

HABIT8

Landscape Architecture & Urbanism

Level 57, MLC Centre 32/24 Scott St,
19-29 Martin Place, Byron Bay, NSW 2481
Sydney, NSW 2000

www.habit8.com.au
M: 0425 206 047

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB

657-769 MAMRE ROAD, KEMPS CREEK NSW
(LOT 34 DP 1118173, LOT X DP 421633, LOT 1 DP 1018318,
LOT Y DP 421633 & LOT 22 DP 258414)

LANDSCAPE MASTERPLAN REPORT
31.08.2021
ISSUE X





A ALTIS FIRST ESTATE DISTRIBUTION HUB

B ERSKINE PARK EMPLOYMENT PRECINCT

C SUBJECT SITE

KEY

Site Boundary

Future Recreation Area



CONTEXT PLAN

DESIGN NOTES

1. SITE ENTRY FEATURE

- Feature tree and shrub planting
- Entry feature walls and signage
- Pylon sign

2. MAMRE RD SETBACK

- 10m landscaped setback
- Large canopy tree planting (15m ht +)
- Screening hedge planting (4m ht +)
- Perimeter security fence set back into landscaped garden beds

3. BAKER'S LANE

- Multiple layers of large canopy trees (15m ht +)
- Smaller trees (8m ht +) to turf verge edges to reduce heavy vehicle conflicts
- Regional cycleway link from Mamre rd to the South creek corridor (for extent shown)

4. SITE BOUNDARY SETBACKS

- Minimum 5m boundary setbacks (landscaped)
- Plant with screening trees (10m-15m height)

5. FUTURE FREIGHT CORRIDOR

6. ALTIS FIRST ESTATE DISTRIBUTION HUB

7. WATER QUALITY BASIN (BIO-BASIN)

8. FUTURE SOUTHERN LINK ROAD CORRIDOR

9. INTERNAL ACCESS ROAD

- Minimum 4m landscape setback
- Large canopy tree planting (10m ht+)
- Small trees to turf verge edges

RE-VEGETATION STATISTICS



1,878 NEW TREES PLANTED



184,820 m² OF NEW TREE CANOPY

GREENER PLACES PRINCIPLES



PRINCIPLE 1.
Integration

combine green infrastructure with urban development and grey infrastructure



PRINCIPLE 2.
Connectivity

create an interconnected network of open space



PRINCIPLE 3.
Multifunctionality

deliver multiple ecosystem services simultaneously

NSW GREENER PLACES POLICY (GAO 2020)

PROJECT

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB
657-769 MAMRE ROAD, KEMPS CREEK NSW

PROJECT NO.

H8-18018

PURPOSE

SSD
APPLICATION

SCALE

1:5000 @A3 X

REVISION

31.08.2021

DATE

KM

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L02

PAGE

0 50 100 150 200 250m

SCALE 1:5000 AT A3



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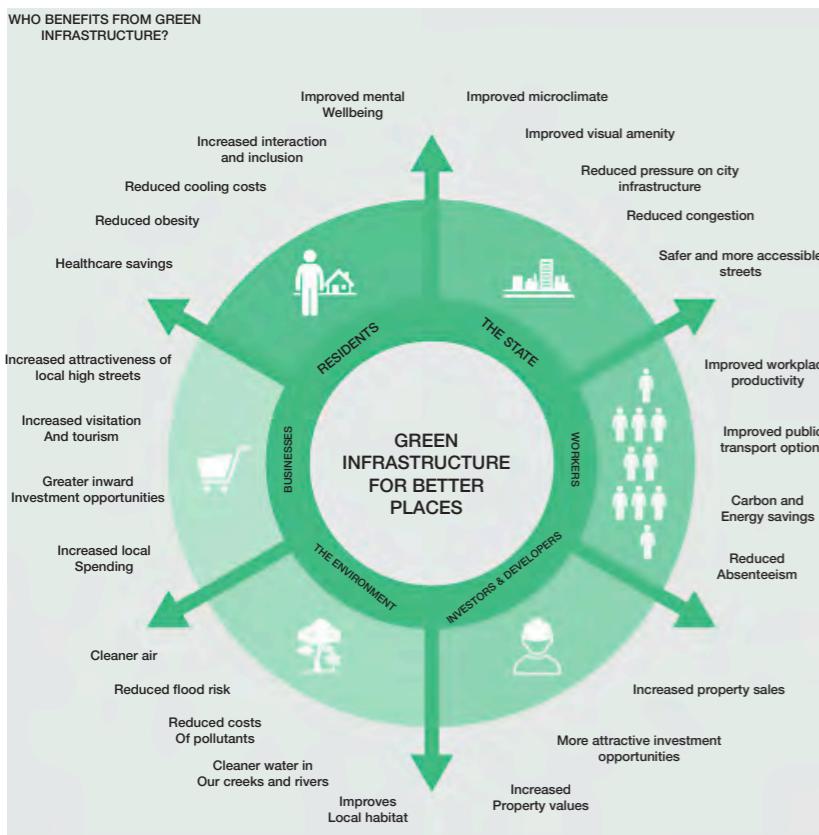
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Landscape Architecture & Urbanism

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 protection and enhancement of the South Creek natural resources and local habitat by improving the quality of watercourse, creating a green habitat corridor and protecting any endangered ecological communities
- 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
- future provision in the South Creek corridor for a diverse range of outdoor space for cultural, educational, and community activities
- future provision in the South Creek Corridor of high-performing open spaces which foster synergies between recreation, climate change adaptation, and local habitat conservation.

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 runoff, 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.

Our re-vegetation numbers are as follows:

No. new trees planted: 1,878
Approximate canopy cover (average): 184,820 m²
Building Floor area: 187,378 m²

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 and link the South Creek Corridor with the built form. 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 South Creek Corridor to 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 to experience the South Creek Corridor interface;
11. Strengthen the connection from Mamre Road through the estate to the South Creek Corridor environment;
12. Incorporate WSUD principles into the streetscape including water quality bio-swales and vegetated detention basins.

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

PRECEDENT IMAGES - BUILDING FRONTAGES

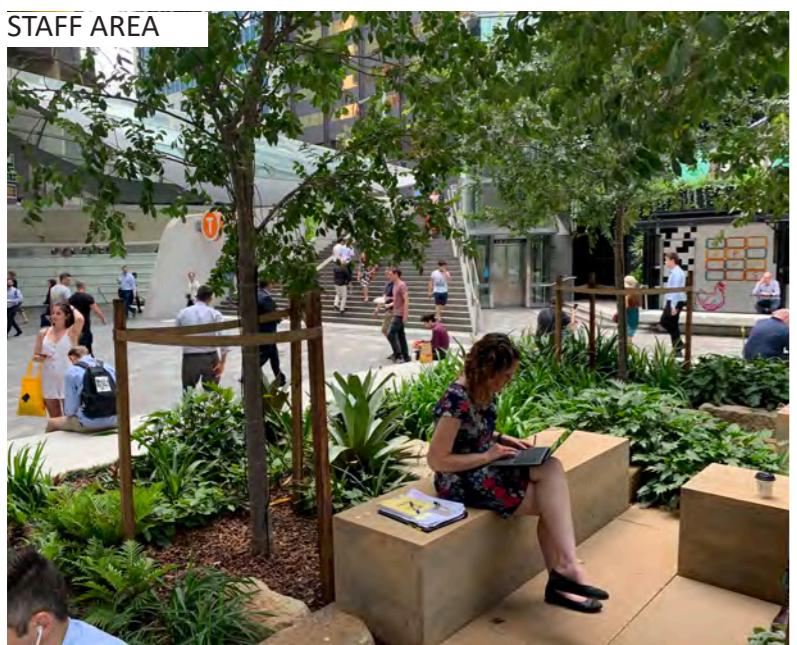
FRONT SETBACK



BIKE PARKING AND LANDSCAPE BUFFER



STAFF AREA



PARKING AREA



PROJECT

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657-769 MAMRE ROAD, KEMPS CREEK NSW

