

# PROPOSED WAREHOUSE DEVELOPMENT

149-155 AIRDS RD, MINTO NSW

LANDSCAPE CONCEPT PLAN  
DA SUBMISSION  
12.01.2024  
ISSUE J



DRAWING LIST:

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| L-01 | Coversheet  |
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| L-03 | Landscape Concept Masterplan                            |
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| L-15 | 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.

CLIENT:



LANDSCAPE ARCHITECT:



**HABIT8**  
Landscape Architecture & Urbanism

SYDNEY (Gadigal country)    BYRON BAY (Bundjalung country)  
MELBOURNE (Wurundjeri country)    SE QUEENSLAND (Yugambah country)

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# DESIGN PRECEDENT IMAGES

FRONT SETBACK



PARKING AREA





# LANDSCAPE CONCEPT MASTERPLAN

## DESIGN NOTES

1. CAR ENTRY / EXIT DRIVEWAY

2. TRUCK ENTRY / EXIT

2a. TRUCK ENTRY

2b. TRUCK EXIT

3. SIGNAGE BY OTHERS

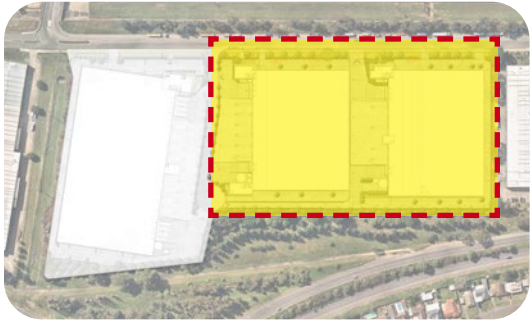
4. 9m PRIVATE ACCESS ROAD PART OF STAGE 1 WORKS AND APPROVALS

