

THE YARDS LOT 14 PROBIOTEC

KEMPS CREEK INDUSTRIAL COMMUNITY NSW 2178

LANDSCAPE CONCEPT PLAN

20.06.2023

DA SUBMISSION

ISSUE H



DRAWING LIST:

L-01	Coversheet
L-02	Estate Landscape Area
L-03	Landscape Masterplan
L-04	Landscape Concept Plan 01
L-05	Landscape Concept Plan 02
L-06	Landscape Concept Plan 03
L-07	Landscape Concept Plan 04
L-08	Landscape Concept Plan 05
L-09	Landscape Concept Plan 06
L-10	Landscape Setback Detail Plan
L-11	Landscape Sections
L-12	Proposed Plant Schedule
L-13	Typical Specification & Maintenance Notes
L-14	Typical Landscape Details



Canopy Tree Offset
Commitment

When this symbol appears on the drawing, Habit8 with our selected nursery partner will donate 5 x 300mm pot size endemic canopy trees to the local Landcare group in the LGA. This initiative is a joint commitment with landscape architect and client in providing local tree canopy cover to help mitigate the urban heat island effect while increasing local biodiversity values.

LANDSCAPE ARCHITECT:



HABIT8

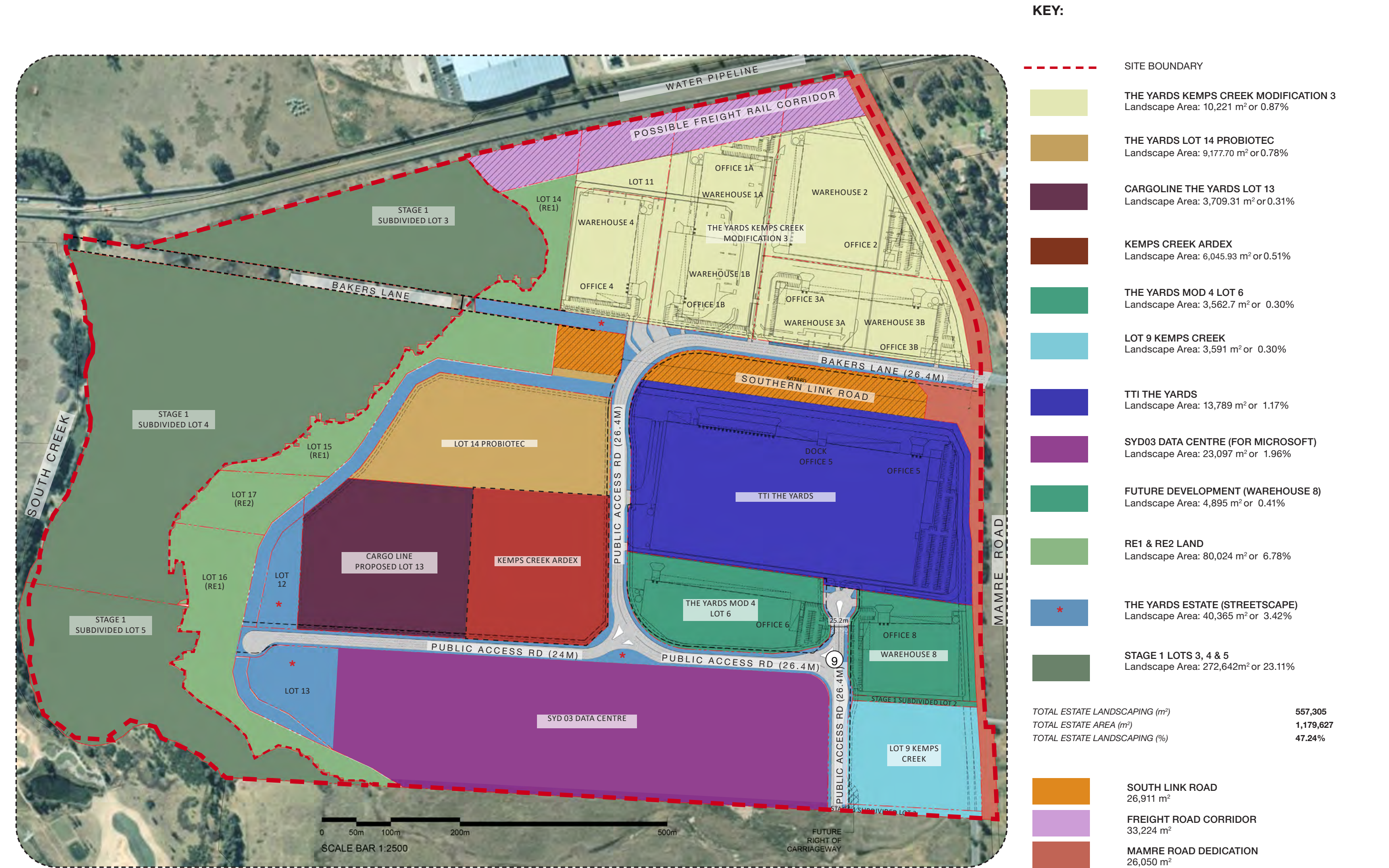
Landscape Architecture & Urbanism

SYDNEY (Gadigal country) BYRON BAY (Bundjalung country)

MELBOURNE (Wurundjeri country) SE QUEENSLAND (Yugambeh country)

www.habit8.com.au

ESTATE LANDSCAPE AREA



LANDSCAPE MASTERPLAN

KEY

SITE BOUNDARY

2100mm HT PALISADE FENCE
TO ARCHITECT'S DETAILS

2100mm HT BLACK PVC
COATED CHAIN WIRE FENCE
WITH BARBED WIRE
TO ARCHITECT'S DETAILS

CONCRETE EDGE
REFER TO DETAIL

PROPOSED TREE PLANTING
REFER TO PLANT SCHEDULE

TURF
REFER TO DETAIL

MASS PLANTING BEDS
REFER TO DETAIL AND PLANT
SCHEDULE

CONCRETE SURFACE
TO ENGINEER'S DETAILS

PAVED SURFACE TO ARCHITECT'S
DETAILS

PERVIOUS SURFACE / PERMEABLE
PAVERS
TO ENGINEER'S DETAILS

TREE CANOPY COVER

TREE NO.	TREE CANOPY	CANOPY AREA (m²)	TOTAL CANOPY COVER (m²)
172	3m	7	1204
60	5m	20	1200
53	6m	30	1590
74	8m	50	3700
25	10m	78	1950