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PURPOSE

SSD
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SCALE

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REVISION

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DATE

31.08.2021

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LANDSCAPE SECTIONS

Note: landscape sections are indicative only

GREENER PLACES PRINCIPLES



PRINCIPLE 1.
[Integration](#)

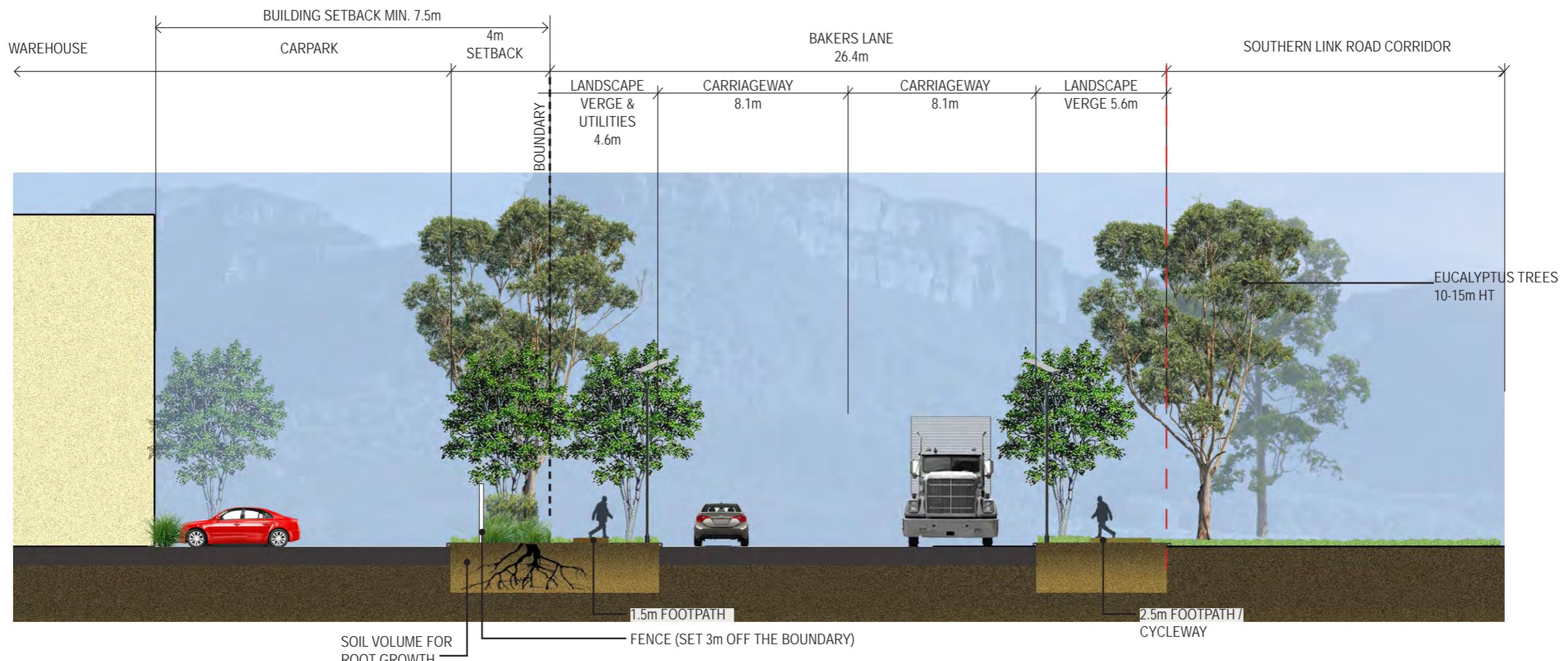


PRINCIPLE 2.
[Connectivity](#)



PRINCIPLE 3.
[Multifunctionality](#)

NSW GREENER PLACES POLICY (GAO 2020)



01 LANDSCAPE SECTION A-A
Scale 1:200@A3

PROJECT

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SCALE 1:200 AT A3

LANDSCAPE SECTIONS

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GREENER PLACES PRINCIPLES



PRINCIPLE 1.
Integration



PRINCIPLE 2.
Connectivity



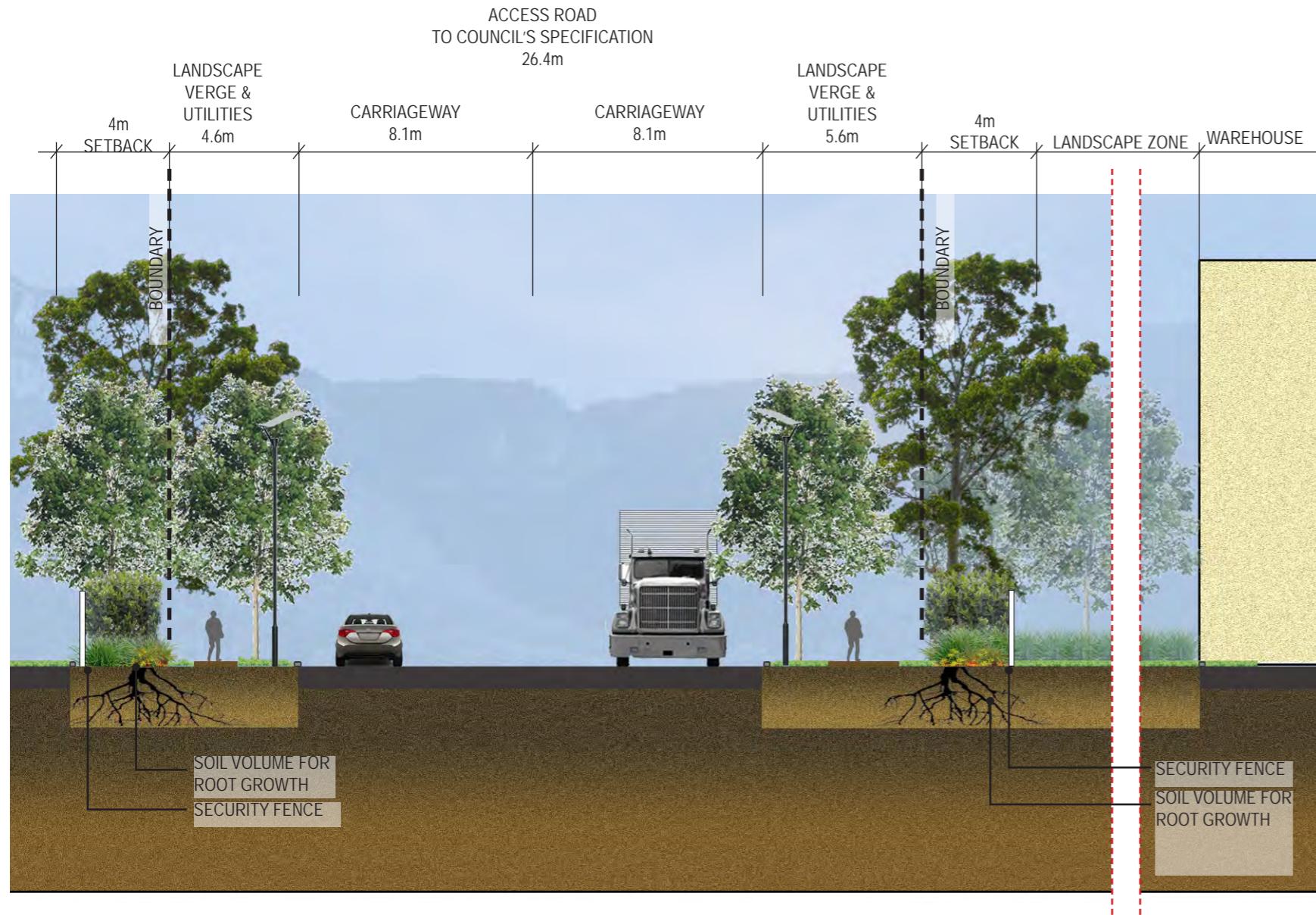
PRINCIPLE 3.
Multifunctionality

combine green infrastructure with urban development and grey infrastructure
create an interconnected network of open space
deliver multiple ecosystem services simultaneously

NSW GREENER PLACES POLICY (GAO 2020)

HEALTHY TREE GROWTH

THE TREE ROOT VOLUME IS SUFFICIENT FOR OPTIMAL GROWTH AS THE VOLUME OF SOIL IS A LINEAR EXCAVATED CONTINUOUS TRENCH WITH 1500mm DEPTH OF IMPORTED SOIL THAT RUNS ALONG THE BOUNDARY.



