

THE YARDS KEMPS CREEK MODIFICATION

THE YARDS, KEMPS CREEK, NSW

LANDSCAPE CONCEPT PLAN

23.08.2022

DA SUBMISSION

ISSUE J



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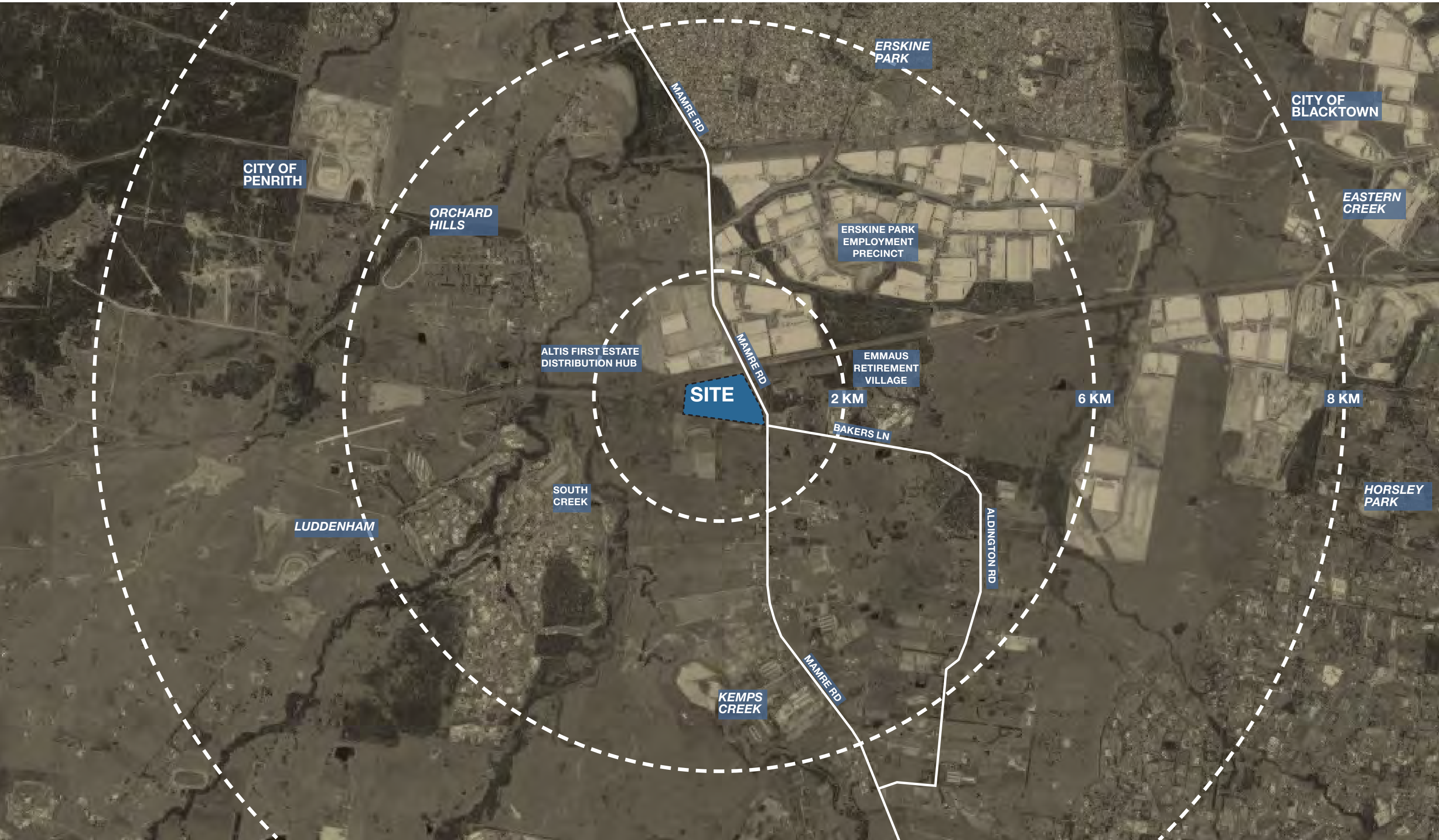


LANDSCAPE ARCHITECT:



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REGIONAL CONTEXT



SITE CONTEXT: AERIAL PHOTO



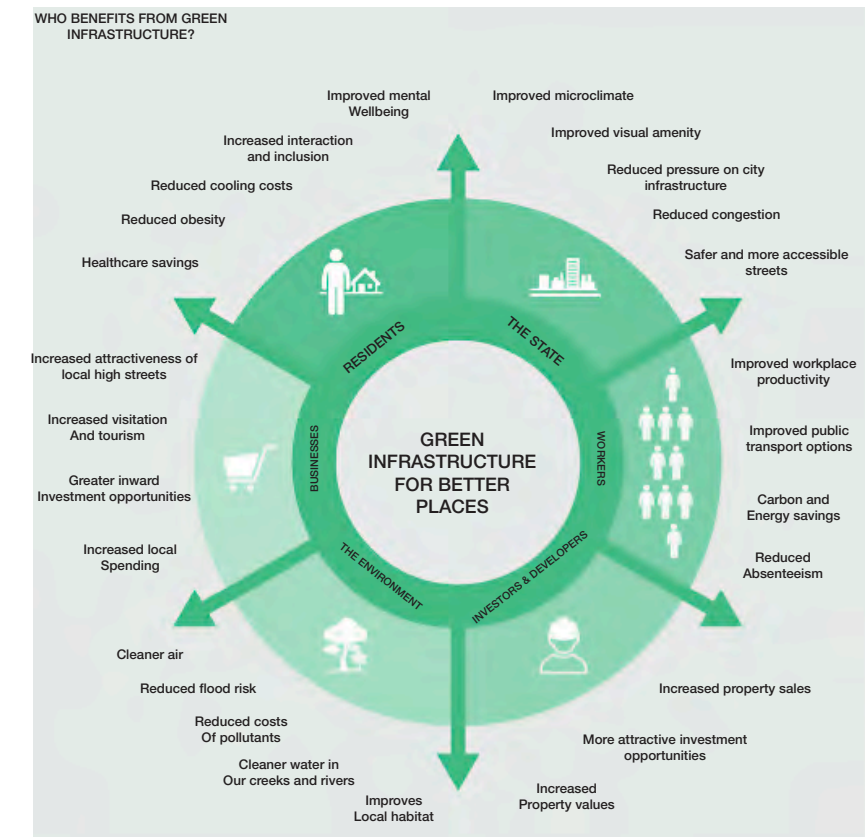
SITE ZONING MAP



LANDSCAPE DESIGN PHILOSOPHY

Green Infrastructure is the network of green spaces, natural systems and semi-natural systems including parks, rivers, bushland and private gardens that are strategically planned, designed and managed to support a good quality of life in an urban environment.

Green Infrastructure should be envisioned as a three-dimensional envelope that surrounds and connects buildings, streets and utilities. The concept of landscape as Green Infrastructure provides a framework for integrating the work of designers, planners, developers and policy makers, and leveraging this collaboration to achieve larger local or state goals.



NSW GAO - Greener Places Policy 2020

Green Infrastructure is as crucial to the city as transport, cultural and communications infrastructure. It delivers a range of benefits including:

- Healthy living
- Mitigating flooding
- Improving air and water quality
- Cooling the urban environment
- Encouraging walking and cycling
- Enhancing biodiversity and ecological resilience
- Absorbing and transforming waste.

