessary, approval must first be obtained from the Superintendent and/or Building manager. Care must be taken to prevent spray drift from affecting non-target plantings. Treatments are to be carried out with appropriate Personal Protective Equipment (PPE), *and where feasible, scheduled outside of business hours* to minimise exposure to staff and site users. Only products formally approved for use on site may be used.

Program

- **Operational timing:** Landscaping contractor to ensure all planting beds and containers are to be maintained in a weed-free condition, as verified during fortnightly inspections. All weeding works are to be scheduled in consultation with the Superintendent and/or Building manager, ensuring minimal disruption to site use and access.
- **Control methods:** Weeds are to be removed from all designated planting areas via hand removal or application of an approved herbicide. The contractor is to provide a list of suitable products and management strategies for control of weeds in an environment occupied by sensitive receptors.
- **Chemical control:** The use of herbicides (e.g. glyphosate-based products such as Roundup) should be minimized. Any herbicide application must be approved in advance by the Superintendent or Building manager, with careful consideration of safety and environmental impact.

2.1.2 PEST, DISEASE AND FUNGI CONTROL

The service provider is responsible for the control of any pest or disease which may affect the planting areas. Soil health is a key factor in the prevalence of plant diseases. When soil conditions are conducive - for instance, with optimal moisture and temperature - pathogens may become active and widespread. However, imbalances such as excessive fertilisation, nutrient deficiencies, and variations in organic matter levels can also contribute to disease occurrence. **Suboptimal soil conditions** (caused by compaction, waterlogging, over-fertilisation, or installation of unsuitable soil types) may exacerbate the potential for disease and fungal activity. **Waste** associated to be collected and discarded in accordance with the Building's Waste Management Plan.

Chemical Controls

The application of pesticides or fungicides must be approved by the Superintendent or Building manager prior to use. Treatments are to be carried out with appropriate Personal Protective Equipment (PPE), *and where feasible, scheduled outside of business hours* to minimise exposure to staff and site users. Only products formally approved for use on site may be used.

Contractor Responsibilities

The appointed contractor is responsible for identifying and managing any pest or disease affecting vegetation within the internal landscaped areas.

Treatment Protocol

- Diagnose the issue promptly and accurately.
- Determine the appropriate treatment method and seek formal approval from the Superintendent.
- Apply the treatment consistently until the issue is resolved.
- Where hazardous products are required, treatments should occur outside of standard operational hours.
- Ensure public and staff safety: all chemical residues are to be safely cleaned or removed, and any waste (e.g., containers) must be responsibly disposed of to avoid environmental or safety risks.

Program

- **Reporting:** Upon identification of pest or disease affecting plant material, the contractor must immediately notify the Superintendent and/or Building manager.
- **Control methods:** Pests, fungi, disease are to be removed from all designated planting areas via hand removal or application of an approved insecticide/fungicide/and or pathogen control as required. The contractor is to provide a list of suitable products and management strategies for management of pests, fungi and disease.
- **Chemical Control:** Targeted application of insecticides, fungicides, or appropriate combinations may be undertaken based on the nature of the issue.
- **Operational Timing:** All pesticide and fungicide applications are to be scheduled in consultation with the Superintendent or Building manager, ensuring minimal disruption to site use and access.

2.2 TREES AND SHRUBS

2.2.1 PRUNING AND TRIMMING

To preserve both the visual coherence and functional integrity of the planted areas, routine management, pruning and shaping of plant material is required. The prune/shape requirements are to reflect the natural growth flowering and regrowth habit of the individual species. **Waste** associated to be collected and discarded in accordance with the Building's Waste Management Plan. This management includes the following:

Deadwood and foliage management

Removal of deadwood and spent foliage to support plant health and minimise visual clutter. Selected organic matter may be retained on the soil surface to mimic natural habitat conditions and contribute to soil organic content and microbiological activity.

Spatial clearance

Vegetation must be maintained to avoid encroachment into defined useable areas—particularly seating zones—to ensure accessibility and comfort for site users.

Functional and aesthetic pruning

Trimming may also be necessary to Improve light penetration within planting areas, enhance air circulation across densely planted zones, elevate tree canopies to allow for healthy understory development, refine plant form for aesthetic and ecological outcomes.

Seasonal and targeted interventions

Specific plant parts should be removed at appropriate times of year to limit ecological risk and enhance site management(i.e. tree fern fronds may require pruning prior to spore release, fallen fruits should be removed to mitigate fruit fly infestation risk).

Community engagement opportunities

The collection of berries or seeds—particularly from rare or endemic species—may be coordinated as an engagement initiative, allowing staff and occupants to cultivate specimens off-site, fostering connection with the habitats.