5. LARGE CANOPY SCREENING TREES (10-12m HT)
6. OUTDOOR STAFF AREA (GRASS, SHADE STRUCTURE, FURNITURE)

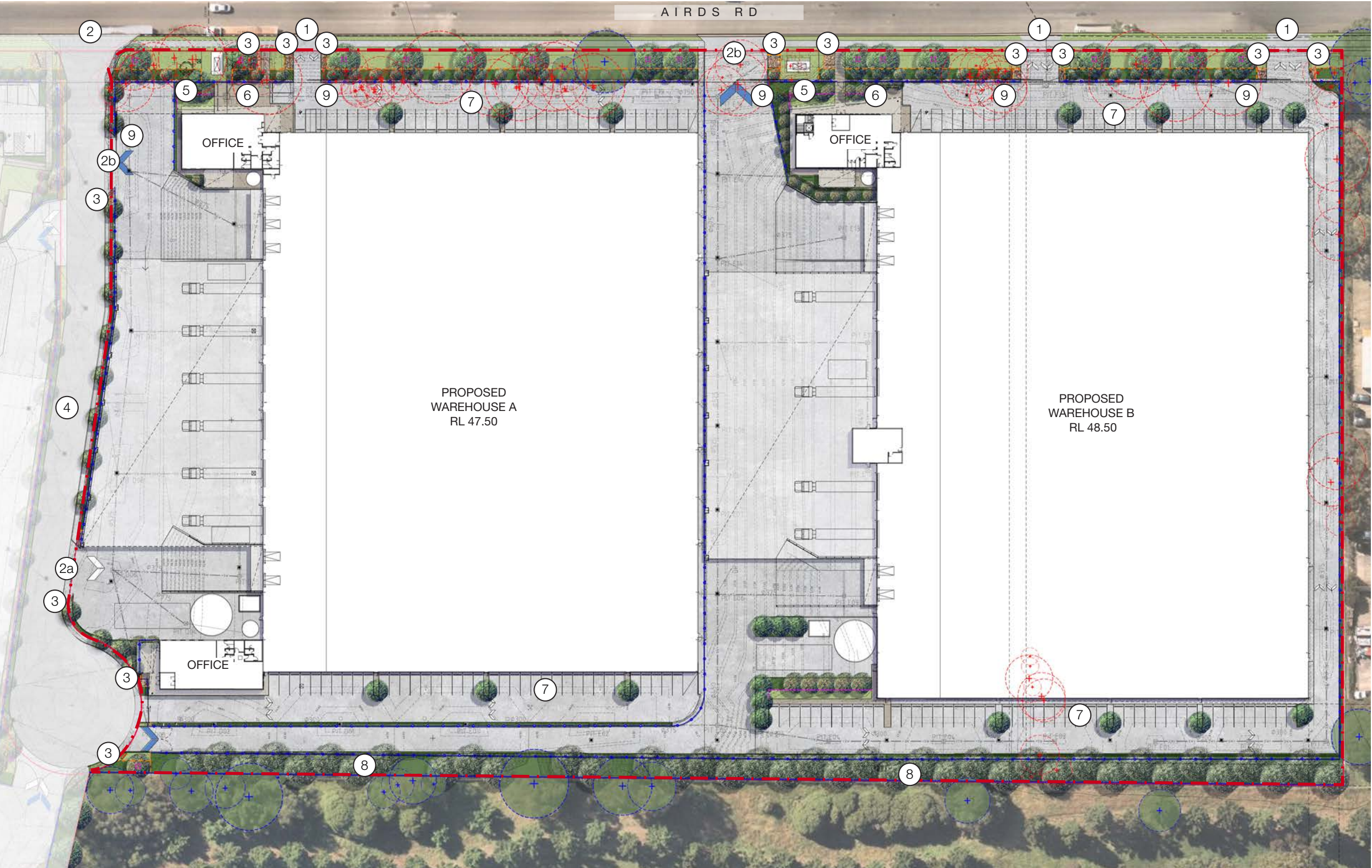
7. CARPARK AREA

8. LANDSCAPE SETBACK: CANOPY TREES (15m HT @10M OC)

9. SLIDING SECURITY GATE



KEY PLAN



## KEY

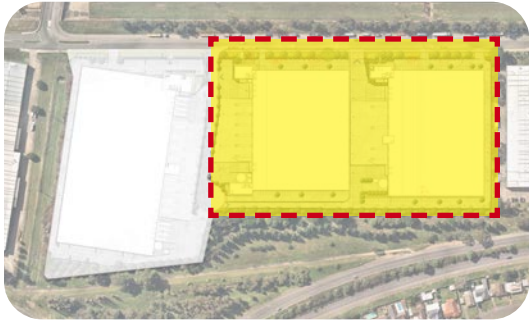
- SITE BOUNDARY
- PALISADE  
SECURITY FENCE  
TO CH SPECIFICATIONS
- STEEL EDGING
- CONCRETE GARDEN EDGING