The landscape design principles for the landscape masterplan (Issue K-23.07.20) are consistent with the previous exhibited application. These four main principles associated with the draft NSW Greener Places Policy prepared by the Government Architect NSW (2017) are:

a) Principle 1: Integration: We propose a multi-purpose infrastructure strategy that mimics nature, provides critical ecosystem services and promotes healthy and active living. We propose to combine green space with urban

development and WSD infrastructure.

b) Principle 2: Connectivity: We aim to create a network of high quality open streetscape and spaces that connect with each warehouse and office, public transport hubs, South creek corridor. The network includes physical and functional connections that benefit people, wildlife and the logistics nature of the estate.

c) Principle 3: Multifunctionality: Our proposed green space infrastructure is designed to be high quality and high performing, producing ecological, social, environmental and economic benefits. The multifunctionality of our design proposal allows the sites green infrastructure to deliver multiple ecosystem, environmental and other services simultaneously.

d) Principle 4: Participation: We have followed a planning process that has been open to all, transparent and incorporates the knowledge and needs of all interested and diverse parties. The process has involved stakeholders in development, NSW Government Penrith Council and the industrial open market through tenants and the companies they represent. The process has incorporated local and state Green Infrastructure policies and actions.

The following design features reflect the project outcomes:

PROJECT OUTCOMES:

- 1. Conservation of the natural environment.**
 - This project will lead to the future enhancement of the increasing endemic canopy tree planting
 - promotion of social, cultural, recreational, and educational opportunities within natural landscapes.
- 2. Increased access to open space**
 - improved connections to local destinations such as the South Creek corridor
 - quantity, quality, distribution, and accessibility of Industrial office green spaces enables the delivery of multifunctional spaces that promote healthy work environments
- 3. Improved connectivity to promote active living**
 - improvements to the office communal areas and frontages that promote exercise and alternative modes of transport such as walking and cycling.
- 4. Increase urban greening to ameliorate climate extremes**
 - design of green cover strategies including street trees, front setback canopy trees, cooler pavement materials and WSUD.
 - Provide benefits such as improved amenity, comfort, health, reduced stormwater run-off, improved air and water quality, and energy and resource efficiency

a) RE-VEGETATION STRATEGY

The strategy for re-vegetating the site focuses on canopy tree planting to reduce the “urban heat island effect”. We have proposed a mix of local endemic, native and exotic trees to strengthen the urban design principles and to comply with current sustainability guidelines. Street verges, buffer tree planting to boundaries and all road setbacks are densely planted with canopy trees ranging from 6m to 15m+ in height and canopy spread. Car parks hard surfaces are shaded by tree planting between car parking spaces. Cycleways and path systems are also shaded by canopy tree planting. WSUD principles including soft engineering through bio-swales, detention basins and grey water re-use (co-ordinated with the civil engineer) shall help in maintaining and managing the re-vegetation areas.

Greener Places policy principles: Integration, Connectivity, Multifunctionality.

b) COMPLETE STREETS

All streets have been designed to be multifunctional and provide connectivity throughout the Estate for vehicles, pedestrians and cyclists. The streets form the main “green spines” throughout development. The street has been designed in accordance with Penrith City Council’s Public Domain policy. The main features of the public domain street design are to:

1. Provide tree canopy cover and reduce the “urban heat island effect”;
2. Provide safe and comfortable transit for pedestrians and cyclists;
3. Strengthen canopy connectivity through the Estate;
4. Visually link the Estate and Blue Mountains beyond;
5. Allow multi-functionality through the revisions of various transit lanes such as heavy vehicle, cars, pedestrian footpaths and cycleways;
6. Soften and screen the bulk of the warehouses;
7. Help create a cooler microclimate around buildings and along pedestrian routes;
8. Provide multiple opportunities to create an address for each warehouse project;
9. Integrate lighting for safety;
10. Allow safe passage for visitors and workers
11. Strengthen the connection from Mamre Road through improvements to Aldington Road.
12. Incorporate WSUD principles into the streetscape including water quality bio-swales and vegetated detention basins.

Greener Places policy principles: Integration, Connectivity, Multifunctionality, Participation

LANDSCAPE MASTERPLAN

TREE CANOPY COVER TABLE (WH2 & WH3)
(ISSUE I) 08.08.22

TREE NO.	TREE CANOPY	CANOPY AREA (m²)	TOTAL CANOPY COVER (m²)
85	3m	7	595
163	6m	30	4890
101	8m	50	5050
31	10m	78	2418
37	15m	177	6549

TOTAL TREE NO. 417
TOTAL SQM LANDSCAPE AREA 10,220.78
TOTAL SQM CANOPY COVER 19,502
TOTAL AREA 87,852
TOTAL LANDSCAPE PERCENTAGE 11.6%
TOTAL CANOPY PERCENTAGE 22%
DCP REQUIREMENT 10%
TOTAL CAR PARK SPACES 201
TOTAL LANDSCAPE BLISTER AREAS 19

TREE CANOPY COVER TABLE (WH2 & WH3)
(ISSUE G DPE SUBMISSION) 12.04.22

TREE NO.	TREE CANOPY	CANOPY AREA (m²)	TOTAL CANOPY COVER (m²)
76	6m	30	2280
169	8m	50	8450
31	10m	78	2418
29	15m	177	5133

TOTAL TREE NO. 285
TOTAL SQM LANDSCAPE AREA 10,249.13
TOTAL SQM CANOPY COVER 18,281
TOTAL AREA 87,852
TOTAL LANDSCAPE PERCENTAGE 11.6%
TOTAL CANOPY PERCENTAGE 20.8%
DCP REQUIREMENT 10%

TREE CANOPY COVER TABLE (WH2 & WH3)
(SSDA 9522 MOD 1)

TREE NO.	TREE CANOPY	CANOPY AREA (m²)	TOTAL CANOPY COVER (m²)
76	6m	30	2280
150	8m	50	7500
31	10m	78	2418
28	15m	177	4956

TOTAL TREE NO. 285
TOTAL SQM LANDSCAPE AREA 9,846.55
TOTAL SQM CANOPY COVER 17,154
TOTAL AREA 87,852
TOTAL LANDSCAPE PERCENTAGE 11.2%
TOTAL CANOPY PERCENTAGE 19.5%
DCP REQUIREMENT 10%

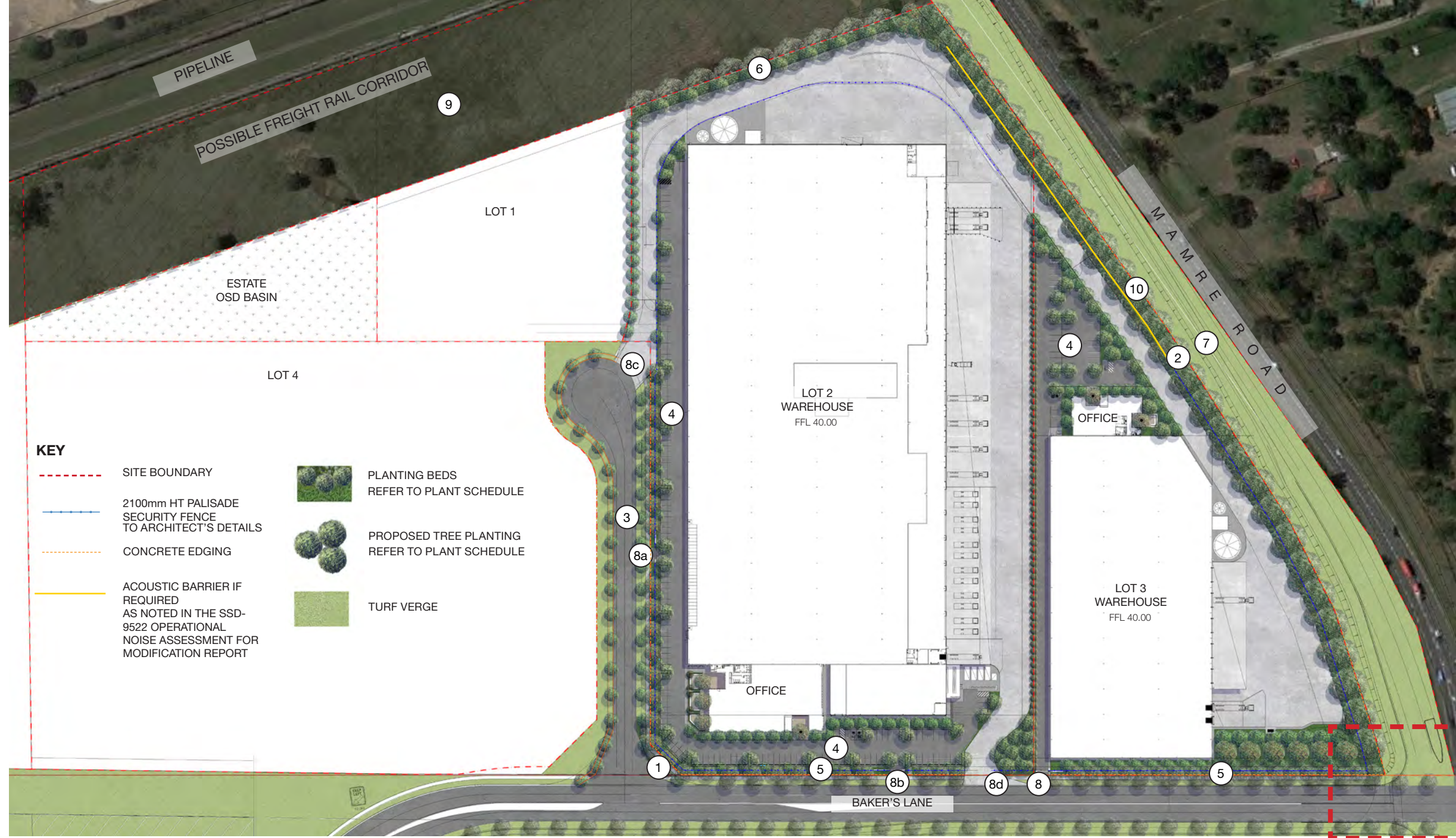
TREE CANOPY COVER TABLE
(SSDA 9522 MOD 1)