01 LANDSCAPE SECTION B-B

Scale 1:200@A3

PROJECT

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657-769 MAMRE ROAD, KEMPS CREEK NSW

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H8-18018

PURPOSE

SSD APPLICATION

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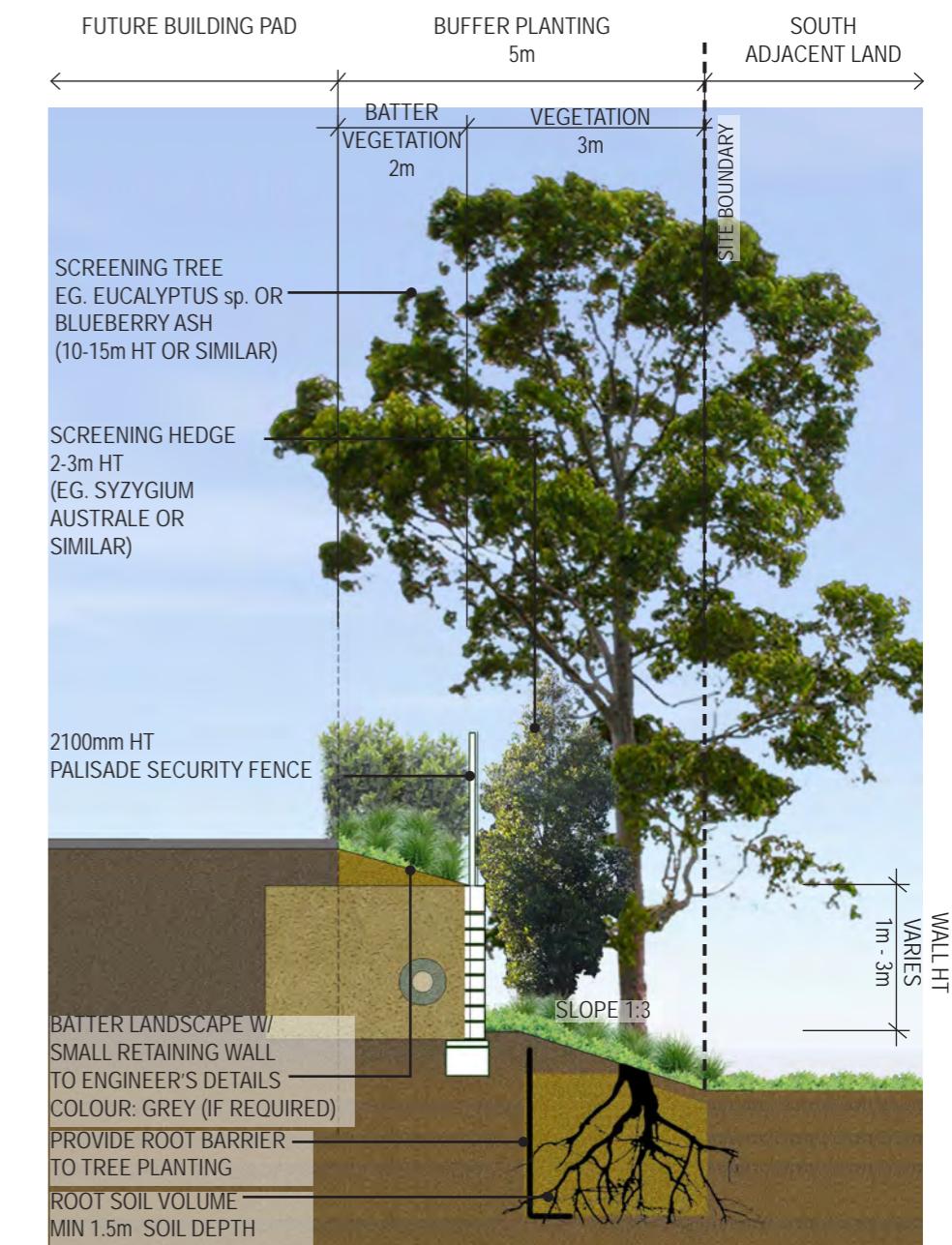
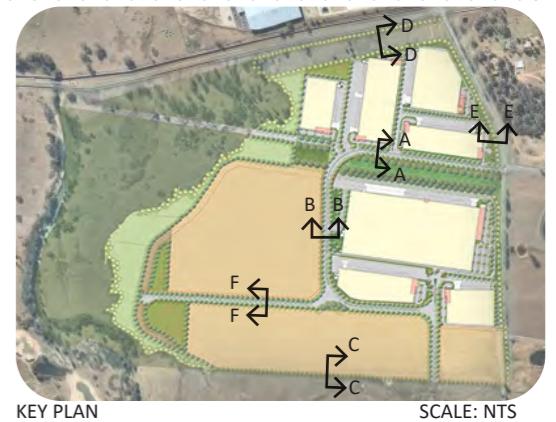
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02 LANDSCAPE SECTION C-C

Scale 1:100@A3

LANDSCAPE SECTIONS

Note: landscape sections are indicative only

GREENER PLACES PRINCIPLES



PRINCIPLE 1. Integration

combine green infrastructure with urban development and grey infrastructure



PRINCIPLE 2. Connectivity

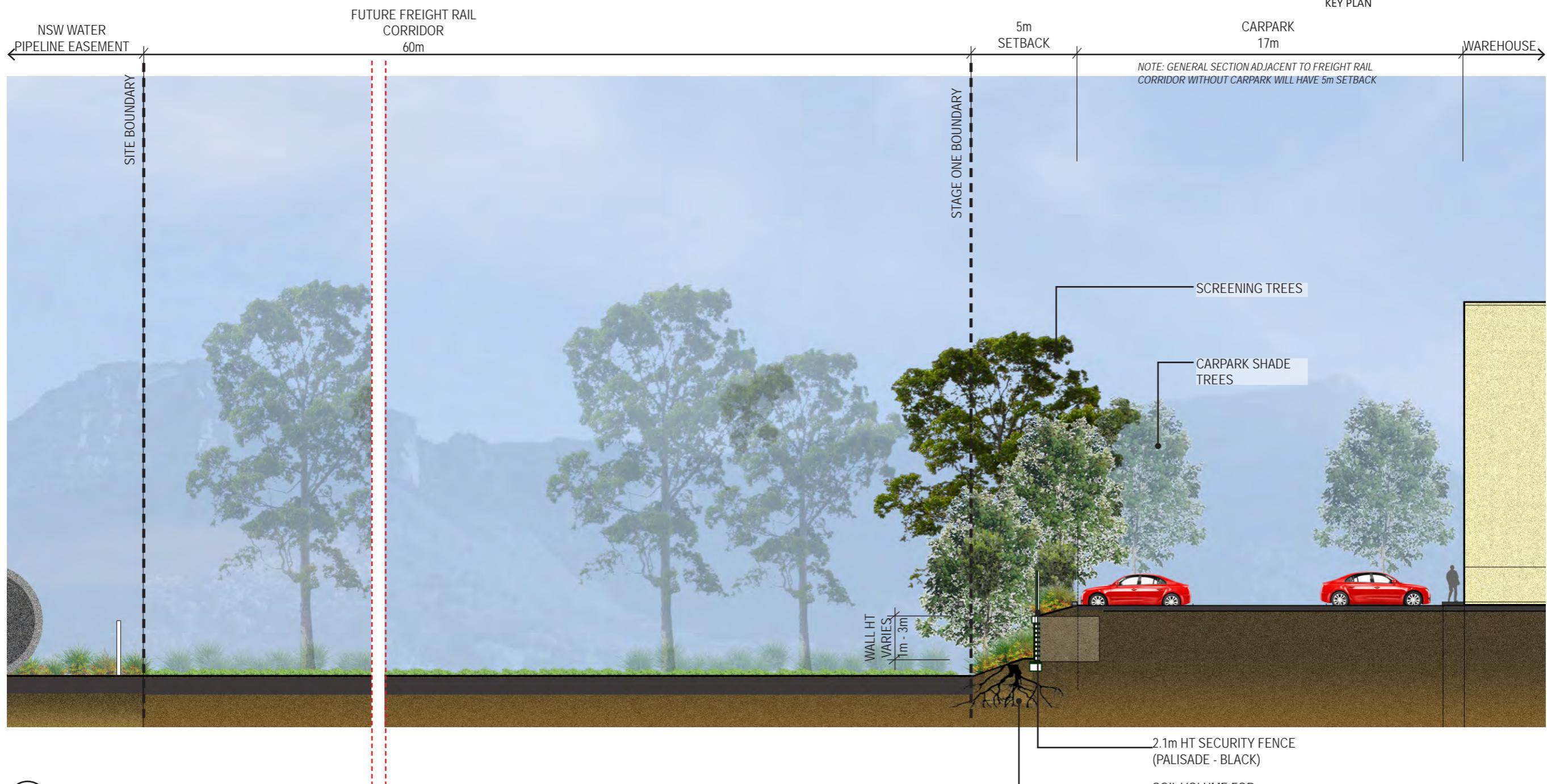
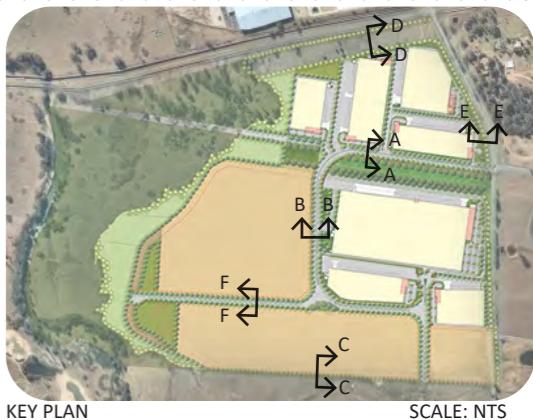
create an interconnected network of open space