Program

Primary pruning/trimming operations are to be undertaken during Autumn and Winter, with spot treatments conducted on an as-needed basis throughout the year

- **Shrubs:** Prune following flowering periods as per species
- **Trees:**
 - o Prune to maintain the tree's natural form and character, under the supervision and/or guidance of an authorised representative of Superintendent/Building manager
 - o Remove diseased, damaged, or structurally compromised growth
 - o Prevent inter-branch contact and thin crowns where appropriate, maintaining a balanced canopy
 - o Ensure clear sightlines for user safety and optimal light conditions for plant health
- **Tree branch removal:**
 - o A qualified arborist is to be engaged and provide approval of works undertaken
 - o Remove only in accordance with AS 4373—2007 (R2020), *Pruning of amenity trees*
 - o Provide a minimum of 48h notice to building management prior to any tree branch removal works.
- **Operational timing:** All pruning/trimming works are to be scheduled in consultation with the Superintendent or Building manager, ensuring minimal disruption to site use and access.

2.2.2 FERTILISING

Fertilising program to be based on soil testing results.

Soil testing

Refer to Section 3.3 for soil testing frequency. Undertake soil tests as follows:

- At the commencement of the contract.
- Annual testing is suggested subject to the advice of the landscaping contractor and based on site inspection findings.

Soil pH adjustment

Apply additional fertilisers and soil conditioners as indicated from soil testing. Maintain a pH range of 5.5 – 6.5.

Shrubs:

- N:P:K ratio: Balanced 15:4.4:10.
- Apply 3- or 6-month slow release fertilisers (such as Nutricote/Osmocote ensure fertilisers are odourless) or liquid fertilisers (such as Thrive).
- Plant hormone adjustment may be required and should be done in accordance with good horticultural practices.
- Contractor may suggest alternatives; approval from superintendent / Building Manager is required to proceed.
- Rates: To the manufacturer's recommendation and cultivate into the soil 10-20 mm deep.
- Regular application: Each September and February.
- Ensure the appropriate dosage for sensitive native species.

Trees:

- Fertiliser type: Slow release or Liquid fertilisers for trees
- Type: Agriform 10 gram N:P:K 20:4.3:4.1.
 - o 3 tablets/plant over 500 mm in height, or
- Application: Apply pill to the root zone at a distance from the trunk equal to the spread of the foliage.
- Make holes 400 mm deep to take the pill. Backfill with sand, equally spaced around the plant.
- **Operational timing:** All fertilising work to be scheduled in consultation with the Superintendent or Building manager, ensuring minimal disruption to site use and access.

2.2.3 PLANT REPLACEMENTS AND REPLENISHMENT

Plant replacement to be required when plant death occurs or are showing signs of decline. Provide replacement and replenishment plants, as documented in accordance with the Landscape Management Plan. **Waste** associated to be collected and discarded in accordance with the Building's Waste Management Plan. This management includes the following:

Performance Criteria

Replacement is required for evergreen plants exhibiting one or more of the following conditions:

- o Complete death or irreversible decline
- o Loss of 50% or more of normal foliage density
- o Etiolated growth (e.g. excessive elongation, discoloration, bleaching)
- o Marked phototropism indicating poor placement or growing conditions (growth towards light)

Root zone and aeration

Aeration within planting areas is critical for overall plant vitality. Air movement during active growth phases enhances root development, as evidenced by comparative horticultural studies. Soil compaction or poor airflow must be corrected to improve uptake and resilience.

Replacement plant standards

All replacement specimens are to comply with the following minimum standards:

- **Species consistency:** Match to planting schedule by species/variety (*Refer to A-8111 - Materials and plant schedule*)
- **Quality:** Uniformly high-grade stock equal to the best commercially available
- **Form:** Representative of optimal growth for the species relative to pot/container constraints
- **Root system:** Balanced and vigorous root development supporting successful transpiration
- **Condition:** Free from stress indicators such as wilting, sun/shade damage, or deformation from nursery conditions
- **Health status:** Well-established, hardened-off plants with sound structure, pest-free, and disease-free
- **Pot bound checks:** Specimens must be inspected for root binding; pruning or replacement may be required to ensure viability

Plant Performance

- **Plants:** Grown to a standard that allows rapid establishment and growth to maturity.
- **Trees:** If a tree dies due to lack of or incorrect maintenance or for other reasons, this tree is to be replaced with one of similar size and shape. In the case an equivalent scale tree is unavailable; a smaller tree may be installed but only with the superintendent's/Building managers approval.
- **Maintenance:** Encourage and maintain healthy growth in accordance with this Operation Landscape Management Plan.

Program

Provide a suitable irrigation, pruning, fertiliser and monitoring program for all plant materials held by the supplier. Take precautions to safeguard the health and well-being of all plant materials before and including their delivery to the project site.