TREE NO.	TREE CANOPY	CANOPY AREA (m²)	TOTAL CANOPY COVER (m²)
22	5m	20	440
114	6m	30	3420
273	8m	50	13650
66	10m	78	5148
28	15m	177	4956

TOTAL TREE NO. 503
TOTAL SQM LANDSCAPE AREA 19,901.09
TOTAL SQM CANOPY COVER 27,614
TOTAL AREA 167,123
TOTAL LANDSCAPE PERCENTAGE 12%
TOTAL CANOPY PERCENTAGE 17%
DCP REQUIREMENT 10%



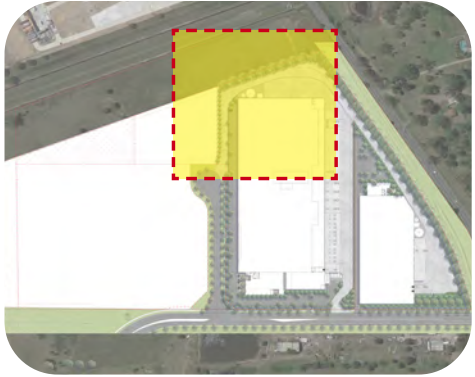
CONTEXT PLAN



DESIGN NOTES

- SITE ENTRY FEATURE**
 - Feature tree planting
 - Signage
- MAMRE RD SETBACK**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (10m ht)
 - Screening shrubs (min 3m ht) to acoustic wall
- INTERNAL ACCESS ROAD**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback and in cul-de-sac centre island
 - Footpath to DCP requirements
- CARPARK**
 - Feature tree planting at carpark entry points
 - Canopy trees (6m min ht)
 - Mix of low groundcover and screening shrubs at perimeter
 - Feature trees around office and carpark entries
- LANDSCAPE SETBACK**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback (10m min ht x 10m dia canopy)
- SCREEN PLANTING**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (8m ht)
- MAMRE ROAD WIDENING (FUTURE)**
- CAR ENTRY / EXIT**
 - 8a. Car Entry Only
 - 8b. Car Exit Only
 - 8c. Truck Entry / Exit
 - 8d. Truck Exit Only
- FUTURE RAIL CORRIDOR**
- CONCRETE EDGING TO SITE BOUNDARY**

LANDSCAPE CONCEPT PLAN 01



KEY

- SITE BOUNDARY
- 2100mm HT PALISADE SECURITY FENCE TO ARCHITECT'S DETAILS
- CONCRETE EDGING
- ACOUSTIC BARRIER IF REQUIRED AS NOTED IN THE SSD-9522 OPERATIONAL NOISE ASSESSMENT FOR MODIFICATION REPORT

KEYPLAN

- PROPOSED TREE PLANTING REFER TO PLANT SCHEDULE
- TURF VERGE
- PLANTING BEDS REFER TO PLANT SCHEDULE

DESIGN NOTES

- SITE ENTRY FEATURE**
 - Feature tree planting
 - Signage
- MAMRE RD SETBACK**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (10m ht)
 - Screening shrubs (min 3m ht) to acoustic wall
- INTERNAL ACCESS ROAD**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback and in cul-de-sac centre island
 - Footpath to DCP requirements
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 - Feature tree planting at carpark entry points
 - Canopy trees (6m min ht)
 - Mix of low groundcover and screening shrubs at perimeter
 - Feature trees around office and carpark entries
- LANDSCAPE SETBACK**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback (10m min ht x 10m dia canopy)
- SCREEN PLANTING**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (8m ht)
- MAMRE ROAD WIDENING (FUTURE)**
- CAR ENTRY / EXIT**
 - 8a. Car Entry Only
 - 8b. Car Exit Only
 - 8c. Truck Entry / Exit
 - 8d. Truck Exit Only
- FUTURE RAIL CORRIDOR**
- CONCRETE EDGING TO SITE BOUNDARY**

LANDSCAPE CONCEPT PLAN 02



KEY

- SITE BOUNDARY
- 2100mm HT PALISADE SECURITY FENCE TO ARCHITECT'S DETAILS
- CONCRETE EDGING
- ACOUSTIC BARRIER IF REQUIRED AS NOTED IN THE SSD-9522 OPERATIONAL NOISE ASSESSMENT FOR MODIFICATION REPORT

KEYPLAN

- PROPOSED TREE PLANTING REFER TO PLANT SCHEDULE
- TURF VERGE
- PLANTING BEDS REFER TO PLANT SCHEDULE

DESIGN NOTES

1. SITE ENTRY FEATURE
 - Feature tree planting
 - Signage
2. MAMRE RD SETBACK
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (10m ht)
 - Screening shrubs (min 3m ht) to acoustic wall
3. INTERNAL ACCESS ROAD
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback and in cul-de-sac centre island
 - Footpath to DCP requirements
4. CARPARK
 - Feature tree planting at carpark entry points
 - Canopy trees (6m min ht)
 - Mix of low groundcover and screening shrubs at perimeter
 - Feature trees around office and carpark entries
5. LANDSCAPE SETBACK
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback (10m min ht x 10m dia canopy)
6. SCREEN PLANTING
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (8m ht)
7. MAMRE ROAD WIDENING (FUTURE)
8. CAR ENTRY / EXIT
 - 8a. Car Entry Only
 - 8b. Car Exit Only
 - 8c. Truck Entry / Exit
 - 8d. Truck Exit Only
9. FUTURE RAIL CORRIDOR
10. CONCRETE EDGING TO SITE BOUNDARY