- EXISTING TREES TO BE RETAINED  
REFER TO ARBORIST'S REPORT
- EXISTING TREES TO BE REMOVED  
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- PROPOSED CANOPY TREE PLANTING  
REFER TO PLANT SCHEDULE
- MASS PLANTING BEDS  
REFER TO PLANT SCHEDULE
- TURF
- CONCRETE SURFACE  
TO ENGINEER'S DETAILS
- PAVED SURFACE  
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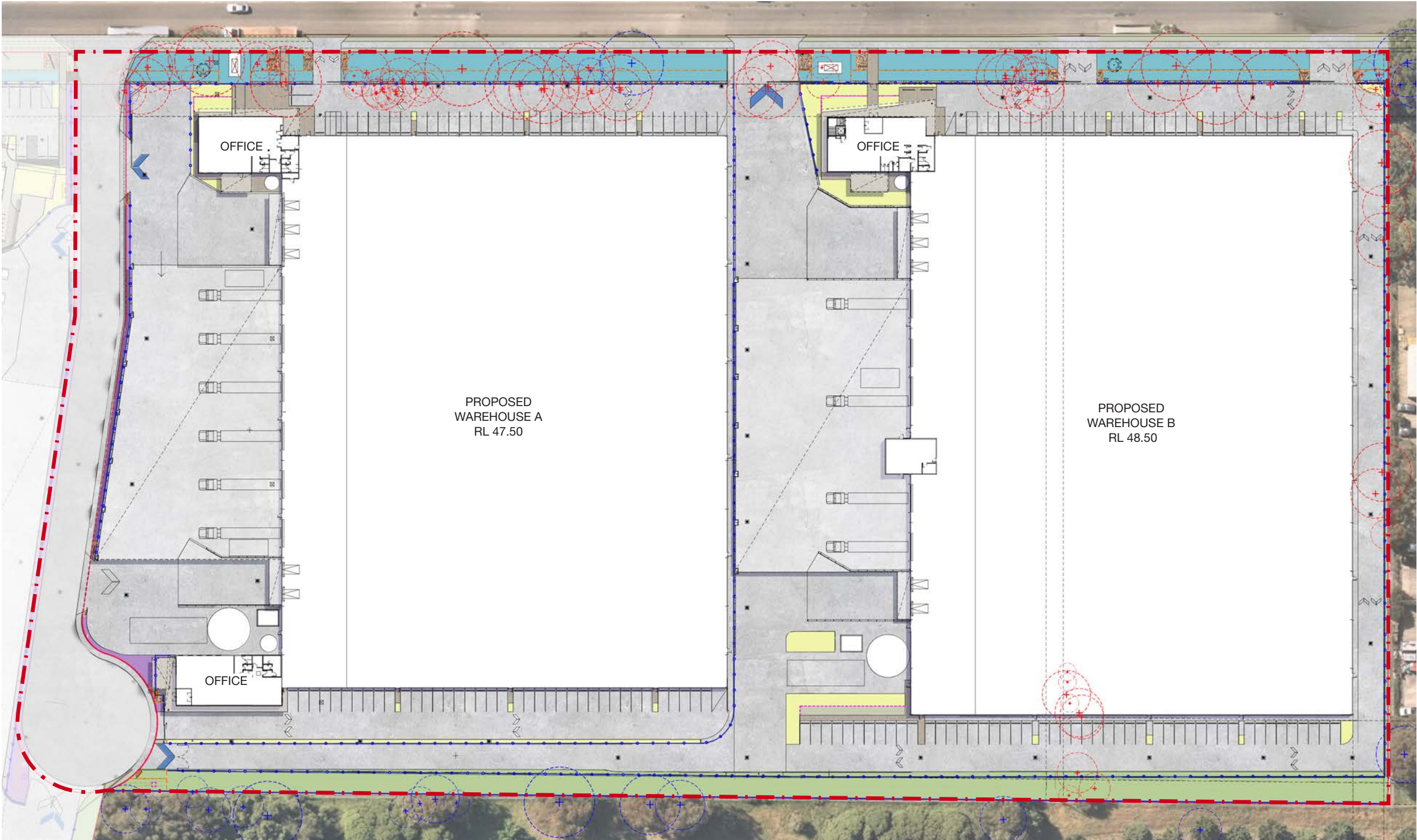
# Tree Planting Strategy