LOT 14 TOTAL SITE AREA	58,655
TOTAL TREE NO.	384
TOTAL SQM CANOPY COVER	9,644
TOTAL CANOPY PERCENTAGE	16.44%
LANDSCAPE AREA SQ	4,820.74
PERMEABLE SURFACE (50% OF 8,713.91)	4,356.95
TOTAL PERMEABLE AREA	9,177.70
TOTAL LANDSCAPE PERCENTAGE	15.64%
DCP REQUIREMENT	15%



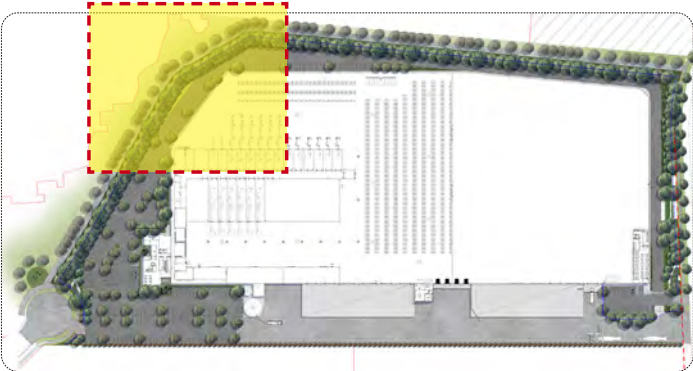
CONTEXT PLAN

DESIGN NOTES

1. LANDSCAPE SETBACK
2. FOOTPATH & STREET TREES PART OF SEPARATE DOCUMENTATION SET
3. TRUCK ENTRY / EXIT
4. CAR ENTRY / EXIT
5. BOUNDARY PLANTING
6. CYCLEWAY
7. OFFICE ENTRY
8. CAR PARK
9. BIKE RACK TO ARCHITECT'S DETAILS
10. ESTATE IDENTIFICATION SIGNAGE TO ARCHITECT'S DETAILS
11. POP UP PARK
12. SUBSTATION



LANDSCAPE CONCEPT PLAN 01



KEYPLAN

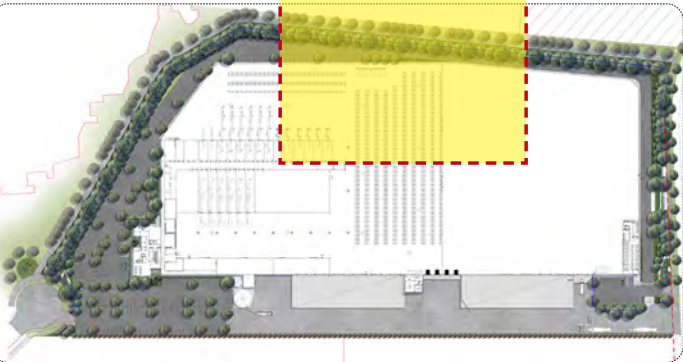
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LANDSCAPE CONCEPT PLAN 02



KEYPLAN

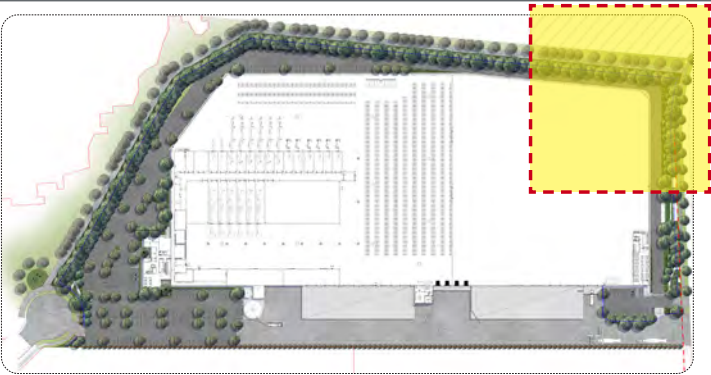
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LANDSCAPE CONCEPT PLAN 03