- **Placing/locating:**
 - o Remove the plant from the container with minimum disturbance to the rootball. Make sure that the rootball is moist.
 - o If required, root prune to make sure all circling roots have been either severed or aligned radially into the surrounding soil.
 - o Place the plant in its final position, in the centre of the hole and plumb, and with the topsoil level of the plant rootball level with the finished surface of the surrounding soil.
- **Fertilising:** Distribute pellets in planting beds and individual plantings, place fertiliser pellets around the plants at the time of planting.
- **Backfilling:** Backfill with topsoil mixture. Lightly tamp and water to eliminate air pockets. Make sure that topsoil is not placed over the top of the rootball, so the plant stem remains the same height above ground as it was in the container. Avoid mixing mulch with topsoil.
- **Operational Timing:** To be scheduled in consultation with the Superintendent or Building manager, ensuring minimal disruption to site use and access.

2.3 WATERING

2.3.1 NEW / REPLACED PLANTINGS

To ensure healthy establishment and longevity of newly placed plant stock, see following watering requirements:

Timing of Watering

Avoid irrigation during peak heat periods - particularly the hottest hours of the day during summer. Early morning watering is strongly recommended to reduce evaporation.

Initial Establishment

All replacement plants must be thoroughly watered prior to planting, immediately following installation, and subsequently as required to support sustained, stress-free growth during the establishment phase.

Regulatory Compliance

The watering regime must comply with current Federal and State Government water restrictions and environmental guidelines. Coordination with local water authorities, ensuring adherence to site-specific allowances and limitations.

Supplementary Misting

Misting should accompany routine watering or be alternated every second watering cycle to aid in maintaining plant health and longevity.

2.3.2 PROGRAMMING

Automated systems

- Automated systems programmed to align with periods of optimal water pressure and absorption—typically during early mornings or cooler parts of the day. Programming should aim to minimise water usage while ensuring effective coverage
- Watering cycles to consider/avoid interference with site access and functionality, including pedestrian pathways, seating zones, and vehicular traffic flows

2.3.3 DRAINS

All drainage structures, including pits and covers, are to be inspected and cleaned regularly to ensure functionality and prevent water accumulation or overflow.

Inspection Frequency

As required to ensure that all overflow points remain unobstructed; inspections to occur at minimum fortnightly intervals.

2.3.4 IRRIGATION

Refer Section 6 Irrigation

2.4 MULCHING

2.4.1 GENERAL

General management

- Mulch materials must be removed from all pedestrian zones to prevent tripping hazards and maintain a consistently tidy appearance.
- Visual inspections to be conducted weekly to ensure mulch is contained within planting beds and does not encroach on surrounding hardscape surfaces.

Mulch depth and coverage

- Maintain a consistent mulch depth between 30-75mm across all designated planting areas.
- Mulch is to provide full coverage of all planting beds to suppress weed growth, regulate soil temperature, and retain moisture.

Placing mulch

Place mulch to the required depth and clear of plant stems. After settling, mulch to meet the following criteria:

- **Even grading:** Smooth and evenly graded between design surface levels.
- **Level transitions:** Flush with adjacent finished surfaces
- **Slope:** Slope mulch towards the base of plant stems in plantation bed.

2.5 INCIDENTAL WORKS

2.5.1 UNDOCUMENTED WORK

All plant beds are to be checked and cleaned out on a regular basis for rubbish left in planting beds.

2.5.2 SUPPLEMENTARY WORKS

Supplementary maintenance tasks are to be undertaken in conjunction, are as follows:

Waste/Rubbish management

Remove/disposal of all waste materials generated through routine landscape maintenance works.

Leaf litter control

Clear accumulated leaf litter from trees, climbers, and surrounding surfaces as required.

Surface cleaning post-herbicide application

Following the use of herbicides, all adjoining paving and hardscape areas are to be thoroughly cleaned to remove residue and prevent staining, overspray accumulation, or runoff contamination.

3.0 SOIL MANAGEMENT SCOPE

3.1 MONITORING PROGRAMME OVERVIEW

Long-term success and resilience of the planting depends on active monitoring of soil conditions, nutrient dynamics, and plant health. While site-specific soil formulation, planting strategies, and maintenance regimes have been carefully designed, data collection during the first 10 years of landscape development will be essential for guiding proactive management decisions.

The monitoring programme is to provide insight into the following:

- Soil quality and structure
- Nutrient availability and uptake
- Landscape performance and development

The monitoring programme is intended to capture periodic insights into soil quality, landscape progression, and nutrient availability and uptake. Achieving this requires a comprehensive approach involving on-site inspection by suitably qualified professionals, systematic sample collection, laboratory testing, and expert recommendations for soil improvement and remediation as needed.