## Tree Calculations:

	NO.
Trees to be removed:	84
Replacement canopy trees (small):	47
Replacement canopy trees (large):	102



KEY PLAN



## KEY

- AIRDS RD TREE PLANTING**
  - Eucalyptus tereticornis*
  - Ficus "Flash"*
  - Angophora costata*
- CARPARK AND OFFICE TREE PLANTING**
  - Tristanopsis laurina*
  - Magnolia 'Coolwyn Gloss'*
  - Corymbia maculata*
  - Waterhousea floribunda*
  - Cupaniopsis anacardioides*
- PRIVATE ACCESS ROAD TREE PLANTING**
  - Angophora costata*
  - Corymbia maculata*
  - Eucalyptus siderosylon*
- KOALA HABITAT TREE PLANTING**
  - Corymbia maculata*
  - Angophora costata*
  - Eucalyptus tereticornis*
  - Eucalyptus punctata*
  - Eucalyptus crebra*



# LANDSCAPE CONCEPT PLAN 01

## DESIGN NOTES

1. CAR ENTRY / EXIT DRIVEWAY

2. TRUCK ENTRY / EXIT

2a. TRUCK ENTRY

2b. TRUCK EXIT

3. SIGNAGE BY OTHERS

4. 9m PRIVATE ACCESS ROAD PART OF STAGE 1 WORKS AND APPROVALS

5. LARGE CANOPY SCREENING TREES (10-12m HT)

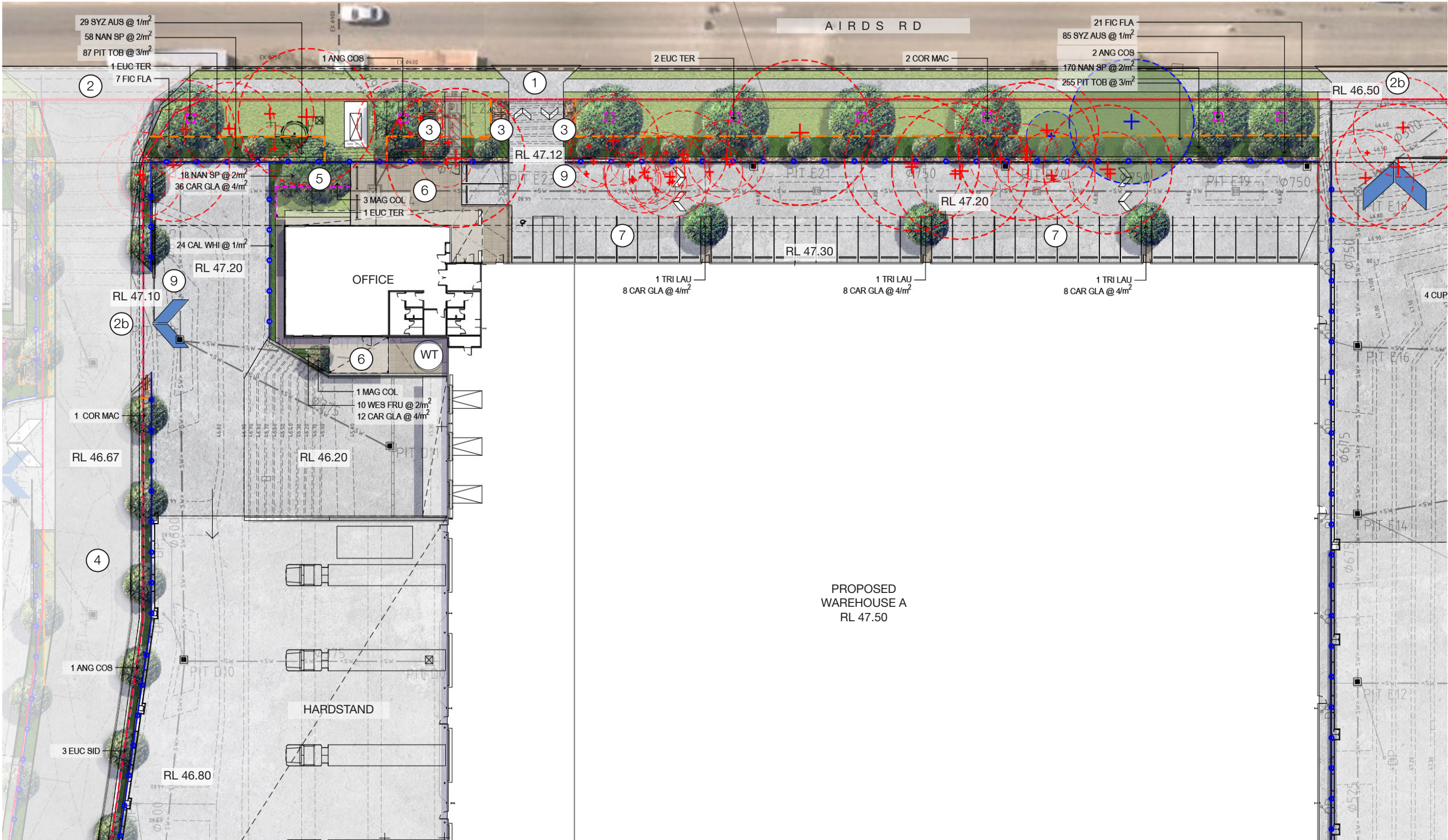
6. OUTDOOR STAFF AREA (GRASS, SHADE STRUCTURE, FURNITURE)
7. CARPARK AREA

8. LANDSCAPE SETBACK: CANOPY TREES (15m HT @10M OC)

9. SLIDING SECURITY GATE



KEY PLAN



## KEY

- SITE BOUNDARY
- PALISADE  
SECURITY FENCE  
TO CH SPECIFICATIONS
- ACOUSTIC WALL BY OTHERS
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- CONCRETE GARDEN EDGING
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PLANTING  
REFER TO PLANT SCHEDULE
- MASS PLANTING BEDS  
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- CONCRETE SURFACE  
TO ENGINEER'S DETAILS
- PAVED SURFACE  
TO ARCHITECT'S DETAILS