KEYPLAN

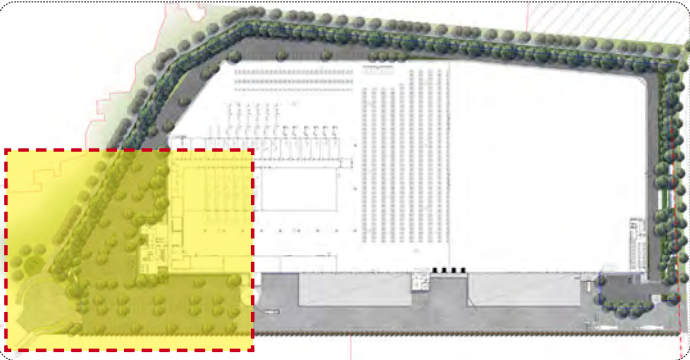
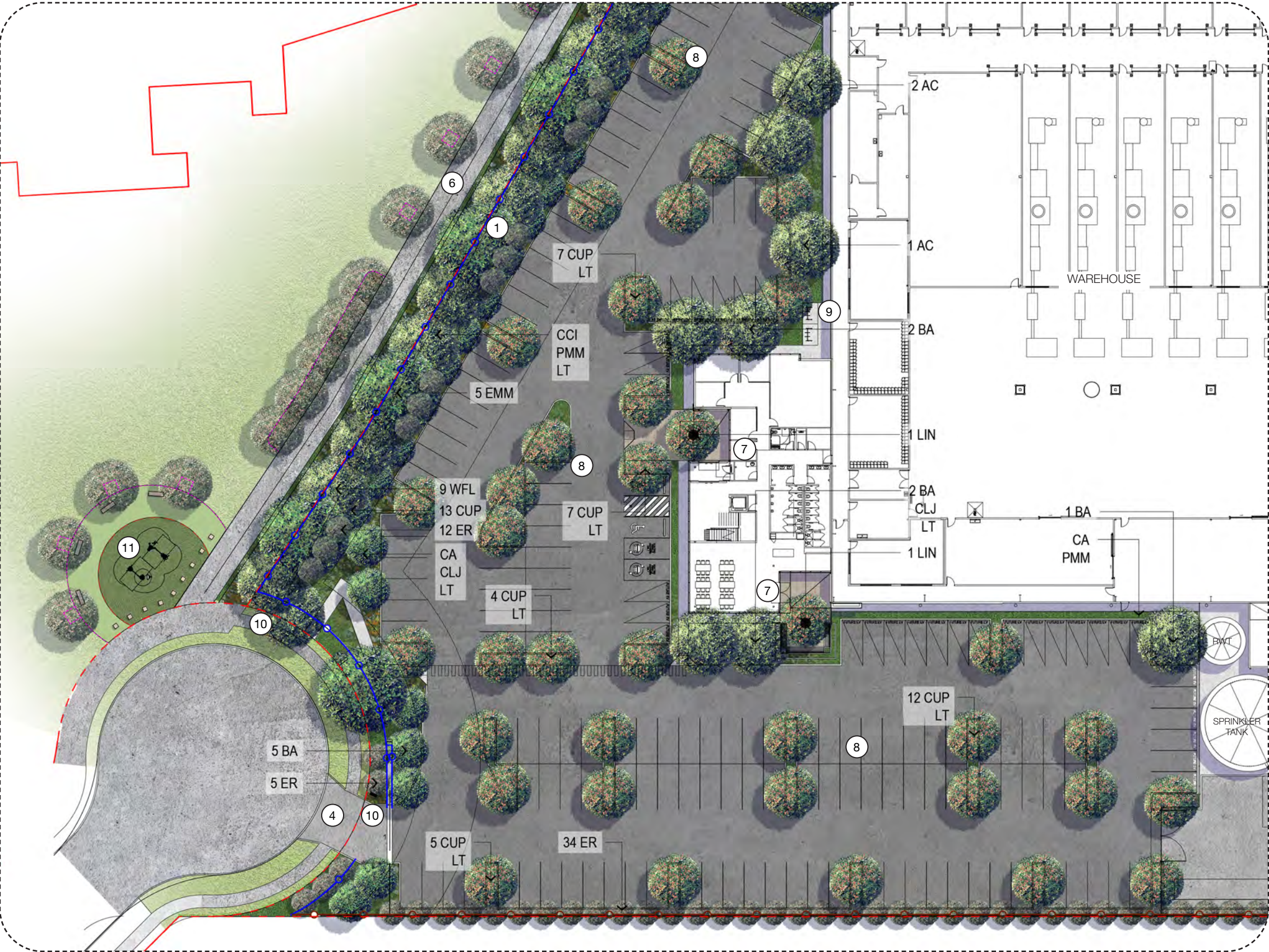
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LANDSCAPE CONCEPT PLAN 04



KEYPLAN

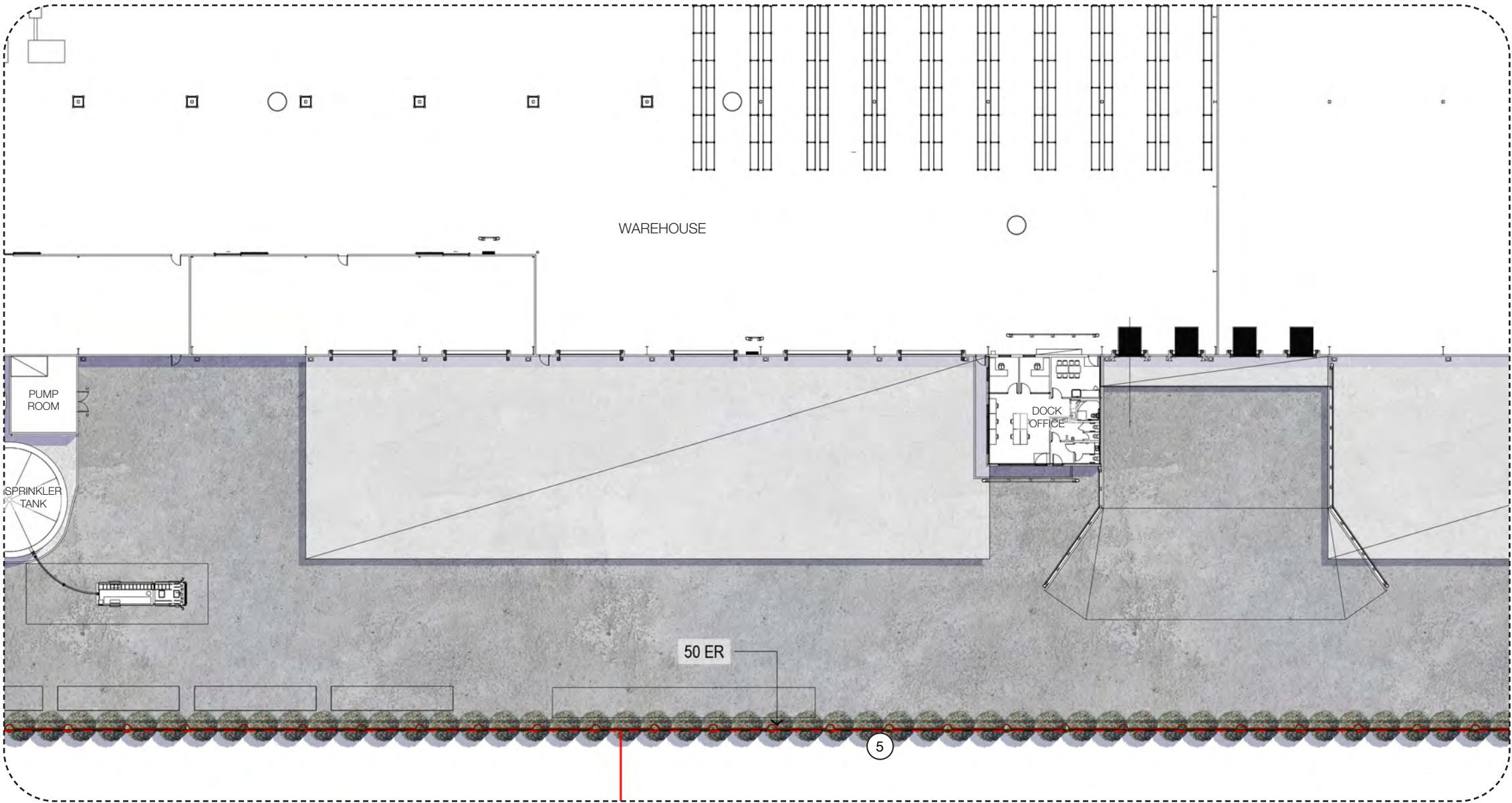
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LANDSCAPE CONCEPT PLAN 05