PRINCIPLE 3. Multifunctionality

deliver multiple ecosystem services simultaneously

NSW GREENER PLACES POLICY (GAO 2020)



PROJECT

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB
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SCALE 1:100 AT A3

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LANDSCAPE SECTIONS

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GREENER PLACES PRINCIPLES



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Integration

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PRINCIPLE 2.
Connectivity

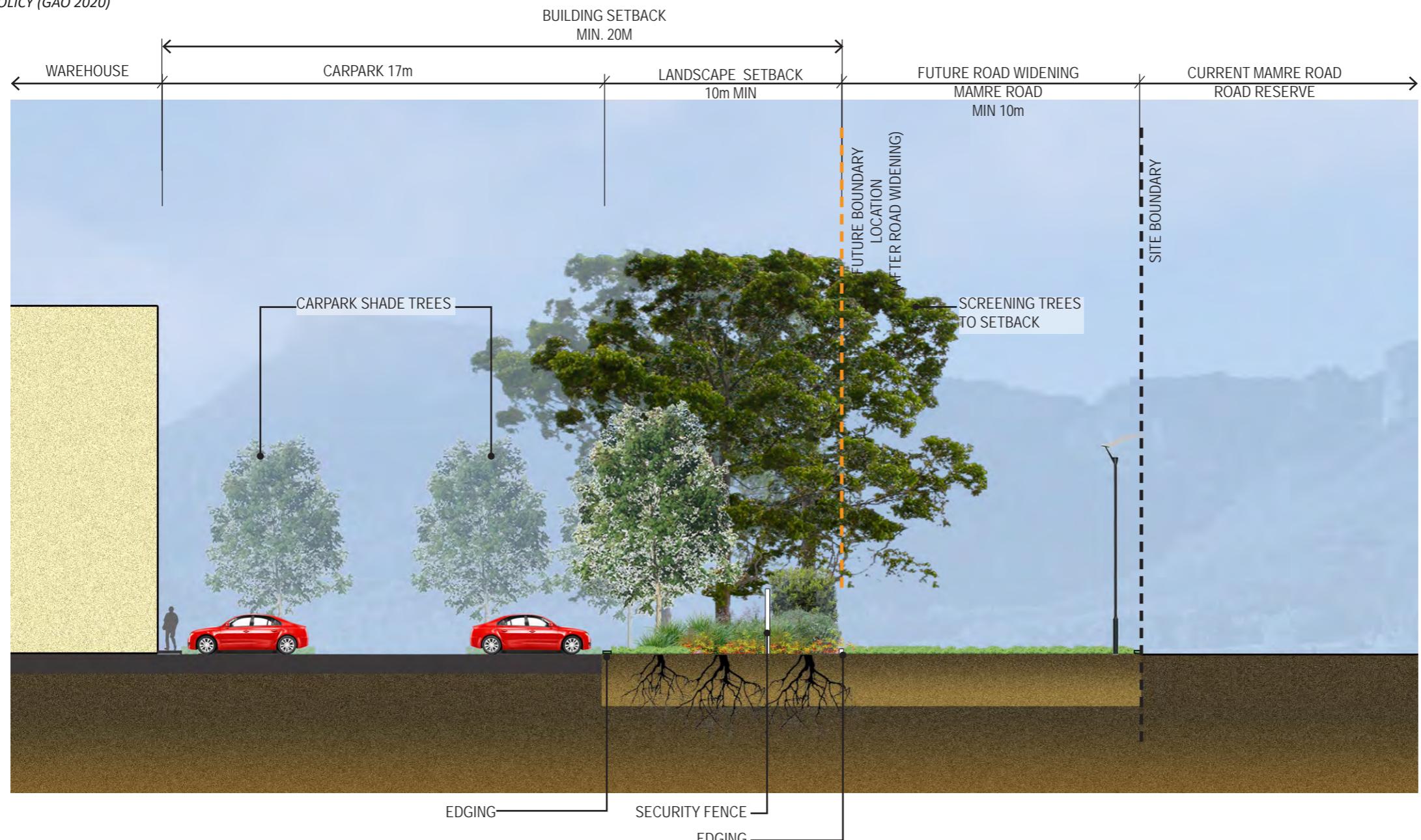
create an interconnected network of open space



PRINCIPLE 3.
Multifunctionality

deliver multiple ecosystem services simultaneously

NSW GREENER PLACES POLICY (GAO 2020)



01 LANDSCAPE SECTION E-E
Scale 1:200@A3

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SCALE 1:200 AT A3

LANDSCAPE SECTIONS

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GREENER PLACES PRINCIPLES



PRINCIPLE 1.
[Integration](#)