The site plan for Proposed Warehouse B shows a large rectangular building footprint with a central courtyard. The building is surrounded by parking areas and landscaped zones. Key features include:













- Building Layout:** The main building is labeled "PROPOSED WAREHOUSE B" with a height of "RL 48.50". It has a central courtyard area labeled "OFFICE" and "WT" (water tank).
- Parking Areas:** There are several parking zones with specific vehicle counts and types:
  - Top left: 120 CAR GLA @ 4/m<sup>2</sup>, 76 NAN SP @ 2/m<sup>2</sup>, 36 CAL WHI @ 1/m<sup>2</sup>.
  - Top center: 10 FIC FLA, 39 SYZ AUS @ 1/m<sup>2</sup>, 78 NAN SP @ 2/m<sup>2</sup>, 117 PIT TOB @ 3/m<sup>2</sup>, 3 ANG COS.
  - Top right: 9 FIC FLA, 43 SYZ AUS @ 1/m<sup>2</sup>, 86 NAN SP @ 2/m<sup>2</sup>, 2 EUC TER, 129 PIT TOB @ 3/m<sup>2</sup>.
  - Bottom left: 4 CUP ANA, 6 MAG COL, 25 CAL WHI @ 1/m<sup>2</sup>, 54 WES FRU @ 2/m<sup>2</sup>, 88 CAR GLA @ 4/m<sup>2</sup>.
  - Bottom center: 1 TRI LAU, 12 CAR GLA @ 4/m<sup>2</sup>.
  - Bottom right: 1 TRI LAU, 12 CAR GLA @ 4/m<sup>2</sup>.
- Landscaping and Circulation:** The plan includes numerous trees, shrubs, and pathways. Key circulation elements include:
  - A main road labeled "AIRDS RD" at the top.
  - Internal roads and paths with various elevations (e.g., RL 47.80, RL 47.20, RL 47.00, RL 47.90).
  - Drainage lines and pits (e.g., PIT E16, PIT E14, PIT E12, PIT E10, PIT E08, PIT E07, PIT E06, PIT E05).
  - Utility lines and structures (e.g., EX #675, EX #676, EX #677, EX #678, EX #679, EX #680).
- Other Features:**
  - A "HARDSTAND" area for vehicle storage.
  - Various numbered callouts (1, 2, 3, 5, 6, 7, 9) indicating specific points of interest or features.
  - Red dashed circles highlighting specific areas of the plan.



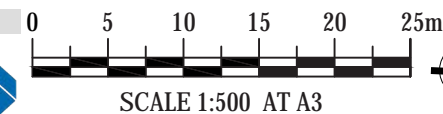
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## KEY

- |   |   |
|---|---|
|   | SITE BOUNDARY   |
|  | PALISADE<br>SECURITY FENCE<br>TO CH SPECIFICATIONS          |
|  | ACOUSTIC WALL BY OTHERS                                     |
|  | STEEL GARDEN EDGING   |
|  | CONCRETE GARDEN EDGING                                      |
|  | EXISTING TREES TO BE RETAINED<br>REFER TO ARBORIST'S REPORT |
|  | EXISTING TREES TO BE REMOVED<br>REFER TO ARBORIST'S REPORT  |
|  | PROPOSED CANOPY TREE PLANTING<br>REFER TO PLANT SCHEDULE    |
|  | MASS PLANTING BEDS<br>REFER TO PLANT SCHEDULE               |
|  | TURF  |
|  | CONCRETE SURFACE<br>TO ENGINEER'S DETAILS                   |
|  | PAVED SURFACE<br>TO ARCHITECT'S DETAILS                     |

PROJECT	DRAWING TITLE	PROJECT NO.	PURPOSE	SCALE	REVISION	DATE	DRAWN	CHECKED	PAGE	CLIENT
PROPOSED WAREHOUSE DEVELOPMENT WAREHOUSE 1 + 2 149-155 AIRDS RD, MINTO NSW	LANDSCAPE CONCEPT PLAN 02	H8-22026	DA SUBMISSION	1:500@A3	J	12.01.2024	DG	DV	L06	