3.1.1 SOIL HEALTH

In contained or isolated planting environments, inorganic material inputs will be limited. As plants absorb nutrients over time, supplementary soil additions will be required (i.e. estimated at 1-2kg of material per 100kg of existing substrate) depending on nutrient uptake and depletion rates.

Soil connectivity

Interconnected soil zones promote healthier biological activity, enhancing microbial exchange and mineral flow. Design modifications should preserve or enhance connectivity across beds, avoiding fragmentation into isolated pots or sections wherever possible.

Soil as a Living System

Soil must be treated as a living medium, akin to healthy water—requiring free movement and exchange to remain biologically active and supportive of plant development.

3.2 MULCH COVER

The service provider is responsible for all tasks necessary to support soil health through appropriate mulching practices. The service provider will be responsible for the following:

Initial Installation

A minimum mulch depth of **75mm** must be applied at planting across all garden beds.

Breakdown and Replenishment

Organic mulch will degrade over time. If mulch depth is reduced to 30mm, a top-up is required to 75mm.

- Replacement mulch must not exceed original installed levels.
- Mulch must be kept clear of plant stems/trunks to reduce the risk of disease
- Where feasible, apply fertilisers before mulching to support nutrient retention and uptake

3.3 SOIL INSPECTION AND TESTING

Landscape contractor to monitor ongoing soil performance:

- Inspections must be conducted at a minimum annually for 2 years, with one soil test scheduled for mid-spring to align with peak seasonal activity. Following the 2 years, frequency of inspection as required thereafter.
- Soil testing should be coordinated by the service provider
- **It is recommended that a qualified and accredited soil scientist** perform analytical testing, ensuring scientific accuracy and informed remediation if required

3.4 INSPECTION REQUIREMENTS

Routine inspection of soil conditions is essential to identify potential issues such as waterlogging, subsidence, as well as chemical imbalances requiring fertiliser adjustment. Soil evaluation should incorporate both physical and chemical sampling processes. Inspections to include the following:

- **Vegetation health assessment:** Conduct assessments in collaboration with service provider and record observations on:
 - o General health/structure/appearance
 - o Signs of nutrient toxicity or deficiency
 - o Evidence of pest or disease activity
 - o Plant mortality or unusual growth patterns
 - o Photographic documentation of notable plant issues and general site condition
- **Plant tissue sampling:** Collect a minimum of two (2) plant tissue samples from species showing signs of poor health, toxicity, or deficiency. If no symptoms are evident, select representative specimens at the inspector's discretion for benchmarking purposes
- **Topsoil depth survey:** Measure topsoil depth from finished garden edge levels to monitor any subsidence or erosion across the site
- **Soil Profile analysis:** Excavate soil profiles to full drainage depth at a minimum of four(4) sample points. For each location document mulch depth and determine if topping up is necessary

3.5 MEASUREMENT OF TOPSOIL DEPTH SOIL FERTILITY MANAGEMENT

The service provider must manage all aspects of soil fertility to support healthy plant growth and long-term performance of the landscape. Over time, changes in soil chemistry are expected due to nutrient uptake by vegetation, organic matter decomposition, and the activation of slow-release fertilisers.

Monitoring & assessment of soil fertility is to be evaluated through regular soil and plant nutrient testing, conducted under the guidance of a qualified horticulturist and accredited soil scientist. Testing and observations to include:

- Fertiliser specifications tailored to soil type and seasonal needs (e.g. controlled-release, fast-acting formulations)
- Recommended application rates and methods (e.g. remove mulch prior to application, incorporate correctly)
- Measurement of subsoil depth (if applicable)
- Identification of waterlogging or poor drainage
- Photographic documentation of each extracted soil profile
- Bore log recording soil structure, condition, and pedology
- From the 4 boreholes, a minimum of 1 composite sample combining topsoil and subsoil must be collected and submitted for laboratory testing to assess chemical composition and guide fertiliser strategy
- Any moisture or irrigation measurements made by maintenance teams must be made available and included within the inspection.

3.6 LABORATORY ANALYSIS

The following laboratory analysis must be conducted on the samples collected during the inspections. These sets of analysis serve as a minimum requirement. Additional testing may be required at the discretion of the inspecting consultant.

The plant tissue samples are to be analysed for total nitrogen, phosphorus, potassium, sulfur, calcium, magnesium, iron, copper, manganese, zinc, boron, sodium, chloride and nitrate.

Topsoil and subsoil samples are to be analysed for the relevant specification requirements as per *AS 4419:2018 Soils for landscaping and garden use*.

3.7 REPORTING AND DOCUMENTATION REQUIREMENTS

The inspecting consultant is required to produce a report outlining the findings of the inspections, along with the presentation of field notes, laboratory data and photographs. This Soil management report is to align with the project-wide framework in **Section 4 Reporting schedule**.