LANDSCAPE CONCEPT PLAN 03



KEY

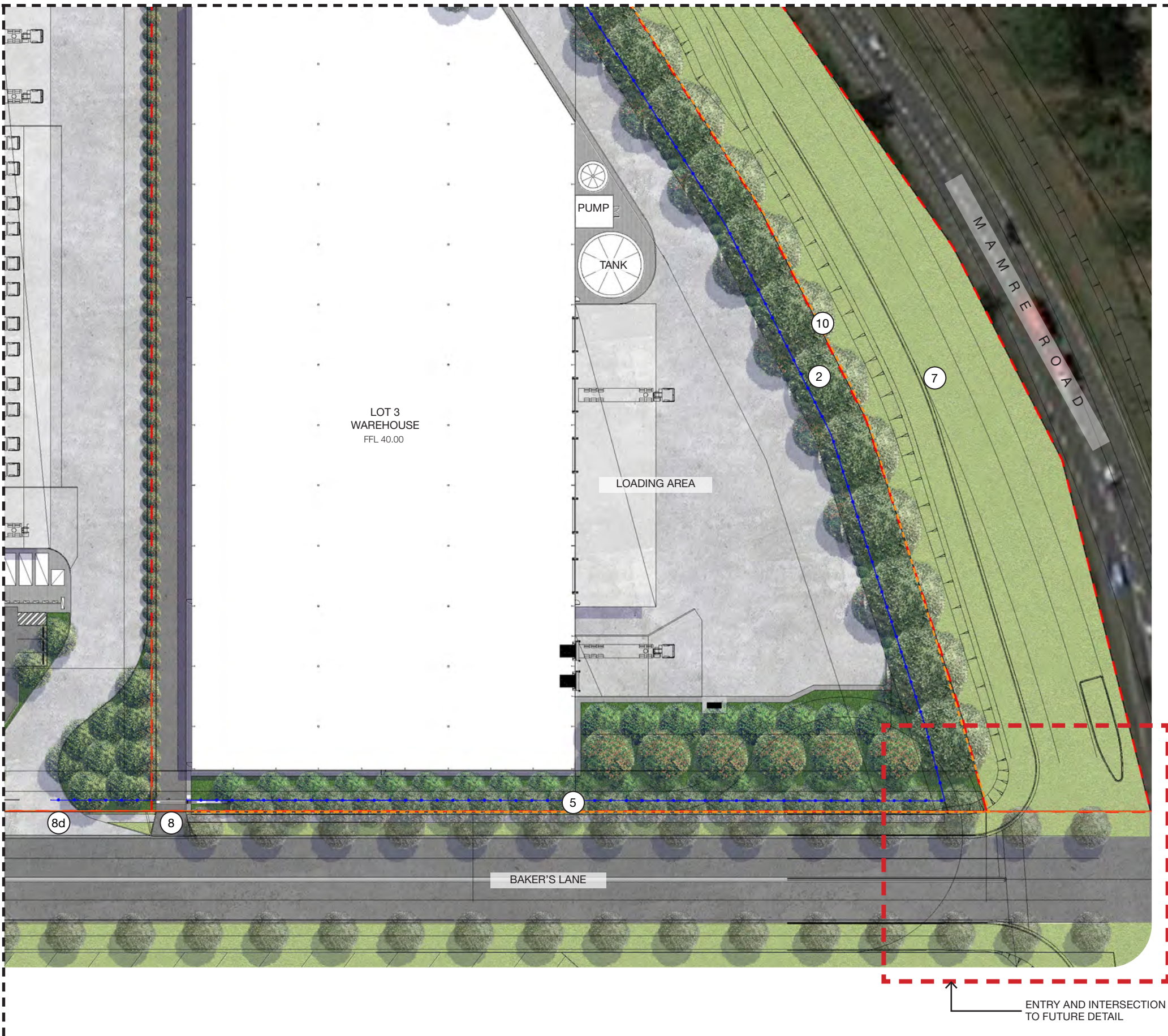
- SITE BOUNDARY
- 2100mm HT PALISADE SECURITY FENCE TO ARCHITECT'S DETAILS
- CONCRETE EDGING
- ACOUSTIC BARRIER IF REQUIRED AS NOTED IN THE SSD-9522 OPERATIONAL NOISE ASSESSMENT FOR MODIFICATION REPORT

KEYPLAN

- PROPOSED TREE PLANTING REFER TO PLANT SCHEDULE
- TURF VERGE
- PLANTING BEDS REFER TO PLANT SCHEDULE

- DESIGN NOTES**
- SITE ENTRY FEATURE**
 - Feature tree planting
 - Signage
 - MAMRE RD SETBACK**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (10m ht)
 - Screening shrubs (min 3m ht) to acoustic wall
 - INTERNAL ACCESS ROAD**
 - 2m landscape setback from boundary to fence line
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 - CARPARK**
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 - LANDSCAPE SETBACK**
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 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback (10m min ht x 10m dia canopy)
 - SCREEN PLANTING**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (8m ht)
 - MAMRE ROAD WIDENING (FUTURE)**
 - CAR ENTRY / EXIT**
 - 8a. Car Entry Only
 - 8b. Car Exit Only
 - 8c. Truck Entry / Exit
 - 8d. Truck Exit Only
 - FUTURE RAIL CORRIDOR**
 - CONCRETE EDGING TO SITE BOUNDARY**

LANDSCAPE CONCEPT PLAN 04



KEY

- KEY**
- SITE BOUNDARY
 - 2100mm HT PALISADE SECURITY FENCE TO ARCHITECT'S DETAILS
 - CONCRETE EDGING
 - ACOUSTIC BARRIER IF REQUIRED AS NOTED IN THE SSD-9522 OPERATIONAL NOISE ASSESSMENT FOR MODIFICATION REPORT

KEYPLAN



PROPOSED TREE PLANTING
REFER TO PLANT SCHEDULE



TURF VERGE



PLANTING BEDS
REFER TO PLANT SCHEDULE

DESIGN NOTES

1. **SITE ENTRY FEATURE**
 - Feature tree planting
 - Signage
2. **MAMRE RD SETBACK**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (10m ht)
 - Screening shrubs (min 3m ht) to acoustic wall
3. **INTERNAL ACCESS ROAD**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback and in cul-de-sac centre island
 - Footpath to DCP requirements
4. **CARPARK**
 - Feature tree planting at carpark entry points
 - Canopy trees (6m min ht)
 - Mix of low groundcover and screening shrubs at perimeter
 - Feature trees around office and carpark entries
5. **LANDSCAPE SETBACK**
 - 2m landscape setback from boundary to fence line
 - Canopy street tree planting (6m ht+) to turf verge
 - Large canopy trees in setback (10m min ht x 10m dia canopy)
6. **SCREEN PLANTING**
 - Large canopy tree planting (15m ht x 10m dia)
 - Canopy tree planting (8m ht)
7. **MAMRE ROAD WIDENING (FUTURE)**
8. **CAR ENTRY / EXIT**
 - 8a. Car Entry Only
 - 8b. Car Exit Only
 - 8c. Truck Entry / Exit
 - 8d. Truck Exit Only
9. **FUTURE RAIL CORRIDOR**
10. **CONCRETE EDGING TO SITE BOUNDARY**



TYPICAL DETAIL PLAN

DESIGN NOTES

- 1. PLANTER / SEATWALL
- 2. PROPOSED TREES IN PAVING GRATE AND TREE PIT
- 3. PROPOSED SCREENING TREES
- 4. BIKE RACK BY OTHERS
- 5. GREENWALL



LL @ 4/m
DV @ 2/m²
DEX @ 2/m²
(IN GROUPS OF 5)