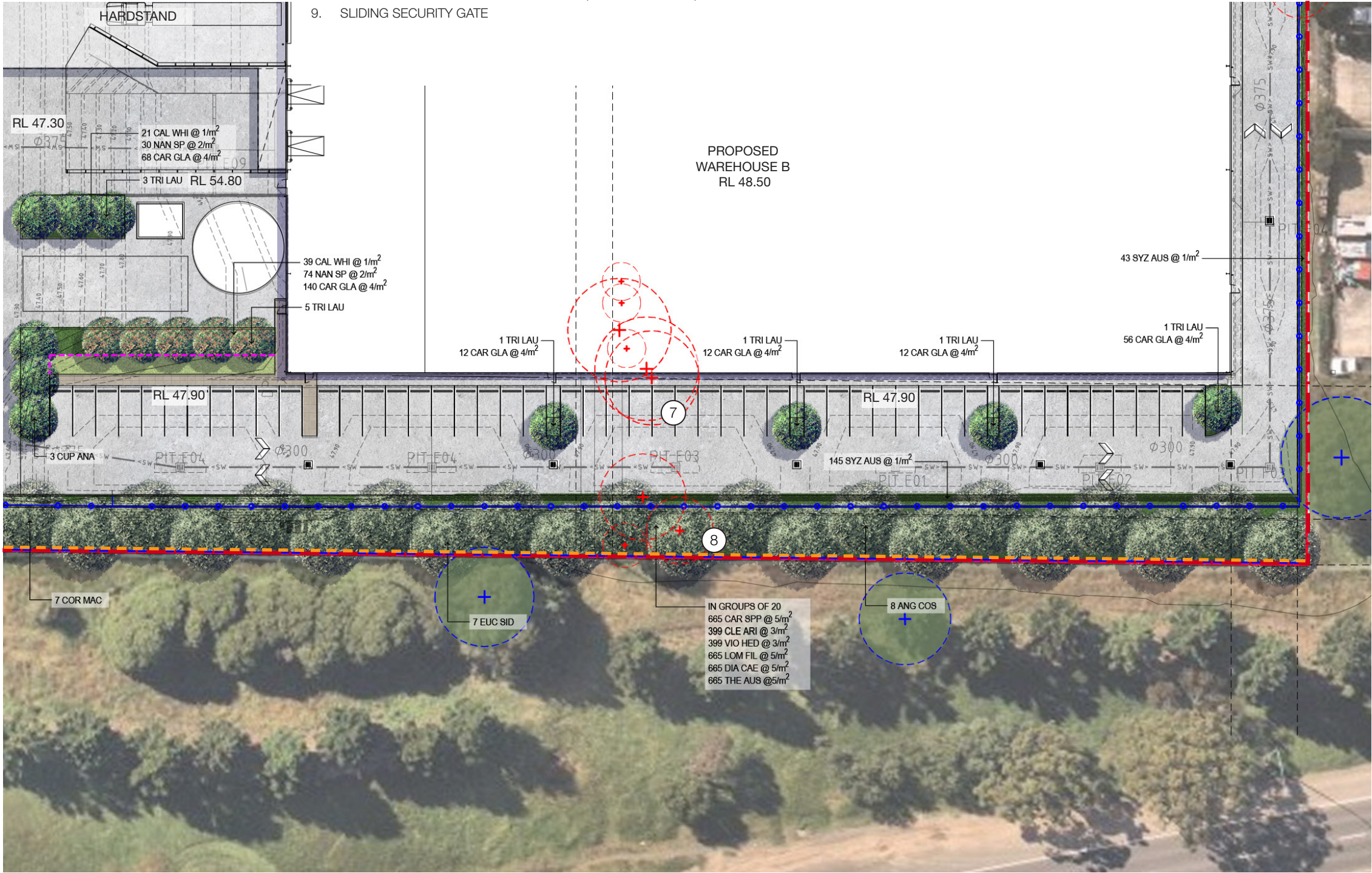




LANDSCAPE CONCEPT PLAN 04

DESIGN NOTES

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  - 2a. TRUCK ENTRY
  - 2b. TRUCK EXIT
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KEY PLAN