The consultant must assess the overall landscape and soil chemical/physical condition and determine if any additional actions are required to improve the quality and longevity of the landscape and planting items.

Amelioration advice is to be provided independent of any company owned products and must explain the purpose and objective of soil amendment.

Plant replacement and monitoring reports

Contractors undertaking site maintenance must report on plant health as part of routine reporting. At a minimum, the report is to note, by zone where relevant: observed pest activity, disease symptoms, weed proliferation, structural damage, plant mortality/replacements, and soil-moisture observations.

Review of monitoring reports

Completed recording sheets must be submitted to the Maintenance Coordinator and soil scientist for review and archiving. These records support the development of a landscape database and help identify recurring issues. Plants marked for replacement require photographic evidence and a brief review of site conditions to determine cause of decline. Not all losses warrant replacement, as gardens mature and natural variation occurs.

3.8 REQUIRED QUALIFICATIONS / CERTIFICATIONS

Personnel requirements

The service providers/consultant nominated to conduct soil inspections must have relevant industry experience, qualifications and be recognised as a Soil scientist and/or Horticulturalist, with demonstrated expertise in: soil profiling, sampling procedures.

Laboratory requirements

All soil and tissue samples must be analysed by a laboratory that is:

- Accredited by **NATA** (National Association of Testing Authorities)
- Recognised by **ASPAC** (Australasian Soil and Plant Analysis Council)

Report sign-off

Final soil reports, including any soil amelioration recommendations must be reviewed and formally endorsed by a qualified Soil scientist/Horticulturalist. Soil scientist/Horticulturalist to conduct soil tests annually for a minimum of 2 years, then as required thereafter.

4.0 REPORTING SCHEDULE

4.1 MAINTENANCE REPORT SCHEDULE

4.1.1 MONTHLY / QUARTERLY REPORTS

Timing of reporting

Reports to be submitted by the last Friday of each month for the first 6 months following commencement of maintenance activities. Thereafter, reporting frequency will shift to a quarterly basis.

Each report to include the following:

- A summary of the general status of works undertaken during the reporting period
- Soil test results relevant to the fertiliser programme and overall soil condition
- Details of plant replacements, including identification, location, and reasons for replacement
- An overview of maintenance activities, highlighting key operational tasks carried out in the period

Incident reports

Any disturbance or incident that impacts the daily scheduling or delivery of landscape maintenance works must be reported. Notification to be made verbally to the service provider or relevant site authority, and to be confirmed in recorded writing/correspondence.

Minimum report content requirements: Check list as listed below.

Item	Action
Plant material	Replace failed plants
	Additional planting
	Treat for disease or insect attack
	Tree surgery
	Fertilising generally
	Fertilising for specific nutrient deficiencies
	Thin out planting
Soil	Pruning/trimming
	Additional soil
	Soil conditioner
Mulch	Weeding
	Top up mulch
Rubbish removal	Generally remove bottles, paper, cigarette butts etc.
	Remove leaf, litter from pots and other permanent planting areas
Irrigation	Replace parts
	Repair
	Clean out
	Adjust
	Clean out subsurface drains

5.0 MAINTENANCE PROCEDURE SCHEDULE

5.1 MAINTENANCE SCOPE OF WORKS AND SCHEDULE

Minimum attendance checklist

Initial 6 months require monthly reporting, there after quarterly reports are required only.

Table	ACTIVITY	FREQUENCY						ACTION
		D	W	2W	3W	M	3/6/12 M	
1	Logbook	+		+		+		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 the Contract Administrator 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. If a replaced plant persists to fail due to environmental conditions replace with a more suitable species within the selected planting palette provided by the landscape architect.
3	Mulch			+		+		Inspect and replace mulch deficiencies within 2 weeks of observation. Ensure gardens beds have evenly dispersed mulch as high winds may have impact. 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	Soil control					+	12	Check moisture levels of soil monthly in all planter beds to ensure water dispersal is in accordance with the irrigation system. Furthermore, sample and test soil annually checking to ensure there isn't any persisting contaminants and/or toxicities and adjust accordingly.
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 usually within 3 months.
6	Weed and rubbish removal	+		+				Rubbish Removal to as required, weed removal every 2 weeks. 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. Specifically Monitor Level 03 rooftop trees and their canopies not to exceed parapet.
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 necessary.
9	Drainage		+					Inspect strip drains and pits along with planter drainage to ensure there are no blockages; clear immediately if any loose rubbish or fill is blocking 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	Irrigation			+				Ensure the irrigation system is working as intended and as per manufacture specification for all planters. Ensure that Tree Ferns canopy dripper is adjusted to match the length of growth. General measures for watering include but are not limited to; 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	Fixed Furniture						6-12m+	Inspect surface of all fixed furniture ensuring all fixings and surfaces are to standard as per manufactures specification. Clean surfaces every 12months or as needed.