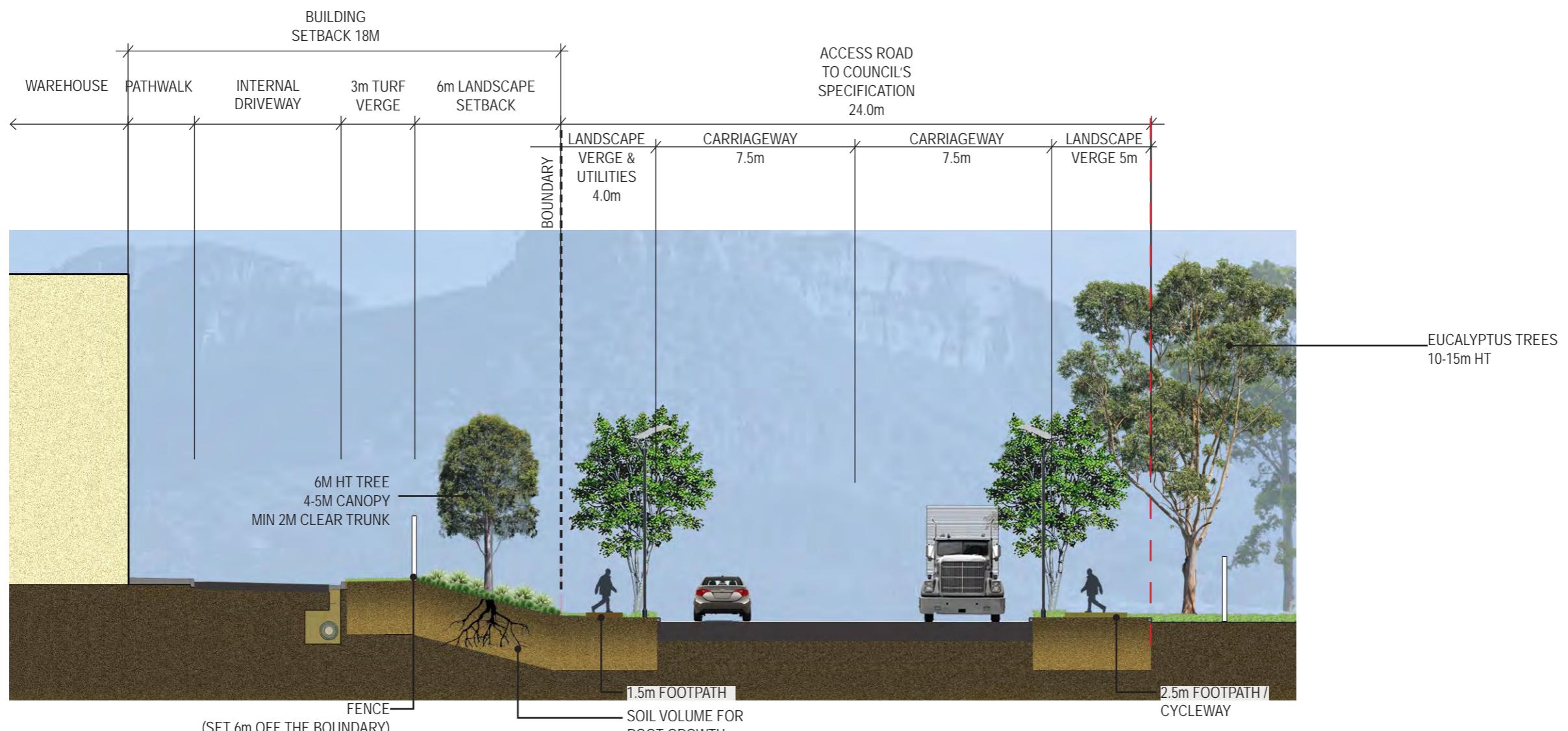
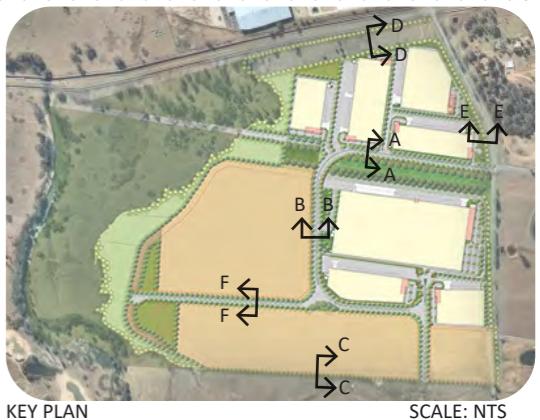


PRINCIPLE 2.
[Connectivity](#)



PRINCIPLE 3.
[Multifunctionality](#)

NSW GREENER PLACES POLICY (GAO 2020)



01 LANDSCAPE SECTION F-F
Scale 1:200@A3

PROJECT

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB
657-769 MAMRE ROAD, KEMPS CREEK NSW

PROJECT NO.

H8-18018

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0 2 4 6 8 10m

SCALE 1:200 AT A3

PROPOSED PLANTING LIST

Plant list sourced from "Penrith City Council DCP"

SMALL TREE SPECIES	
BOTANICAL NAME	COMMON NAME
<i>Acer buergeranum</i>	Trident Maple
<i>Acer freemannii 'Autumn Blaze'</i>	Autumn Blaze Freeman Maple
<i>Acer negundo 'Sensation'</i>	Sensation Maple
<i>Acmena smithii</i>	Lilly Pilly
<i>Angophora hispida</i>	Dwarf Apple
<i>Arbutus andrachnoides</i>	Grecian Strawberry Tree
<i>Arbutus unedo</i>	Irish Strawberry Tree
<i>Backhousia citriodora</i>	Lemon Scented Myrtle
<i>Backhousia myrtifolia</i>	Grey Myrtle
<i>Banksia integrifolia</i>	Coast Banksia
<i>Bauhinia variegata</i>	Butterfly Tree
<i>Brachychiton populneus</i>	Kurrajong
<i>Buckinghamia celsissima</i>	Ivory Curl Flower
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Callistemon viminalis 'Kings Park Special'</i>	Weeping Bottlebrush
<i>Calodendrum capense</i>	Cape chestnut
<i>Ceratonia siliqua</i>	Carob bean
<i>Corymbia eximia</i>	Yellow bloodwood
<i>Cupaniopsis anacaroides</i>	Tuckeroo
<i>Fraxinus griffithii</i>	Evergreen Ash
<i>Fraxinus pennsylvanica 'Cimmzam Cimmaron'</i>	Ash
<i>Fraxinus pennsylvanica 'Urbdel Urbanite'</i>	Ash
<i>Fraxinus pennsylvanica 'Wasky Skyward'</i>	Ash
<i>Geijera parviflora</i>	Wilga
<i>Ginkgo biloba 'Princeton Sentry'</i>	Ginkgo
<i>Gleditsia triacanthos 'Shademaster'</i>	Honey Locust
<i>Gleditsia triacanthos 'Sunburst'</i>	Honey Locust
<i>Harpullia pendula</i>	Tulipwood
<i>Koelreuteria paniculata</i>	Golden Rain Tree
<i>Lagerstroemia hybrids 'Indian Summer Range'</i>	Crepe Myrtle Lipan, Biloxi
<i>Lophostemon confertus</i>	Brush Box
<i>Magnolia grandiflora 'Exmouth'</i>	Bull Bay Magnolia
<i>Malus floribunda</i>	Japanese Crabapple
<i>Malus ionensis 'Plena'</i>	Bechtel Crabapple
<i>Melaleuca bracteata</i>	Black Tea tree
<i>Melaleuca linariifolia</i>	Snow in Summer
<i>Melaleuca stypheioides</i>	Prickly Paperback
<i>Pistacia chinensis</i>	Chinese Pistachio
<i>Pittosporum rhombifolium</i>	Queensland Pittosporum

SMALL TREE SPECIES	
BOTANICAL NAME	COMMON NAME
<i>Auranticarpa rhombifolia</i>	
<i>Pyrus calleryana 'Aristocrat'</i>	Ornamental Pear
<i>Pyrus calleryana 'Bradford'</i>	Pear
<i>Pyrus calleryana 'Capital'</i>	Pear
<i>Pyrus calleryana 'Glens Form'</i>	Pear
<i>Pyrus ussuriensis</i>	Manchurian Pear
<i>Quercus palustris 'Pringreen' green Pillar</i>	Pin Oak
<i>Tristaniopsis laurina</i>	Water Gum
<i>Waterhousea floribunda</i> and cultivars	Weeping Lilly Pilly
<i>Syzygium leuhmannii</i>	Riberry, Small leafed lilly pilly
<i>Ulmus parvifolia</i> (cult)	Chinese elm
<i>Zelkova serrata 'Green Vase'</i>	Japanese Zelkova