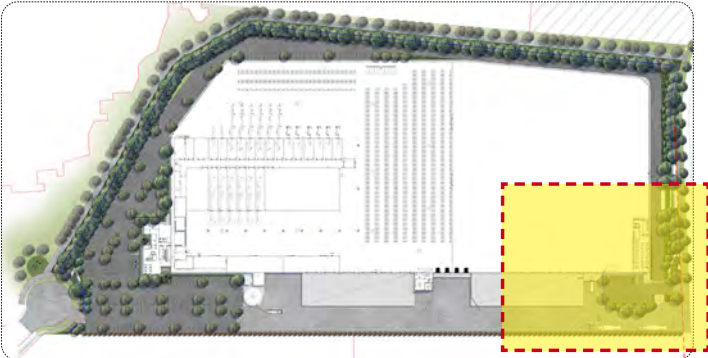
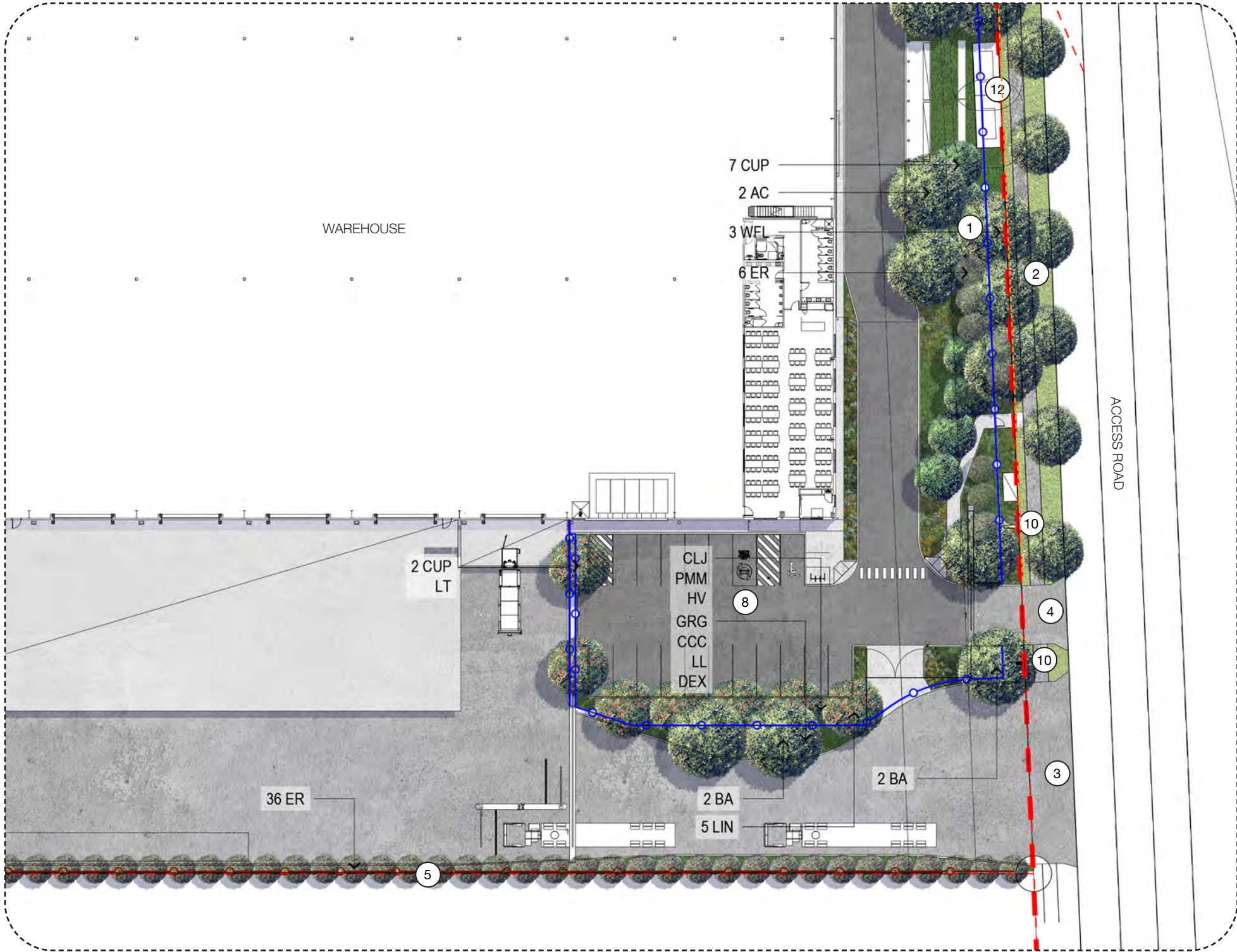
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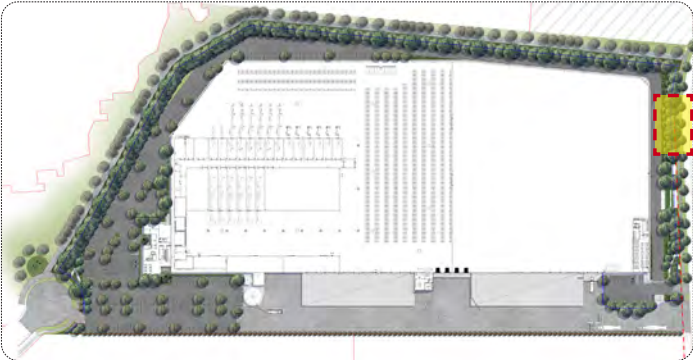
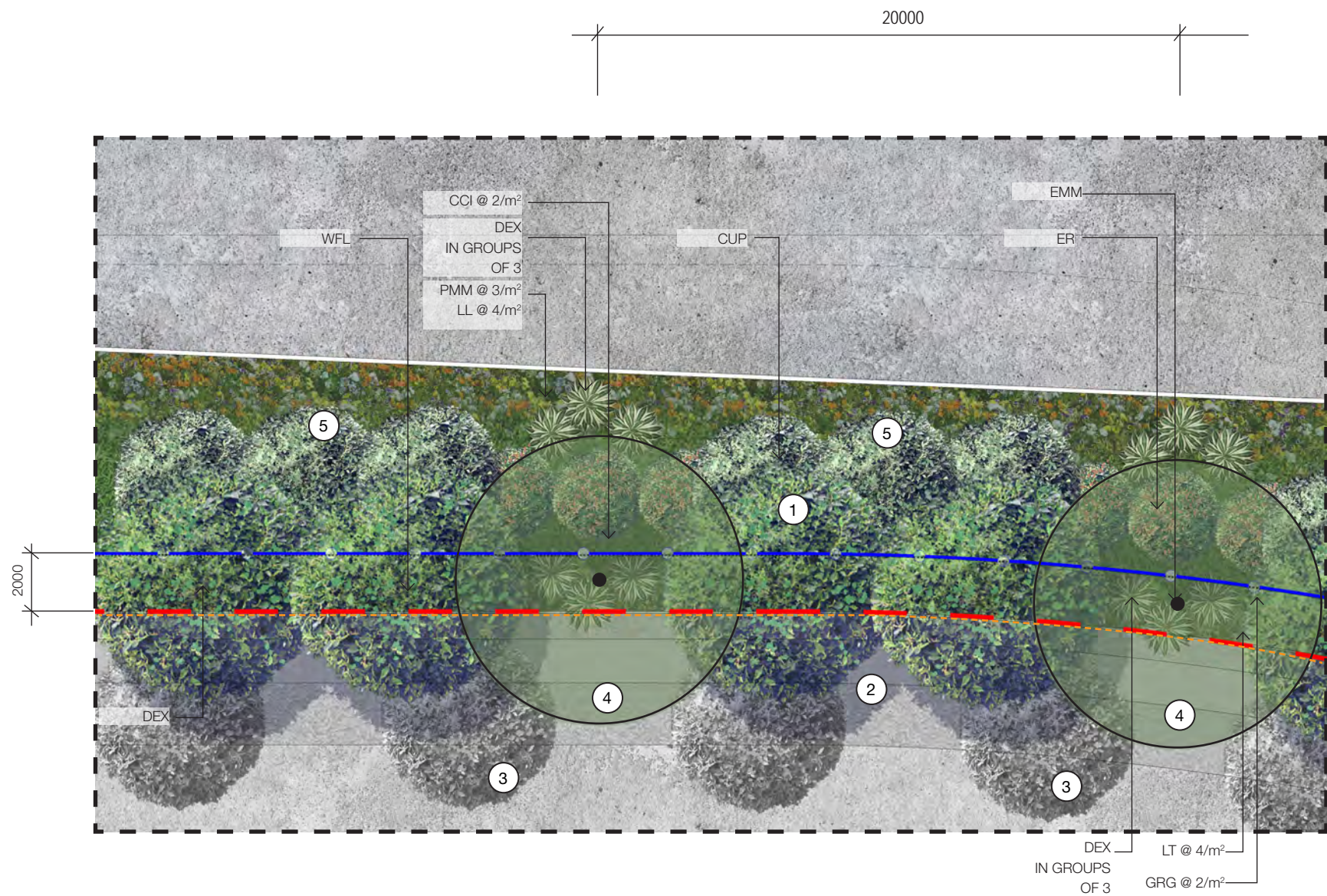
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LANDSCAPE SETBACK DETAIL PLAN