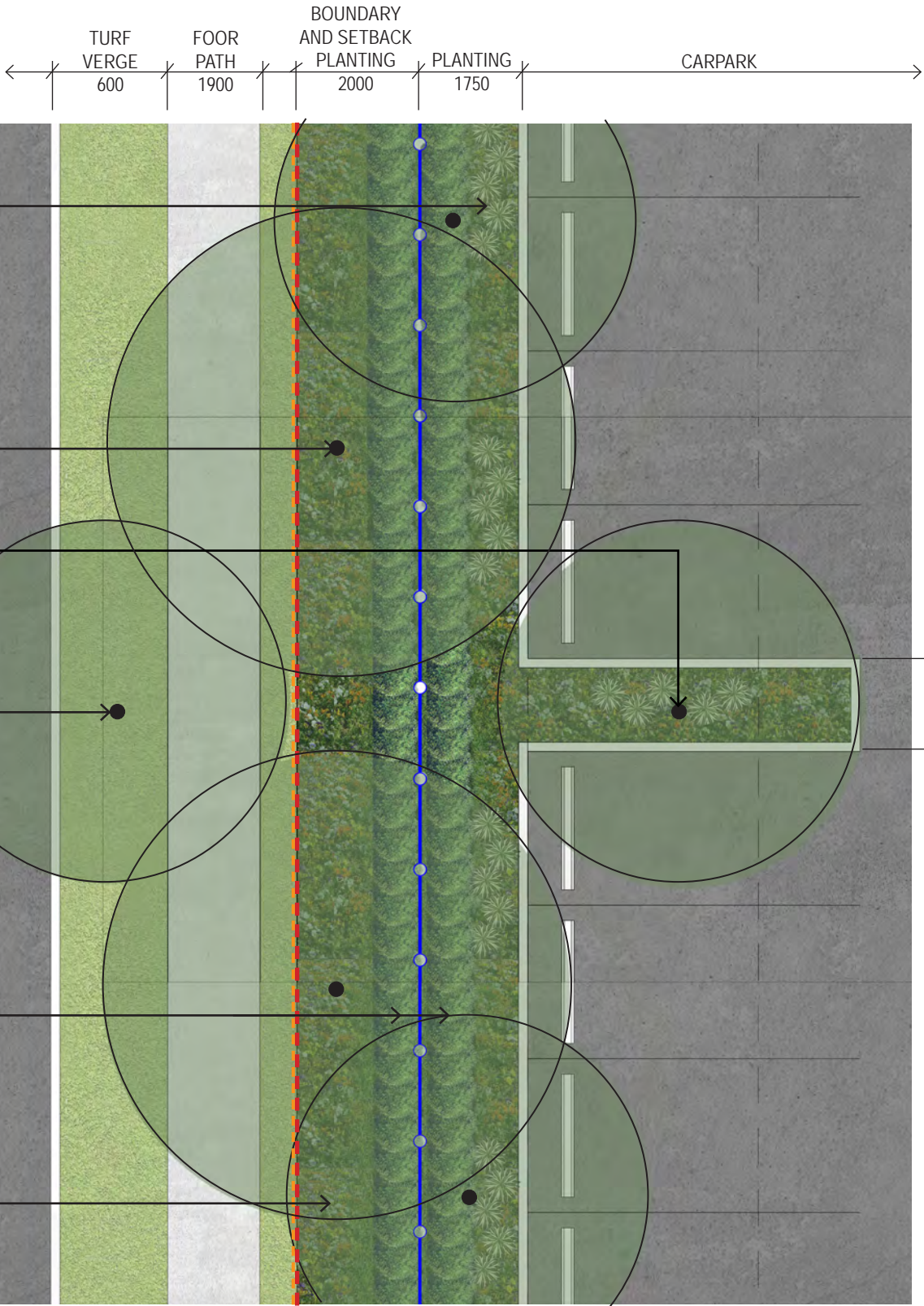
EMM

WFL

AC

HS @ 2/m²
HHE @ 2/m²

CCI @ 2/m²
DV @ 2/m²
CA @ 2/m²



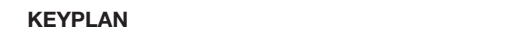
KEYPLAN

KEY




- SITE BOUNDARY
- 2100mm HT PALISADE SECURITY FENCE TO ARCHITECT'S DETAILS
- CONCRETE EDGING TO EDGE
- PROPOSED TREE PLANTING REFER TO PLANT SCHEDULE
- PLANTING BEDS REFER TO PLANT SCHEDULE
- TURF
- FEATURE PAVING TO ARCHITECT'S SPECIFICATION
- PAVING TO ARCHITECT'S SPECIFICATION

01 OFFICE STAFF COURTYARD
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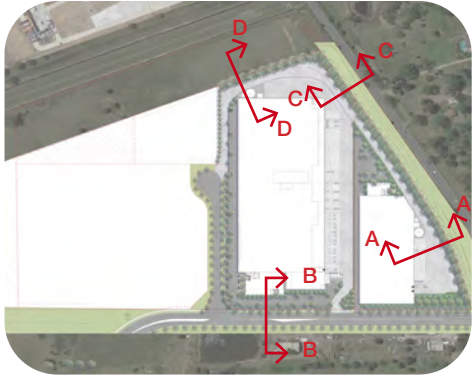
02 BLISTER LANDSCAPE
Scale 1:100@A3 / 1:50@A1



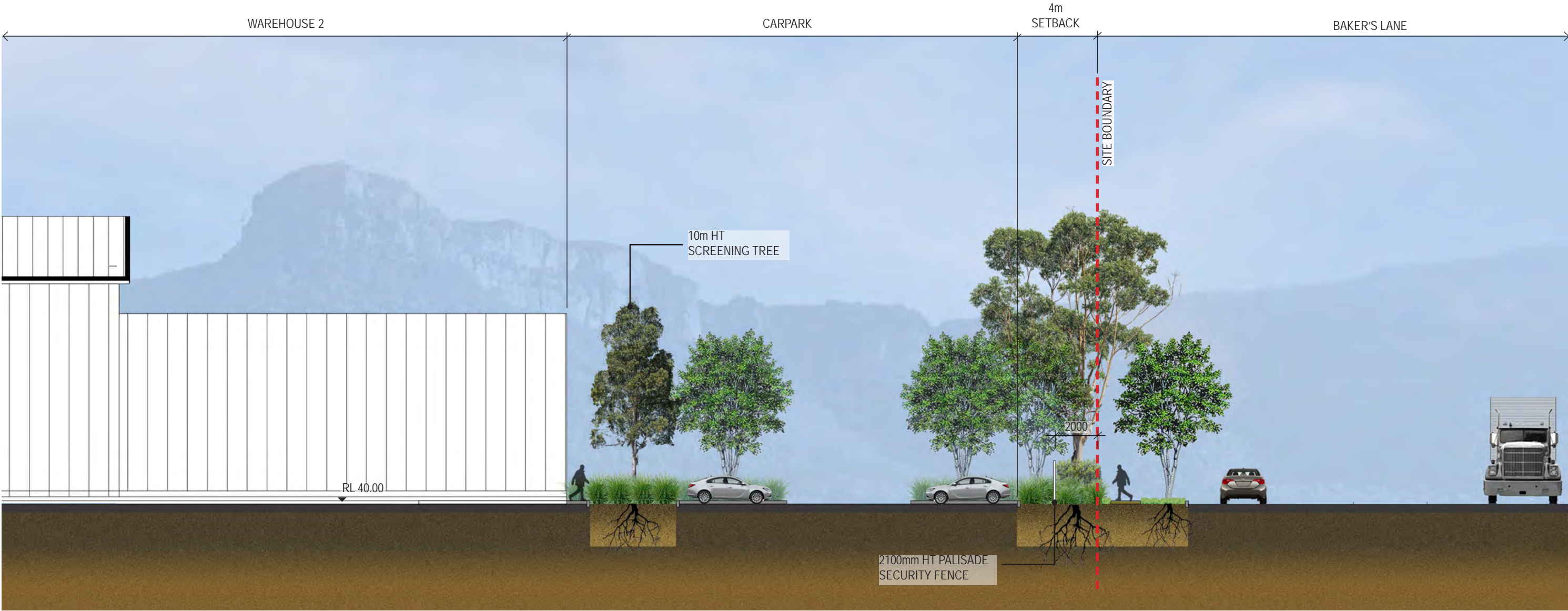
01 SECTION A-A
Scale 1:200@A3 / 1:100@A1

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THE YARDS KEMPS CREEK MODIFICATION THE YARDS, KEMPS CREEK NSW	LANDSCAPE SECTION A-A	H8-21043	DA SUBMISSION	1:200 @A3	J	23.08.2022	KM/DG	DV	L 12			