6.0 IRRIGATION MAINTENANCE SCOPE

6.1 IRRIGATION MAINTENANCE SCOPE OF WORKS

The service provider must perform all aspects of irrigation monitoring and performance checks. Only staff trained in effective irrigation shall undertake the irrigation assessment. Water shall be applied at a rate that allows even infiltration into the soil without disturbing mulch or mixing soil with mulch. Overly high-water pressures or too high flow rates can disturb mulch and create a soil / mulch blend at the surface. If soil is blended with mulch, it will detract from the specified mulch depth requiring additional mulch to be added. This may have implications for weed control and / or nitrogen drawdown and maintenance of adequate fertility. Do not over irrigate/water as reduced oxygen levels will lead to an anaerobic environment and the death and decline of plants. Water must be applied at a rate that does not exceed the infiltration rate of the soil.

Equipment maintenance:

- Check all components for proper operation.
- Repair or replace damaged component with equivalent parts.
- Flush any dirt or foreign matter from the system and clear all blockages.
- Operation: Ensure by adjustment or replacement of components, that the overall operation of the system is efficient and operational.

Supervision: Prevent excessive use of water.

6.2 PROGRAMMING

- Automated systems programmed to align with periods of optimal water pressure and absorption—typically during early mornings or cooler parts of the day. Programming should aim to minimise water usage while ensuring effective coverage
- Watering cycles to consider/avoid interference with site access and functionality, including pedestrian pathways, seating zones, and vehicular traffic flows

Minimum attendance checklist

General	
Filters – mainline	Monthly
Electrical source output (auto system)	Monthly
Controller (automatic systems)	Monthly
Operation – progression - Sta to Sta.	Fortnightly
Proper activation of valves	Monthly
Proper timing of stations	Every 2 years
Proper time and day readings	Fortnightly
Valve operation	Every 2 years
Open, close completely (weeping)	Fortnightly
Riser seal leaks	Every 2 months
Set to grade	Every 2 months
Coverage pressure	Every 2 months
Clogged screens	Every 2 months
Piping	Every 2 months
Leaks – broken or cracked pipe	As Needed
Bad solvent welds, bad threaded	As Needed
Connection	As Needed
Clogged pipe	As Needed

7.0 WASTE MANAGEMENT

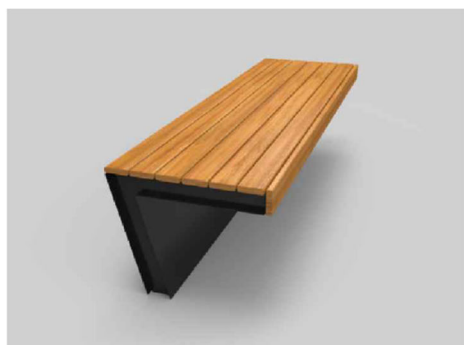
A Waste Management Plan (WMP) has been prepared, in accordance with the NSW Waste Classification Guidelines (2014) and the Blacktown Development Control Plan (2015). Wastes generated from the site will be managed in accordance with the WMP.

8.0 FIXED FURNITURE

Inspect surface of all fixed furniture ensuring all fixings and surfaces are to standard as per manufactures specification. Clean surfaces every 6-12 months or as needed.

Timber Maintenance

Inspect surface of all timber to ensure there is no splintering or damages, replace as per manufactures specification. Re-apply specified timber finishes to manufacturers specification.



F1-Bench Seat, F2-Rubbish bin. Refer to Landscape Material and Plant Schedule (A-8111 - Materials and Plant Schedule)

APPENDIX 01 – LANDSCAPE MATERIALS SCHEDULE

22-869 - MATERIALS SCHEDULE					
CODE	TYPE	LOCATION	PRODUCT INFORMATION	MATERIAL	CONSTRUCTION NOTES
PAVING & SURFACES					
P1	In situ concrete with exposed aggregate	Communal area	Grey concrete to Engineers Detail. Aggregate: TBC	Grey Concrete	Refer Landscape Detail and Specification
LANDSCAPE FENCES					
FE1	Palisade Fence	To boundary edge	Pre-fab Palisade Fence Fence material: Powdercoated Steel Colour: Charcoal Height: 1800mm TBC	Powdercoated Steel	Refer Architectural Drawingd
FURNITURE + ELEMENTS					
F1	Seating Bench	Communal area	Product: Ocley Bench Size: 1800mm length Beams: Timber Supports: Powdercoated charcoal	Hardwood Timber + Steel Supports	Refer Landscape Specification
F2	Rubbish Bin	Communal area	Product: Ocley Bench Size: 1240mm x 600mm x 605mm Beams: Timber Supports: Powdercoated charcoal	Hardwood Timber + Steel Supports	Refer Landscape Specification
F3	Planter Box	Communal area	Product: Lander Metals Planter Box Size: 1200mm x 1200mm x 560mm Material: Galvanised Steel Supports: As per Lander Steel Specification	Galvanised Steel	Refer Lander Metals Specification 02 4209 3039