LARGER TREE SPECIES	
BOTANICAL NAME	COMMON NAME
<i>Acacia melanoxylon</i>	Blackwood
<i>Alphitonia excelsa</i>	Red Ash
<i>Araucaria columnaris & A. heterophylla</i>	Cook Pine/ Norfolk Island Pine
<i>Angophora floribunda</i>	Rough-barked Apple
<i>Angophora subvelutina</i>	Broad-leaved Apple
<i>Castanospermum australe</i>	Blackbean
<i>Casuarina glauca</i> and <i>C. cunninghamiana</i>	She-oak
<i>Cedrus deodara</i>	Deodar Cedar
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus</i> species.	Eucalypts/ Gum tree
<i>Ficus microphylla</i> . <i>F.microcarpa</i> var. <i>hillii</i>	Fig
<i>Jacaranda mimosifolia</i>	Jacaranda
<i>Liquidambar styraciflua</i>	Liquidambar, Sweetgum
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark
<i>Quercus ilex</i>	Holm Oak
<i>Pinus canariensis</i> . <i>P. atula</i> . <i>P. inea</i> .	Pine
<i>Phoenix canariensis</i>	Canary Island Date Palm
<i>Plantanus</i> species	Plane tree
<i>Schinus molle</i> (var. <i>areira</i>)	Peppercorn tree
<i>Taxodium distichum</i>	Bald Cypress
<i>Tipuana tipu</i>	Pride of Bolivia
<i>Washingtonia filifera</i> & <i>W. robusta</i>	Fan palm

NATIVE PLANT SPECIES	
BOTANICAL NAME	COMMON NAME
TREES	
<i>Acacia decurrens</i>	Green Wattle
<i>Acacia elata</i>	Cedar Wattle
<i>Acacia falcata</i>	Sickle Wattle
<i>Acacia floribunda</i>	White Sally
<i>Acacia implexa</i>	Hickory Wattle
<i>Acacia longifolia</i>	Sydney Golden wattle
<i>Acacia parramattensis</i>	Parramatta Wattle
<i>Acmena smithii</i>	Lilly Pilly
<i>Allocasuarina littoralis</i>	Black She oak
<i>Alphitonia excelsa</i>	Red Ash
<i>Angophora bakeri</i>	Narrow Leaved Apple
<i>Angophora floribunda</i>	Rough Barked Apple
<i>Angophora subvelutina</i>	Broad Leaved Apple
<i>Backhousia myrtifolia</i>	Grey Myrtle
<i>Brachychiton populneus</i>	Kurrajong-
<i>Callicoma serratifolia</i>	Black Wattle
<i>Casuarina cunninghamiana</i>	River She Oak
<i>Casuarina glauca</i>	Swamp Oak
<i>Commersonia fraseri</i>	Brush Kurrajong
<i>Corymbia eximia</i>	Yellow Bloodwood
<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus benthami</i>	Camden White Gum
<i>Eucalyptus crebra</i>	Narrow Leaved Ironbark
<i>Eucalyptus deanei</i>	Mountain Blue Gum
<i>Eucalyptus elata</i>	River Peppermint
<i>Eucalyptus eugenoides</i>	Thin Leaved Stringbark
<i>Eucalyptus fibrosa</i>	Broad Leaved Ironbark
<i>Eucalyptus longifolia</i>	Woolybutt
<i>Eucalyptus moluccana</i>	Grey Box
<i>Eucalyptus parramattensis</i>	Parramatta Red Gum
<i>Eucalyptus punctata</i>	Grey Gum
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus sclerophylla</i>	Scribbly Gum
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Exocarpus cupressiformis</i>	Cherry Ballart
<i>Ficus coronata</i>	Creek Sandpaper Fig

PROPOSED PLANTING LIST

Plant list sourced from "Penrith City Council DCP"

NATIVE PLANT SPECIES		NATIVE PLANT SPECIES		NATIVE PLANT SPECIES		NATIVE PLANT SPECIES	
BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME	BOTANICAL NAME	COMMON NAME
TREES							
<i>Glochidion ferdinandi</i>	Cheese Tree	<i>Adiantum aethiopicum</i>	Maidenhair Fern	<i>Cyperus exaltatus</i>		<i>Imperata cylindrica</i>	Blady Grass
<i>Leptospermum polygalifolium</i>	Yellow Tea-tree	<i>Adiantum formosum</i>	Giant Maidenhair Fern	<i>Cyperus laevis</i>		<i>Juncus planifolius</i>	
<i>Melaleuca decora</i>	White Feather Honey-myrtle	<i>Agrostis avenacea</i>	Blown Grass	<i>Danthonia racemosa</i>	Wallaby Grass	<i>Juncus usitatus</i>	Common Rush
<i>Melaleuca linariifolia</i>	Snow-in-Summer	<i>Agrostis parviflora</i>		<i>Danthonia tenuior</i>	Wallaby Grass	<i>Kennedia rubicunda</i>	Dusky Coral Pea
<i>Melaleuca stypheioides</i>	Prickly-leaved Paperbark	<i>Alisma plantago-aquatica</i>		<i>Desmodium varians</i>	Slender Tick-trefoil	<i>Lomandra filiformis</i>	
<i>Melia azedarach</i>	White Cedar	<i>Alternanthera denticulata</i>	Lesser Joyweed	<i>Dichelachne micrantha</i>	Plume Grass	<i>Lomandra fluviatilis</i>	
<i>Pittosporum revolutum</i>	Rough Fruit Pittosporum	<i>Aristida vagans</i>	Three-awned Spear Grass	<i>Dichelachne rara</i>		<i>Lomandra gracilis</i>	
<i>Syncarpia glomulifera</i>	Turpentine	<i>Arthropodium milleflorum</i>		<i>Dianella longifolia</i>	Flax Lily	<i>Lomandra longifolia</i>	Spiny Mat Rush
<i>Toona ciliata</i>	Red Cedar	<i>Austrostipa ramosissima</i>	Bamboo Grass	<i>Dianella revoluta</i>		<i>Lomandra multiflora</i>	
<i>Tristaniopsis laurina</i>	Water Gum	<i>Asperula conferta</i>	Common Woodruff	<i>Dichondra repens</i>	Kidney Weed	<i>Ludwigia peploides</i>	Water Primrose
SHRUBS							
<i>Acacia binervia</i>	Coast Myall	<i>Asterolasia correifolia</i>	Star-bush	<i>Doodia aspera</i>	Rasp Fern	<i>Lycopus australis</i>	
<i>Acacia implexa</i>	Hickory	<i>Azolla pinnata</i>		<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass	<i>Microlaena stipoides</i>	Weeping Grass
<i>Acacia ulicifolia</i>		<i>Baumea articulata</i>	Bare Twig-rush	<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	<i>Murdannia graminea</i>	Murdannia
<i>Banksia serrata</i>	Old Man Banksia	<i>Bolboschienus fluviatilis</i>	March Club-rush	<i>Einadia hastata</i>	Berry Saltbush	<i>Najas tenuifolia</i>	
<i>Breynia oblongifolia</i>	Common Breynia	<i>Bothriochloa decipiens</i>		<i>Eleocharis sphacelata</i>	Tall Spike Rush	<i>Nicotiana suaveolens</i>	
<i>Bursaria spinosa</i>	Blackthorn	<i>Bothriochloa macra</i>	Red-leg Grass	<i>Elymus scaber</i>		<i>Opercularia aspera</i>	Common Stinkweed
<i>Callistemon salignus</i>	Willow Bottlebrush	<i>Brunoniella australis</i>	Blue Trumpet	<i>Entolasia stricta</i>	Wiry Panic	<i>Oplismenus aemulus</i>	Basket Grass
<i>Callistemon sp</i>		<i>Calochlaenia dubia</i>	False Bracken Fern	<i>Eragrostis brownii</i>	Brown's Lovegrass	<i>Oxalis chnoodes</i>	
<i>Clerodendrum tomentosum</i>	Hairy Clerodendrum	<i>Capillipedium spicigerum</i>	Scented-top Grass	<i>Eragrostis leptostachya</i>	Paddock Lovegrass	<i>Oxalis pes-caprae</i>	Soursob
<i>Croton verreauxii</i>	Native Cascarilla	<i>Carex appressa</i>	Tall sedge	<i>Eremophila debilis</i>	Amulla	<i>Pandorea pandorana</i>	Wonga Vine
<i>Daviesia genistifolia</i>		<i>Carex inversa</i>		<i>Eriochloa pseudoacrotricha</i>		<i>Parsonia straminea</i>	Common Silkpod
<i>Daviesia ulicifolia</i>		<i>Cayratia clematidea</i>	Slender Grape	<i>Eustrephus latifolius</i>	Wombat Berry	<i>Paspalidium distans</i>	
<i>Dillwynia juniperina</i>	Prickly Parrot-pea	<i>Centella asiatica</i>	Swamp Pennywork	<i>Fimbristylis dichotoma</i>	Common Fringe-rush	<i>Paspalidium distans</i>	
<i>Dodonaea triquetra</i>		<i>Centipeda minima</i>		<i>Fimbristylis velata</i>		<i>Paspalidium radiatum</i>	
<i>Dodonaea viscosa</i>	Wedge-leaf Hop Bush	<i>Cheilanthes sieberi</i>	Mulga Fern	<i>Geitonoplesium cymosum</i>	Scrambling Lily	<i>Paspalum distichum</i>	Water Couch
<i>Duboisia myoporoides</i>	Corkwood	<i>Chloris truncata</i>	Windmill Grass	<i>Geranium homeanum</i>		<i>Persicaria decipiens</i>	Slender Knotweed
<i>Gonocarpus longifolius</i>		<i>Chloris ventricosa</i>	Tall Chloris	<i>Geranium solanderi</i>		<i>Persicaria hydropiper</i>	Water Pepper
<i>Goodenia hederacea</i>		<i>Cissus antarctica</i>	Native Grape	<i>Glyceria australis</i>		<i>Persicaria lapathifolia</i>	
<i>Goodenia ovata</i>		<i>Clematis aristata</i>	Old Man's Beard	<i>Glycine clandestina</i>	Twining Glycine	<i>Persicaria orientalis</i>	
<i>Grevillea juniperina</i>		<i>Clematis glycinoides</i>	Old Man's Beard	<i>Glycine tabacina</i>		<i>Phragmites australis</i>	
<i>Hakea sericea</i>		<i>Commelinia cyanea</i>	Scurvy Weed	<i>Goodenia hederacea</i>	Violet Leaved Goodenia	<i>Phyllanthus virgatus</i>	
<i>Hibbertia diffusa</i>		<i>Convolvulus erubescens</i>	Australian Bindweed	<i>Hardenbergia violacea</i>	Purple Twining-pea	<i>Plantago debilis</i>	Native Plantain
<i>Hibiscus heterophyllus</i>	Native Rosella	<i>Cotula coronopifolia</i>		<i>Helichrysum scorpioides</i>	Button Everlasting	<i>Plectranthus parviflorus</i>	White Root
<i>Hymenanthera dentata</i>	Tree Violet	<i>Cyclosorus interruptus</i>		<i>Hydrocotyle geraniifolia</i>	Pennywort	<i>Poa labillardieri</i>	Tussock Grass
<i>Leptospermum trinervium</i>	Paperbark Tea Tree	<i>Cymbopogon refractus</i>	Barbed Wire Grass	<i>Hydrocotyle peduncularis</i>	Pennywort	<i>Polymeria calycina</i>	Polymeria
		<i>Cyperus difformis</i>		<i>Hypolepis muelleri</i>	Harsh Ground Fern		