LANDSCAPE SECTION B-B

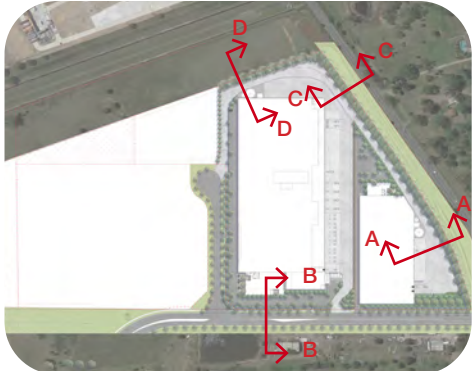


KEYPLAN

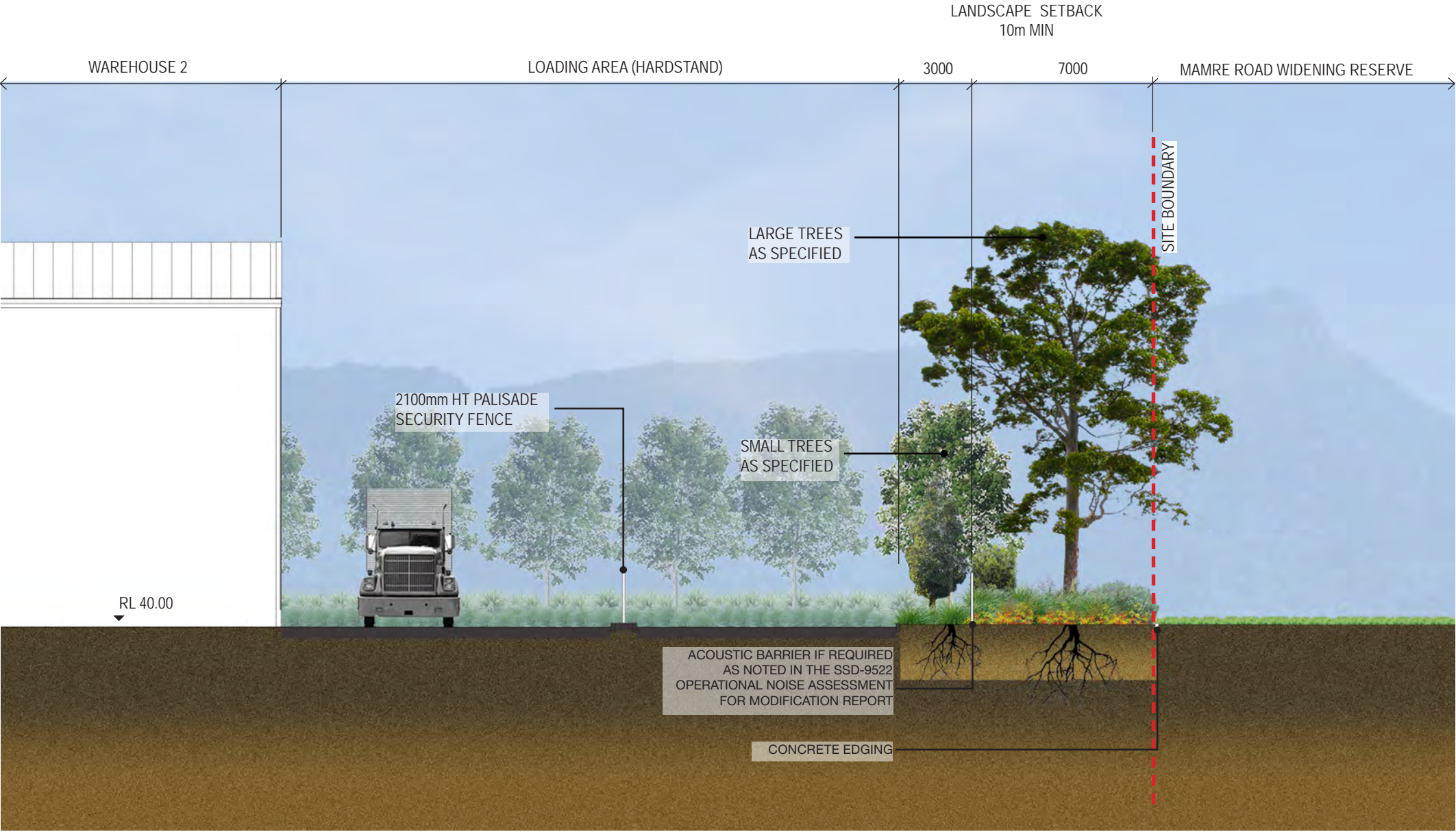


01 SECTION B-B
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LANDSCAPE SECTION C-C

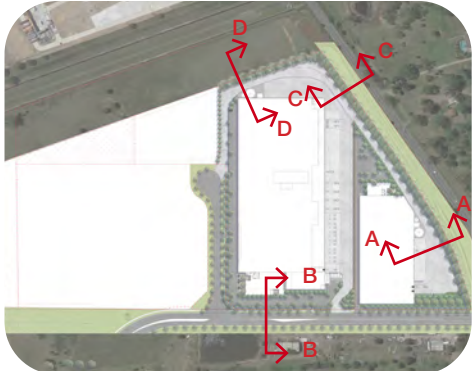


KEYPLAN

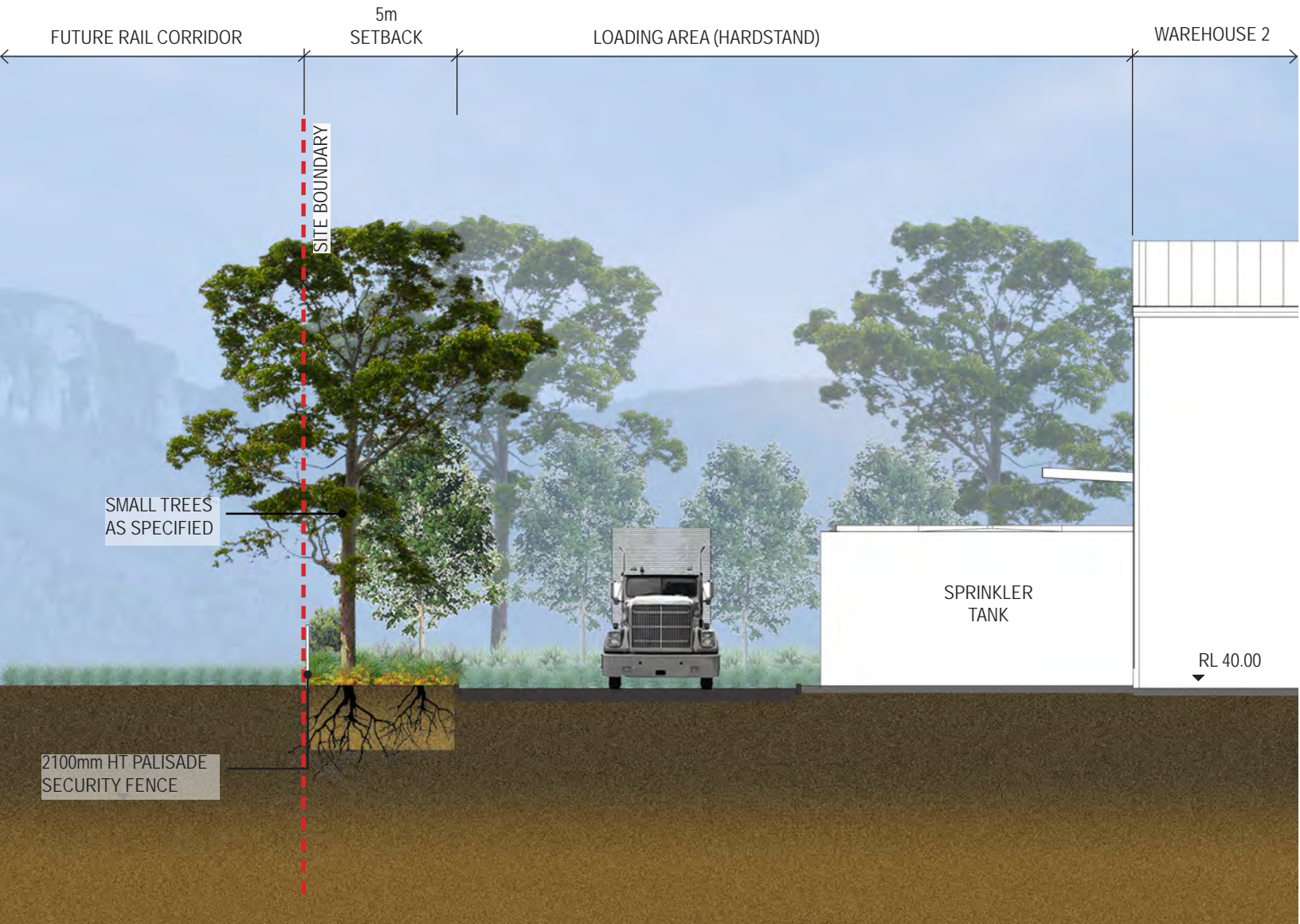


01 SECTION C-C
Scale 1:200@A3 / 1:100@A1

LANDSCAPE SECTION D-D



KEYPLAN



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

INDICATIVE PLANTING SCHEDULE

SMALL TREE SPECIES	
BOTANICAL NAME + POT SIZE	COMMON NAME
Backhousia citriodora (100L)	Lemon Scented Myrtle
Callistemon salignus (75L)	Willow Bottlebrush
Lagerstroemia hybrids ‘Indian Summer Range’ (100L)	Crepe Myrtle Lipan, Biloxi
Lophostemon confertus (200L)	Brush Box
Melaleuca linariifolia (100L)	Snow in Summer
Waterhousea floribunda and cultivars (200L)	Weeping Lilly Pilly
Acacia parramattensis (35L)	Parramatta Wattle
Melaleuca decora (35L)	White Feather Honeymyrtle
Angophora costata (200L)	Smooth Bark Apple

GROUNDCOVERS, FERNS, HEDGES, GRASSES & CLIMBERS (150mm pot size)	
BOTANICAL NAME (150mm pot size) @ 4/m2	COMMON NAME
Adiantum aethiopicum	Maidenhair Fern
Carex appressa	Tall sedge
Cissus antarctica	Native Grape
Clematis aristata	Old Man's Beard
Dianella longifolia	Flax Lily
Dichondra repens	Kidney Weed
Hardenbergia violacea	Purple Twining-pea
Juncus usitatus	Common Rush
Lomandra longifolia	Spiny Mat Rush
Microlaena stipoides	Weeping Grass
Pandorea pandorana	Wonga Vine
Poa labillardieri	Tussock Grass

Plant species sourced from The Mamre Road DCP 2021 - Appendix C Plant list.

PLANT IMAGES



EUCALYPTUS CREBRA



MAGNOLIA "COOLWYN GLOSS"



ELAEOCARPUS RETICULATUS



CUPANIOPSIS ANACARDIOIDES



EUCALYPTUS AMPLIFOLIA



WATERHOUSEA FLORIBUNDA



GLOCHIDION FERDINANDI



MELALEUCA LINARIIFOLIA



SYNCARPIA GLOMULIFERA



MELALEUCA STYPHELIOIDES



TRISTANIOPSIS LAURINA



BANKSIA SERRATA



CALLISTEMON SP

LARGER TREE SPECIES	
BOTANICAL NAME + POT SIZE	COMMON NAME