KEYPLAN

KEY

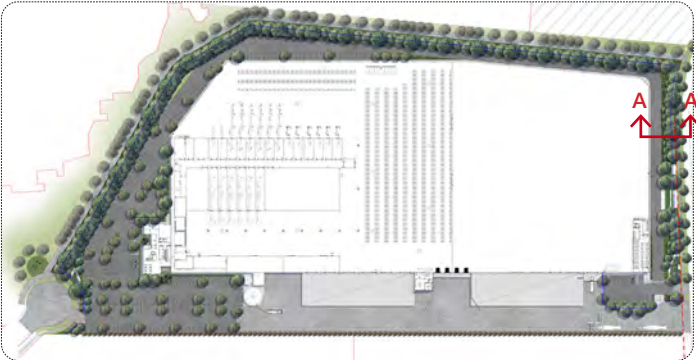
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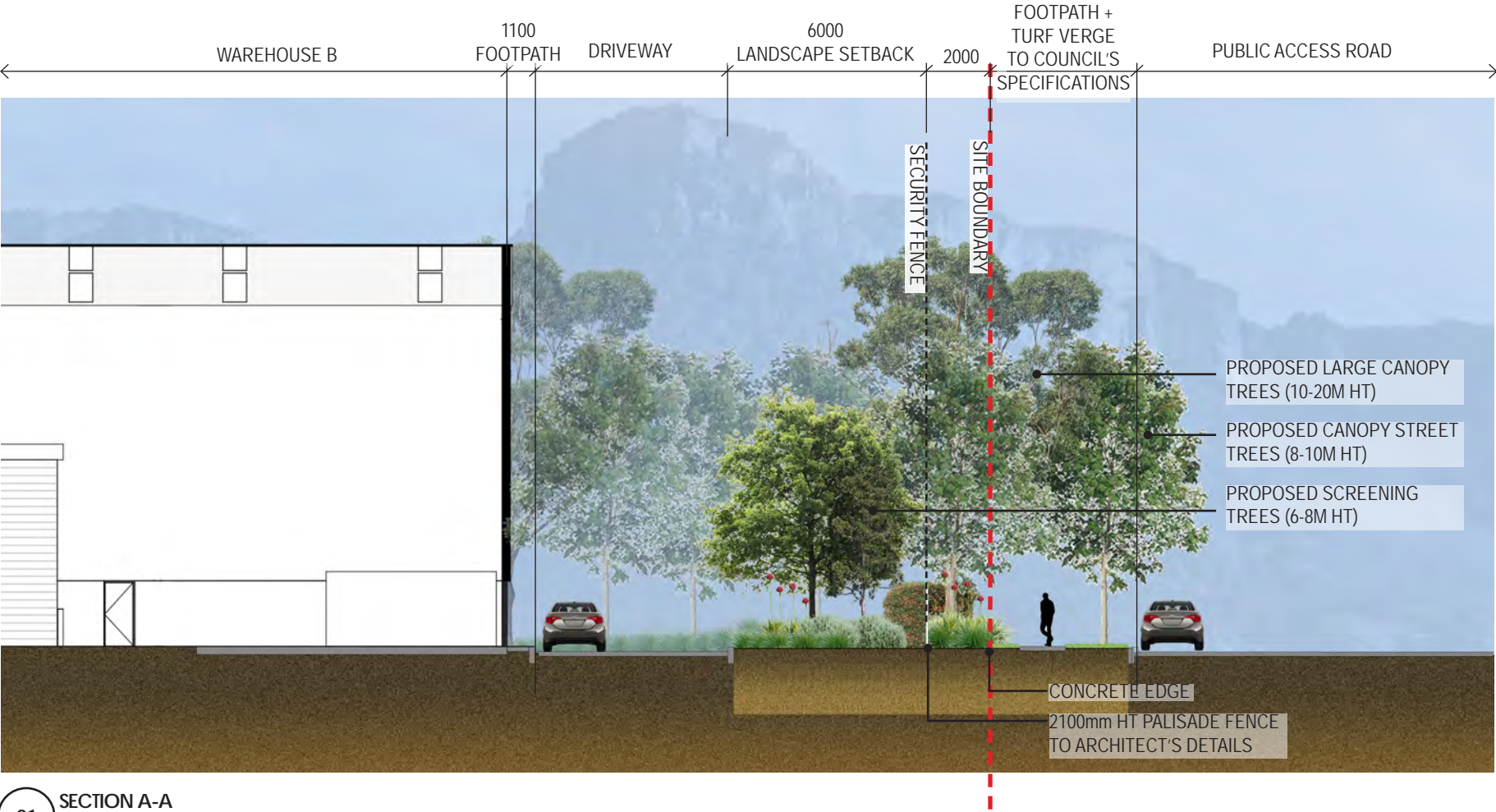
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- PROPOSED CANOPY STREET TREES (8-10m ht +)
- LARGE CANOPY TREES (10-20m ht)
- SCREENING TREES (6m ht)