PROPOSED PLANTING LIST

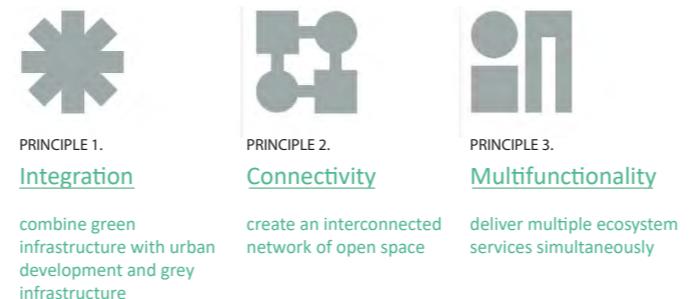
Plant list sourced from "Penrith City Council DCP"

NATIVE PLANT SPECIES	
BOTANICAL NAME	COMMON NAME
GROUNDCOVERS, FERNS, HEDGES, GRASSES & CLIMBERS	
<i>Pomax umbillata</i>	
<i>Poranthera microphylla</i>	Small Poranthera
<i>Potamogeton tricarinatus</i>	
<i>Pratia concolor</i>	
<i>Pratia purpurascens</i>	Pratia
<i>Pseudognaphalium luteoalbum</i>	Jersey Cudweed
<i>Pteridium esculentum</i>	Hard Bracken Fern
<i>Pteris tremula</i>	Tender Brake
<i>Rubus parvifolius</i>	Native Raspberry
<i>Rumex brownii</i>	Dock
<i>Sarcopetalum harveyanum</i>	Pearl Vine
<i>Scaevola aemula</i>	Fan Flower
<i>Schoenoplectus mucronatus</i>	
<i>Schoenoplectus validus</i>	River Club-rush
<i>Scutellaria humilis</i>	
<i>Sigesbeckia orientalis</i>	Indian Weed
<i>Smilax australis</i>	Austral Sarsaparilla
<i>Solanum prinophyllum</i>	Forest Nightshade
<i>Spirodela</i> sp	Small Duckweed
<i>Sporobolus creber</i>	
<i>Stellaria flaccida</i>	Forest Stauork
<i>Stephania japonica</i>	
<i>Stipa ramosissima</i>	
<i>Stipa verticillata</i>	
<i>Tetragonia tetragonioides</i>	Warrigal Spinach
<i>Themeda australis</i>	Kangaroo Grass
<i>Tylophora paniculata</i>	
<i>Typha orientalis</i>	Broad-leaved Cumbungi
<i>Veronica</i> sp	
<i>Viola hederacea</i>	Ivy-leaved Violet
<i>Vittadinia cuneata</i>	Fuzzweed
<i>Wahlenbergia communis</i>	Tufted Bluebell
<i>Wahlenbergia gracilis</i>	Australian Bluebell
<i>Zornia dyctiocarpa</i>	Zornia

PLANT IMAGES



GREENER PLACES PRINCIPLES



NSW GREENER PLACES POLICY (GAO 2020)



FRASERS PROPERTY

ALTIS PROPERTY PARTNERS

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.



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.

TYPICAL SPECIFICATION + MAINTENANCE 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 (Base of Trees):

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

Type 2:

Batters and Edges Re-vegetation Mulch

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. 'Round-up') 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 SUBLIMATION

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.

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

IRRIGATION PERFORMANCE SPECIFICATION NOTES

IRRIGATION OVERVIEW - Confirm with Project Manager at tender stage

EXTENT (Setback and Carpark Landscape 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 40mm 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.

PROJECT

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB
657-769 MAMRE ROAD, KEMPS CREEK NSW

PROJECT NO.