APPENDIX 02 – LANDSCAPE PLANTING SCHEDULE

22-869 - PLANT SCHEDULE					
CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	PROPOSED POT SIZE	QUANTITY
TREES & PALMS					TOTAL: 75
Ba	<i>Brachychiton acerifolius</i>	Flame Tree	3 x 2	200L	9
Qm	<i>Corymbia maculata</i>	Spotted Gum	20 x 10	400L	24
Lc	<i>Lophostemon confertus</i>	Brush Box	15 x 10	200L	23
TI	<i>Tristania lusciosa</i>	Luscious Water Gum	10 x 5	200L	19
SHRUBS & ACCENTS					TOTAL: 413
Be	<i>Banksia ericifolia</i>	Heath Banksia	4 x 3	300mm	106
As	<i>Acacia stricta</i>	Hop Wattle	3 x 2	300mm	56
Apa	<i>Acacia parramattensis</i>	Parramatta Green Wattle	6 x 3	300mm	22
Grg	<i>Grevillea 'Robyn Gordon'</i>	Robyn Gordon Grevillea	3 x 2	300mm	97
Gr	<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea	2 x 2	300mm	132
GRASS + SHRUB MATRIX 1				TOTAL AREA: 3542 m2	
Bi	<i>Banksia spinulosa 'Birthday Candles'</i>	Banksia Birthday Candles	0.4 x 1	150mm	1288
Gm	<i>Grevillea 'Poorinda Royal Mantle'</i>	Royal Mantle	0.3 x 4	150mm	1717
Lt	<i>Lomandra 'Tanika'</i>	Mat Rush	1 x 1	150mm	2862
Mp	<i>Myoporum parvifolium</i>	Creeping Boobialla	0.15 x spreading	150mm	2290
Pl	<i>Poa labillardieri 'Eskdale'</i>	Tussock Grass	0.5 x 0.5	150mm	4293
Wm	<i>Westringia fruticosa 'Mundi'</i>	Native Rosemary	0.4 x 1.5	150mm	1717
GRASS + SHRUB MATRIX 2				TOTAL AREA: 281 m2	
Gbr	<i>Grevillea 'Bronze Rambler'</i>	Grevillea	0.25 x 1	150mm	262
Wm	<i>Westringia fruticosa 'Mundi'</i>	Native Rosemary	0.4 x 1.5	150mm	262
Mp	<i>Myoporum parvifolium</i>	Creeping Boobialla	0.15 x spreading	150mm	262
PLANTER BOX MATRIX				TOTAL AREA: 92 m2	
Be	<i>Banksia ericifolia</i>	Heath Banksia	4 x 3	300mm	92
As	<i>Acacia stricta</i>	Hop Wattle	3 x 2	300mm	92
Wm	<i>Westringia fruticosa 'Mundi'</i>	Native Rosemary	0.4 x 1.5	150mm	92
Gm	<i>Grevillea 'Poorinda Royal Mantle'</i>	Royal Mantle	0.3 x 4	150mm	92
Bi	<i>Banksia spinulosa 'Birthday Candles'</i>	Banksia Birthday Candles	0.4 x 1	150mm	92

Note: Final species selection may differ from the indicative plant schedule, pending incorporation of planting species suggestions by Traditional Custodians and Aboriginal stakeholders

1. *Mulch specification:

Supplier: ANL

Product: Forest blend/or equivalent

Our ref: SSD-47320208-PA-16

Simon Humphreys
Project Manager
ARUP Australia Pty Ltd
151 Clarence Street
SYDNEY, NSW 2000

07/11/2025

Project Echidna Data Centre (SSD-47320208)
Landscape Management Plan, Condition B44

Dear Mr Humphreys

I refer to the Landscape Management Plan (LMP) submitted to the Planning Secretary under condition B44. I also acknowledge and thank you for your response to the Department's request for additional information.

I note the LMP:

- was reviewed by the Applicant, and no issues were raised to the Department;
- contains the information required by condition B44;
- Is included in the Operational Environmental Management Plan (OEMP) under C5; and
- has been submitted to the Department prior to the commencement of operation.

I also note that the LMP has been submitted to Camden Council, with no written response received to- date.