LANDSCAPE SECTION A-A



KEYPLAN



01 SECTION A-A
Scale 1:200@A3 / 1:100@A1

PROPOSED PLANT SCHEDULE

Plant species sourced from the Mamre Road DCP 2021 Appendix C Plant List

CODE	BOTANICAL NAME	HT IN POT (m)	POT SIZE	DENSITY	NOS
TREES					
CUP	Cupaniopsis anacardioides	2.5	100L	As Shown	101
AC	Angophora costata	2.0	100L	As Shown	8
ER	Elaeocarpus reticulatus	2.5	45L	As Shown	172
EMM	Eucalyptus moluccana	2.5	35L	As Shown	25
LIN	Lagerstroemia indica	2.5	100L	As Shown	7
BA	Brachychiton acerifolius	2.0	75L	As Shown	15
WFL	Waterhousea floribunda	2.5	100L	As Shown	56
SHRUBS					
DEX	Doryanthes excelsa		200mm	1/m²	TBC
GRG	Grevillea 'Robyn Gordon'		150mm	2/m²	TBC
CCC	Callistemon 'Captain Cook'		200mm	1/m²	TBC
CLJ	Callistemon 'Little John'		200mm	2/m²	TBC
CCI	Callistemon 'Citrinus'		200mm	2/m²	TBC
CA	Correa Alba		300mm	2/m²	TBC
PMM	Pittosporum 'Miss Muffet'		300mm	3/m²	TBC
GROUNDCOVERS AND GRASSES					
LL	Lomandra longifolia		150mm	4/m²	TBC
LT	Lomandra longifolia 'Tanika'		150mm	4/m²	TBC
HV	Hardenbergia violacea		150mm	4/m²	TBC
VH	Viola hederacea		150mm	4/m²	TBC



TYPICAL SPECIFICATION + MAINTENANCE NOTES

SPECIFICATION NOTES

SERVICES

Before landscape work is commenced the Landscape Contractor is to establish the position of all service lines and ensure tree planting is carried out at least 3 metres away from these services. Service lids, vents and hydrants shall be left exposed and not covered by any landscape finishes (turfing, paving, garden beds etc.) Finish adjoining surfaces flush with pit lids.

PLANTING MIXTURE - (300mm DEPTH)

Imported Garden Mix.
Type: Premium
Available: Australian Native Landscapes (ANL)

TURF SOIL MIX (150mm DEPTH)

Type: Turf underlay
Available: Australian Native Landscapes (ANL)

MULCH

APPLICATION: Place mulch to the required depth, (refer to drawings) clear of plant stems, and rake to an even surface finishing 25mm below adjoining levels. Ensure mulch is watered in and tamped down during installation.

MULCH TYPE: (75mm DEPTH)

Type 1:
Pine bark: From mature trees, graded in size from 15mm to 30mm, free from wood slivers. Dark brown in colour and texture.

COMPOST

Shall be “GO Compost” as available from Soilco or approved equal.

PLANT MATERIAL

All plants supplied are to conform with those species listed in the Plant Schedule on the drawings. Generally plants shall be vigorous, well established, hardened off, of good form consistent with species or variety, not soft or forced, free from disease or insect pests with large healthy root systems and no evidence of having been restricted or damaged. Trees shall have a leading shoot. Immediately reject dried out, damaged or unhealthy plant material before planting. All stock is to be container grown for a minimum of six (6) months prior to delivery to site.

FERTILISER

MASS PLANTING AREAS: Fertiliser shall be ‘Nutricote’ or approved equivalent in granule form intended for slow release of plant nutrients over a period of approximately nine months. Thoroughly mix fertiliser with planting mixture at the recommended rate, prior to installing plants.
TURF: Shall be Shirleys No. 17 or approved equal thoroughly mixed into the topsoil prior to placing turf.
TREES IN GRASS AND SUPER ADVANCED TREES: Pellets shall be in the form intended to uniformly release plant food elements for a period of approximately nine months equal to Shirleys Kokei pellets, analysis 6.3:1.8:2.9. Kokei pellets shall be placed at the time of planting to the base of the plant, 50mm minimum from the root ball at a rate of two pellets per 300mm of top growth to a maximum of 8 pellets per tree.

STAKING AND TYING

Stakes shall be straight hardwood, free from knots and twists, pointed at one end and sized according to size of plants to be staked.
a. 100-greater than 200litre 3x(1800x50x50mm)
Ties shall be 50mm wide hessian webbing or approved equivalent nailed or stapled to stake. Drive stakes a minimum one third of their length, avoiding damage to the root system, on the windward side of the plant.