H8-18018

PURPOSE

SSD

SCALE

NTS

REVISION

X

DATE

31.08.2021

DRAWN

KM

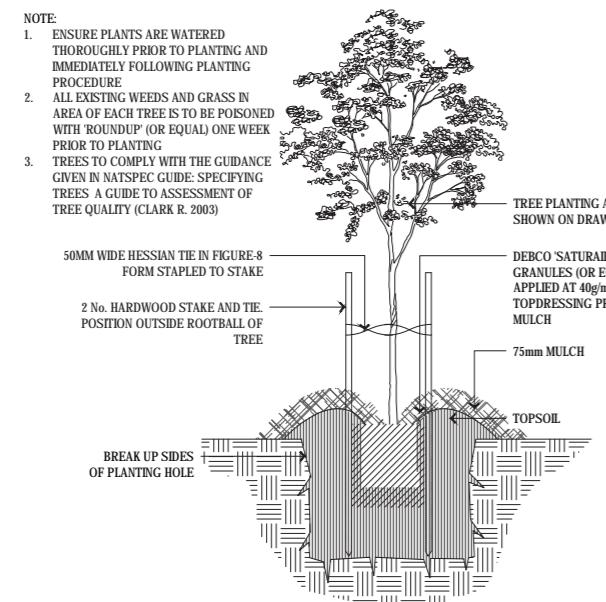
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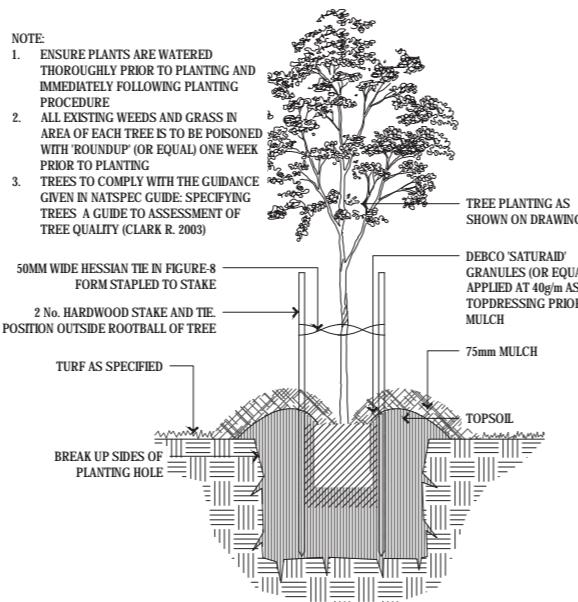
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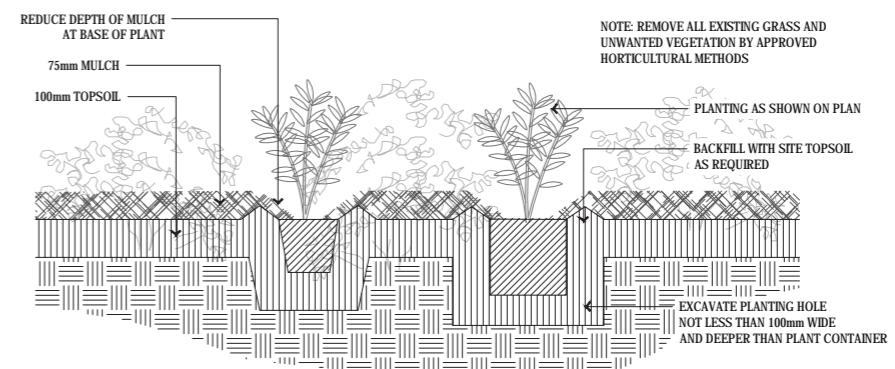
TYPICAL LANDSCAPE DETAILS



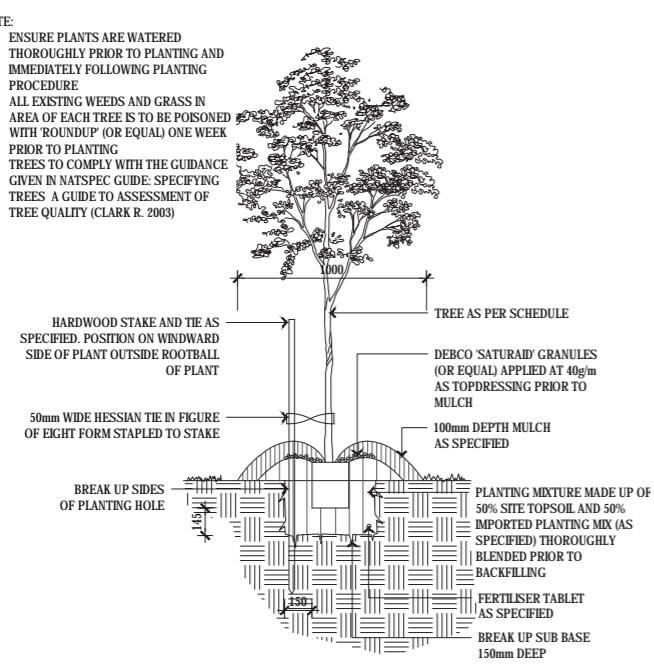
A TYPICAL TREE PLANTING DETAIL UNDER 100L (IN GARDEN BED)
SCALE 1 : 20 @A1



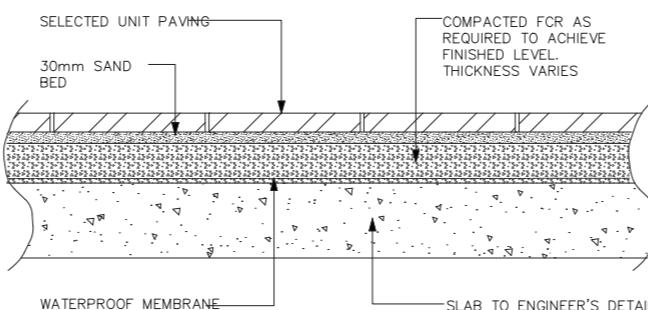
B TYPICAL TREE PLANTING DETAIL (IN TURF)
SCALE 1 : 20 @A1



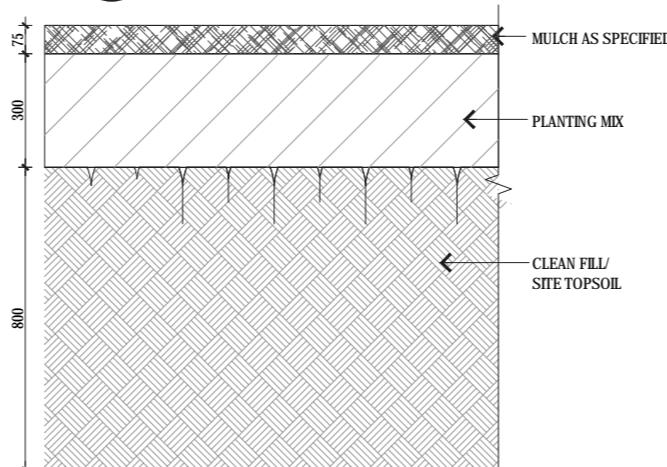
C MASS PLANTING DETAIL
SCALE 1 : 10 @A1



D TYPICAL TREE PLANTING DETAIL OVER 100L
SCALE 1 : 20 @A1

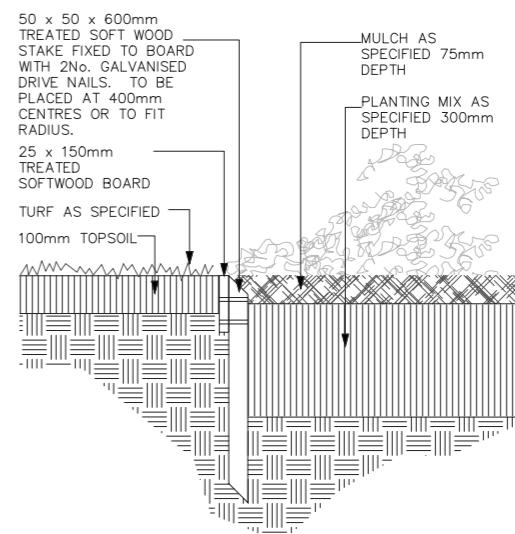


E UNIT PAVING ON SLAB DETAIL
SCALE 1 : 10 @A1

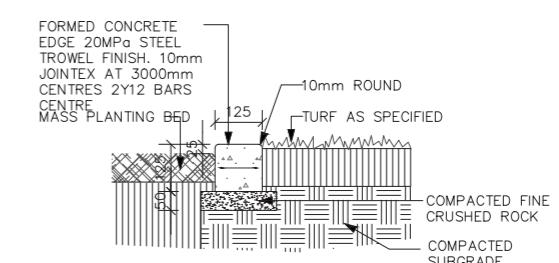


G TURF DETAIL
SCALE 1 : 10 @A1

H TYPICAL SOIL PROFILE
SCALE 1 : 10 @A1



F TIMBER EDGE DETAIL
SCALE 1 : 10 @A1



I CONCRETE EDGE DETAIL
SCALE 1 : 10 @A1

PROJECT

PROPOSED WAREHOUSE, LOGISTICS AND INDUSTRIAL FACILITIES HUB
657-769 MAMRE ROAD, KEMPS CREEK NSW

PROJECT NO.

H8-18018

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X

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