Casuarina glauca (75L)	Swamp Oak
Eucalyptus amplifolia (75L)	Cabbage Gum
Eucalyptus crebra (75L)	Narrow Leaved Ironbark
Eucalyptus fibrosa (75L)	Broad Leaved Ironbark
Eucalyptus moluccana (75L)	Grey Box
Eucalyptus punctata (75L)	Grey Gum
Eucalyptus tereticornis (75L)	Forest Red Gum
Araucaria columnaris & A. heterophylla (400L)	Cook Pine/ Norfolk Island Pine
Angophora costata (400L)	Smooth Bark Apple
Corymbia maculata (200L)	Spotted Gum

LARGER TREE SPECIES	
BOTANICAL NAME	COMMON NAME
Angophora costata (200L)	Smooth Bark Apple
Corymbia maculata (200L)	Spotted Gum

BIO-RETENTION BASIN PLANT SPECIES (TUBESTOCK) @ 5/m2	
BOTANICAL NAME	COMMON NAME
Lomandra longifolia	Spiny Mat Rush
Poa labillardieri	Tussock Grass

SHRUBS	
BOTANICAL NAME	COMMON NAME
Acacia binervia	Coast Myall
Acacia implexa	Hickory
Breynia oblongifolia	Common Breynia
Bursaria spinosa	Blackthorn
Callistemon salignus	Willow Bottlebrush
Callistemon citrinus	Bottlebrush varies
Clerodendrum tomentosum	Hairy Clerodendrum
Daviesia ulicifolia	
Dodonaea viscosa	Wedge-leaf Hop Bush
Goodenia hederacea	
Doryanthes excelsa	Gymea Lily
Grevillea juniperina	
Hakea sericea	
Hibiscus heterophyllus	Native Rosella

PLANTING STRATEGY



INTEGRATION:
STREET TREE PLANTING, SETBACK PLANTING AND BUFFER PLANTING SHALL BE INTEGRATED WITH SOFT ENGINEERING SWALES AND SHALL LINK WITH THE RE-VEGETATED CREEK CORRIDOR



CONNECTIVITY:
THE STREETScape USES PEDESTRIAN AND BIKE PATHS TO CONNECT ALL BUILDINGS WITHIN THE DEVELOPMENT WITH PUBLIC SPACE AND THE CREEK CORRIDOR WHILE LINKING IN WITH THE REGIONAL BIKE NETWORK.

MULTIFUNCTIONALITY:
THE PLANTING STRATEGY ALLOWS FOR THE VARIOUS MICRO-CLIMATE ECOSYSTEMS CREATED BY BUILT FORM AND ROADS. ALL PLANTING LINKS BACK TO THE LOCAL ENDEMIC PLANTING AND CREEK CORRIDOR ENVIRONMENT.

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.

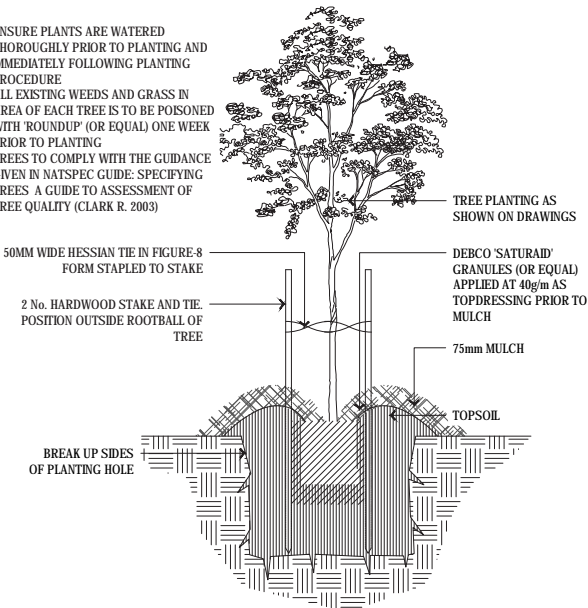
RELEVANT AUSTRALIAN STANDARDS

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

NOTE:

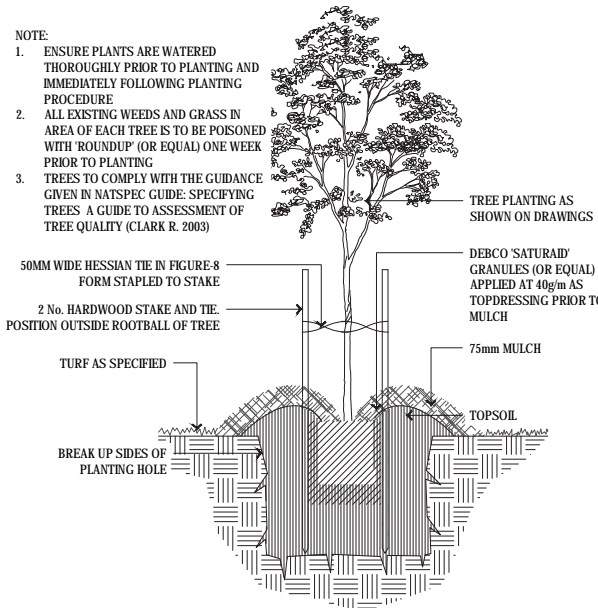
- 1. ENSURE PLANTS ARE WATERED THOROUGHLY PRIOR TO PLANTING AND IMMEDIATELY FOLLOWING PLANTING PROCEDURE
- 2. ALL EXISTING WEEDS AND GRASS IN AREA OF EACH TREE IS TO BE POISONED WITH 'ROUNDUP' (OR EQUAL) ONE WEEK PRIOR TO PLANTING
- 3. TREES TO COMPLY WITH THE GUIDANCE GIVEN IN NATSPEC GUIDE: SPECIFYING TREES A GUIDE TO ASSESSMENT OF TREE QUALITY (CLARK R. 2003)



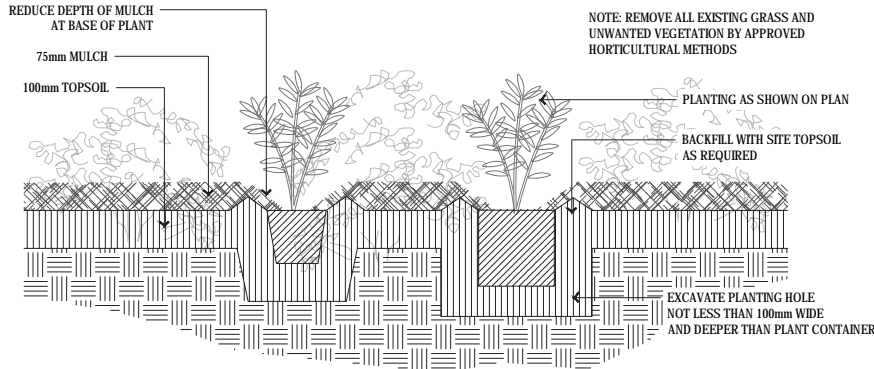
A TYPICAL TREE PLANTING DETAIL UNDER 100L (IN GARDEN BED)
SCALE 1 : 20 @A1

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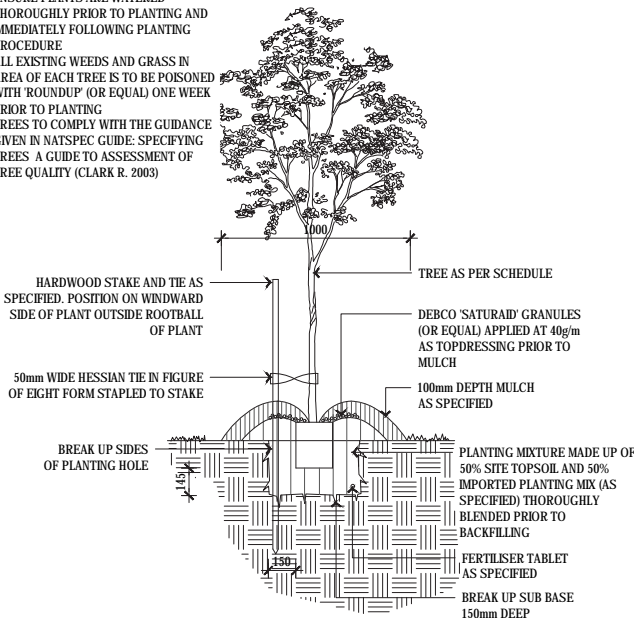
B TYPICAL TREE PLANTING DETAIL (IN TURF)
SCALE 1 : 20 @A1



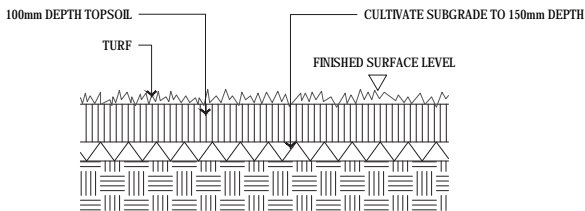
C MASS PLANTING DETAIL
SCALE 1 : 10 @A1

NOTE:

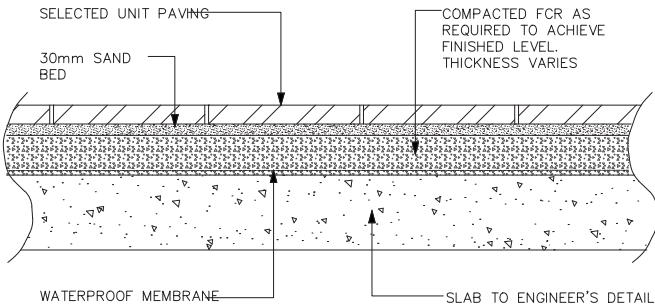
- 1. ENSURE PLANTS ARE WATERED THOROUGHLY PRIOR TO PLANTING AND IMMEDIATELY FOLLOWING PLANTING PROCEDURE
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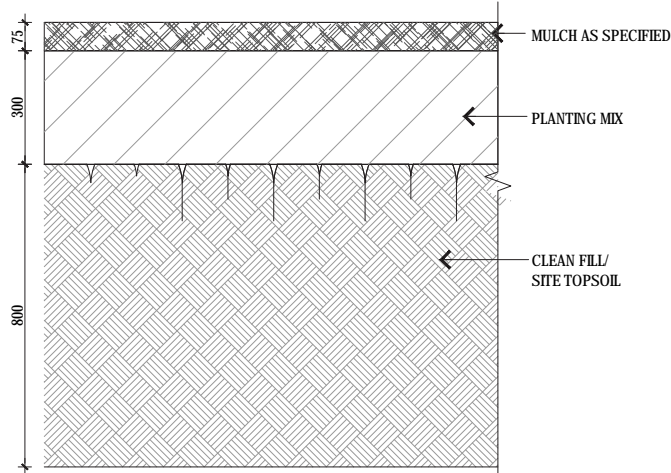
D TYPICAL TREE PLANTING DETAIL OVER 100L
SCALE 1 : 20 @A1



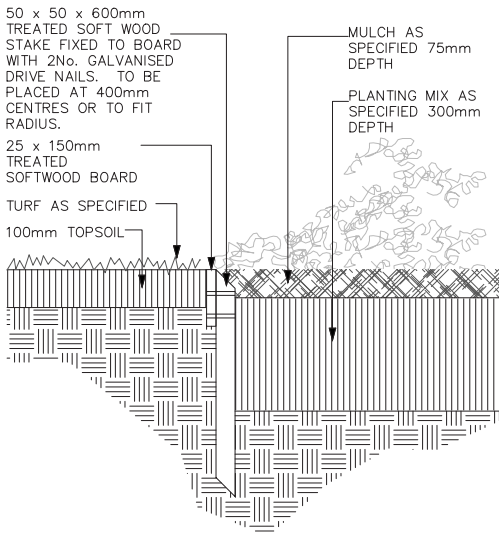
G TURF DETAIL
SCALE 1 : 10 @A1



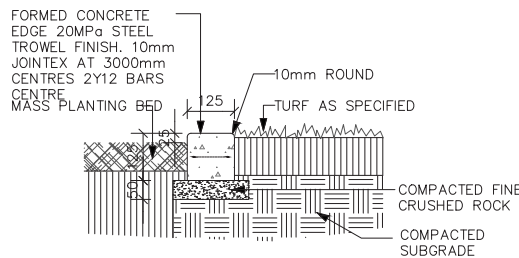
E UNIT PAVING ON SLAB DETAIL
SCALE 1 : 10 @A1



H TYPICAL SOIL PROFILE
SCALE 1 : 10 @A1



F TIMBER EDGE DETAIL
SCALE 1 : 10 @A1



I CONCRETE EDGE DETAIL
SCALE 1 : 10 @A1