TURF

Obtain turf from a specialist grower of cultivated turf. turf shall be of even thickness, free from weeds and other foreign matter; lay in stretcher pattern with joints staggered and close butted, perpendicular to gradient of FSL. Water immediately after laying.
TURF TYPE: Couch (Confirm with council prior to construction)

LANDSCAPE MAINTENANCE PROGRAM

Maintenance shall mean the care and maintenance of the landscape works by accepted horticultural practice as rectifying any defects that become apparent in the landscape works under normal use. This shall include, but shall not be limited to, watering, mowing, fertilising, re-seeding, returfing, weeding, pest and disease control, staking and tying, replanting, cultivation, pruning, aerating, renovating, top dressing, maintaining the site in a neat and tidy condition as follows:-

GENERAL

The landscape contractor shall maintain the landscape works for the term of the maintenance (or Plant establishment) period to the satisfaction of the council. The landscape contractor shall attend to the site on a weekly basis. Landlord to maintain all landscape areas in perpetuity (life of the development).

WATERING

Grass, trees and garden areas shall be watered regularly so as to ensure continuous healthy growth.

RUBBISH REMOVAL

During the term of the maintenance period the landscape contractor shall remove rubbish that may occur and reoccur throughout the maintenance period. This work shall be carried out regularly so that at weekly intervals the area may be observed in a completely clean and tidy condition.

REPLACEMENTS

The landscape contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis after the plant has died or is seen to be missing.

STAKES AND TIES

The landscape contractor shall replace or adjust plant stakes, and tree guards as necessary or as directed by the Landscape Architect. Remove stakes and ties at the end of the maintenance period if so directed.

PRUNING

General: Prune to reflect the natural growth flowering and regrowth habit of the individual species. Shrubs: Prune after flowering - Spring and Summer and on a spot basis as required.
Hedge trimming: Schedule trimming at times which will maintain the character and design of hedges. Allow up to three times per season.
Tip pruning: To encourage development of new shoots during the active growing season. Do not remove buds before the flowering season in those plants that have terminal flowers.
Radical pruning: To maintain a hedge or formal shape or when a particular problem, growth habit, damage, or disease requires branch removal.
Trees: Prune to eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner, maintain sight lines to signs and lights, or maintain visibility for personal security. Tree branch removal to AS 4373. Give notice and engage a suitably qualified ‘arborist’.

MULCHED SURFACES

All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times. Remove all mulching materials off lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.

PEST AND DISEASE CONTROL

The landscape contractor shall spray against insect and fungus infestation with all spraying to be carried out in accordance with the manufacturer's directions. Report all instances of pests and diseases (immediately that they are detected) to the Landscape Architect.

GRASS AND TURF AREAS

The landscape contractor shall maintain all grass and turf areas by watering, weeding, re-seeding, rolling, mowing, trimming or other operations as necessary. Seed and turf species shall be the same as the original specified mixture. Grass and turf areas shall be sprayed with approved selective herbicide against broad leafed weeds as required by the Landscape Architect and in accordance with the manufacturer's directions. Grass and turf areas shall be fertilised once a year in autumn with “Dynamic Lifter” for lawns at a rate of 20kg per 100m2. Fertiliser shall be watered in immediately after application. Irregularities in the grass and turf shall be watered in immediately after application.
Grass and turf areas shall be kept mown to maintain a healthy and vigorous sward. Mowing height: 30-50mm.

WEED ERADICATION

Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide (eg. ‘Roundup’) in any of its registered formulae, at the recommended maximum rate. Regularly remove by

hand, weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 750mm diameter around the base of trees in grassed areas. Continue eradication throughout the course of the works and during the maintenance period.

SOIL SUBSIDENCE

Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the landscape contractor at no cost to the client.

MAITENANCE PERIOD: (26 Weeks) - Confirm with Project Manager

IRRIGATION PERFORMANCE SPECIFICATION NOTES

IRRIGATION OVERVIEW - Confirm with Project Manager at tender stage

EXTENT (Setback, Carpark, Garden and Turf Areas)

All mass planting landscape areas and trees are to have full coverage by a fully automatic irrigation system. The design, materials and installation are to be in accordance with Sydney Water Codes and all relevant Australian Standards.

1. An automatic irrigation system is to be installed to all turf and garden bed areas.
2. The irrigation system shall be designed and installed by a licensed contractor to relevant Australian standards and Sydney water guidelines.
3. The irrigation system shall be connected into the rainwater tank system and pump

DRIPLINE

Provide 13mm dripline to all garden bed areas with appropriate 13mm joiners. Dripline to be Toro drip or similar with 400mm centre drippers.
Install line at 500mm spacings with the first line to be 150mm in from edge. Install dripline after planting and prior to mulching to allow for an adequate mulch cover. Anchor at 1.5m maximum intervals with u-shaped stakes. Dripline pattern to suit planting.

CONTROL VALVES

24v solenoid actuated hydraulic valve with flow control. Control valves to be Toro ezflow series solenoids 25mm or approved equal. Provide a gate valve of the same size immediately upstream of each valve. House both valves in a high impact plastic valve box with a high impact plastic cover at finished ground level. Support the box with bricks on each side. Controller to be Toro greenkeeper or approved equal with a rain switch. Install a master valve/pressure regulating valve equal to Toro p220 with exreg pressure regulation valve. Filter to be installed equal to Toro y filter 75mm screen filter.

CONTROL WIRES

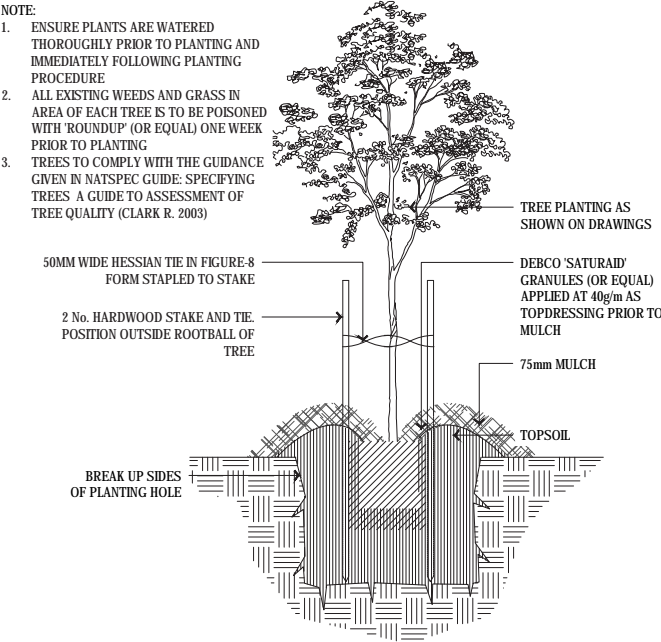
Connect the control valves and soil moisture sensor to the controller with double insulated underground cables laid alongside piping where possible. Lay intertwined for their full length without joints except at the valves and branches off common wires. Provide waterproof connectors.