Notwithstanding this, as nominee of the Planning Secretary, I am satisfied with the Landscape Management Plan, Revision Issue 01 – CC, dated 10 October 2025, as per condition B44 of SSD-47320208.

However, if any comments are received by Camden Council requiring the approved LMP to be updated, you must update and resubmit the plan to the Department for approval.

I remind you to implement the approved LMP and maintain the landscaping and vegetation on the site in accordance with the approved LMP for the life of the development, in accordance with sub-conditions B45(b) and (c).

Also, if the approved LMP is required to be updated in the future, the OEMP must include the most recent approved version of the LMP.

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

Also, please make the approved LMP including the Department approval letter available for public access on the project website at the earliest convenience.

If you have any questions, please contact Matt Wood at matthew.wood@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 Unit
Infrastructure Management
As nominee of the Planning Secretary

Communication Memorandum

To	Matthew Wood
Date	16 November 2025
Copies	
Reference number	288255-00
From	Simon Humphreys
File reference	LMP Clarification
Subject	Council Review: Clarification on Landscape Management

Landscape Management Plan Clarification

I refer to the Landscape Management Plan (LMP) submitted to the Planning Secretary under condition B44 and note the condition requires council consultation.

Under the SSD-47320208-PA-16 Department of Planning, Housing and Infrastructure approval following review there is n accepted condition that “*any comments are received by Camden Council requiring the approved LMP to be updated, you must update and resubmit the plan to the Department for approval*”.

Under the issue of the Landscape Management Plan was a request to Camden Council to review which was incorrect. Arup would like to confirm that the review request should have been issued to Blacktown Council.

This has been completed and the request to Blacktown Council and response is attached.

Notwithstanding the above we agree that any comments are received by Blacktown Council requiring the approved LMP to be updated will be updated and resubmitted to the Department for approval.

Simon Humphreys

From: Ali Baburi <Ali.Baburi@blacktown.nsw.gov.au>
Sent: Tuesday, 18 November 2025 9:59 AM
To: Simon Humphreys
Cc: Matthew Adamcewicz
Subject: RE: Project Echidna Data Centre Eastern Creek - Landscape Management Plan
Attachments: 22-869 Eastern Creek DC_Landscape Management Plan.pdf

You don't often get email from ali.baburi@blacktown.nsw.gov.au. [Learn why this is important](#)

Hi Simon,

As discussed, Matthew will be reviewing the Landscape Management Plan and will provide comments.

Kind regards,
Ali Baburi
Town Planner



Phone: (02) 9839 6496.
PO Box 63, Blacktown NSW 2148.
Blacktown.nsw.gov.au

We acknowledge the Darug as the First People of the Blacktown City region.

From: Simon Humphreys <simon.humphreys@arup.com>
Sent: Friday, 14 November 2025 4:46 PM
To: Ali Baburi <Ali.Baburi@blacktown.nsw.gov.au>
Cc: Blacktown Council <Blacktown.Council@blacktown.nsw.gov.au>
Subject: RE: Project Echidna Data Centre Eastern Creek - Landscape Management Plan

Dear Ali,

Appreciate the phone call earlier this week,

As discussed we are looking for Blacktown Council acknowledgement of the Landscape management plan just to show the Department of Planning that consultation has started. The main aim is for a council review and incorporate any comments but just as a first step acknowledgement that it has been received and been allocated.

Thanks
Simon

Kind regards
Simon Humphreys
Senior Project Manager | Sydney Buildings Group

Arup

Barrack Place

Level 5 151 Clarence Street Sydney NSW 2000

t +61 2 9320 9320

Aus m +61 (0)487 936 222

UK m +44 (0)7880 406 658

f +61 2 9320 9321

simon.humphreys@arup.com

www.arup.com

From: Simon Humphreys

Sent: Thursday, 6 November 2025 4:35 PM

To: council@blacktown.nsw.gov.au

Subject: Project Echidna Data Centre Eastern Creek - Landscape Management Plan

Dear Blacktown Council,

Please find attached Landscape Management Plan for Project Echidna Data Centre Eastern Creek.

The landscape management plan describes the ongoing monitoring and maintenance measures to manage the landscape across the site. This plan builds on and aligns with the SSDA deliverables (Landscape Report and Drawings), which included a Landscape Maintenance/Management section responding to the EIS/SSDA requirements.

Please let us know any comments.

Kind regards

Simon Humphreys

Senior Project Manager | Sydney Buildings Group

Arup

Barrack Place

Level 5 151 Clarence Street Sydney NSW 2000

t +61 2 9320 9320

Aus m +61 (0)487 936 222

UK m +44 (0)7880 406 658

f +61 2 9320 9321

simon.humphreys@arup.com

www.arup.com

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