Provide a backflow prevention device to Sydney water standards AS 3500.

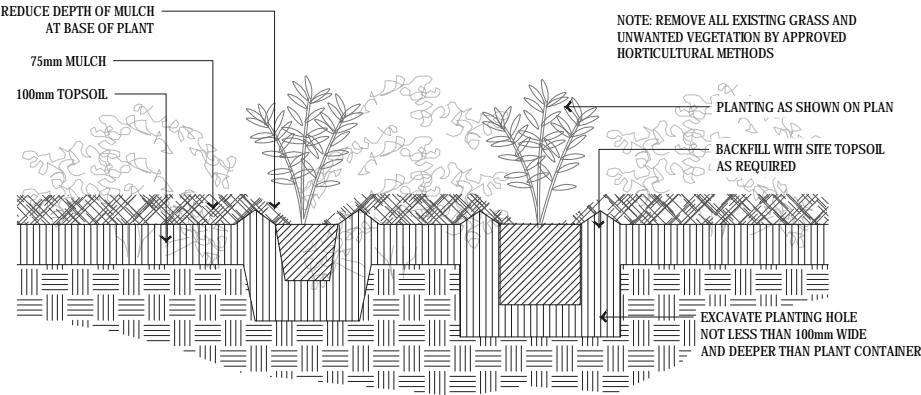
RELEVANT AUSTRALIAN STANDARDS

Soil: AS4419, AS3743, AS4454.
Mulch: AS4454.
Tree Stock: AS2303.
Pruning: AS4373.
Tree Protection: AS4970.
Contractors to comply with the above Australian Standards.

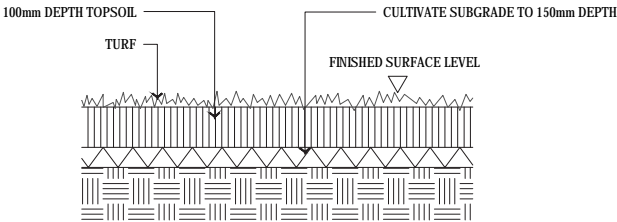
TYPICAL LANDSCAPE DETAILS



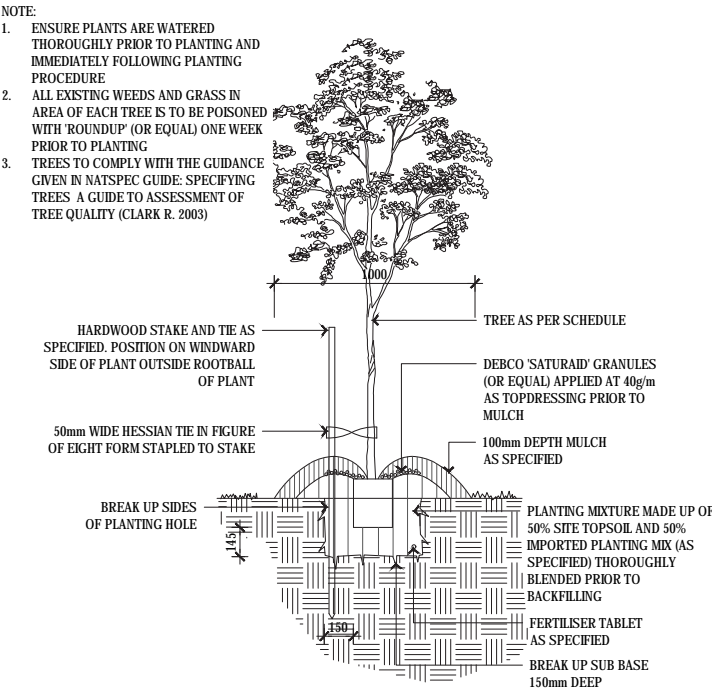
01 TYPICAL TREE PLANTING DETAIL UNDER 100L
1:20 @ A1 / 1:40 @ A3
(IN GARDEN BED)



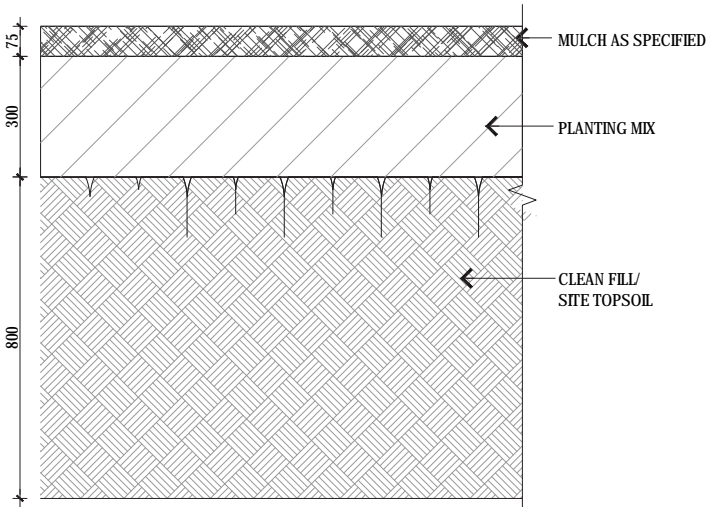
02 MASS PLANTING DETAIL
1:10 @ A1 / 1:20 @ A3



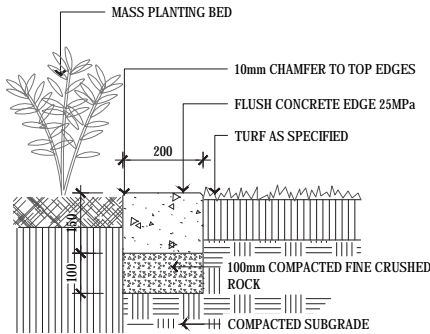
03 TURF DETAIL
1:10 @ A1 / 1:20 @ A3



04 TYPICAL TREE PLANTING DETAIL OVER 100L
1:20 @ A1 / 1:40 @ A3



05 TYPICAL SOIL PROFILE
1:10 @ A1 / 1:20 @ A3



06 CONCRETE EDGE DETAIL
1:10 @ A1 / 1:20 @ A3