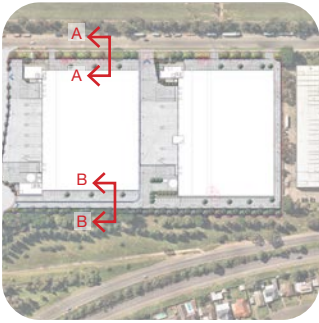
KEY

- SITE BOUNDARY
- PALISADE SECURITY FENCE TO CH SPECIFICATIONS
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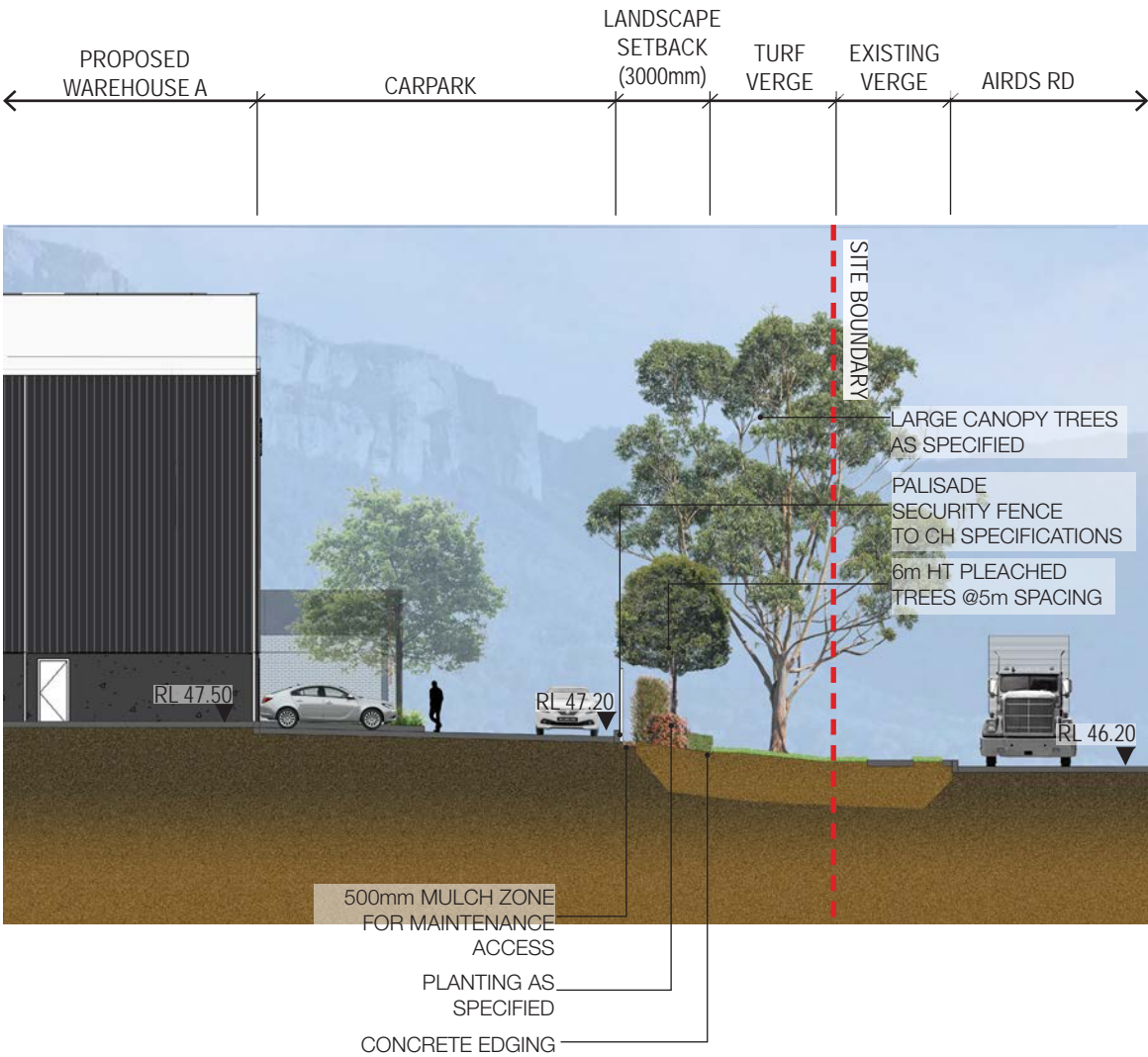




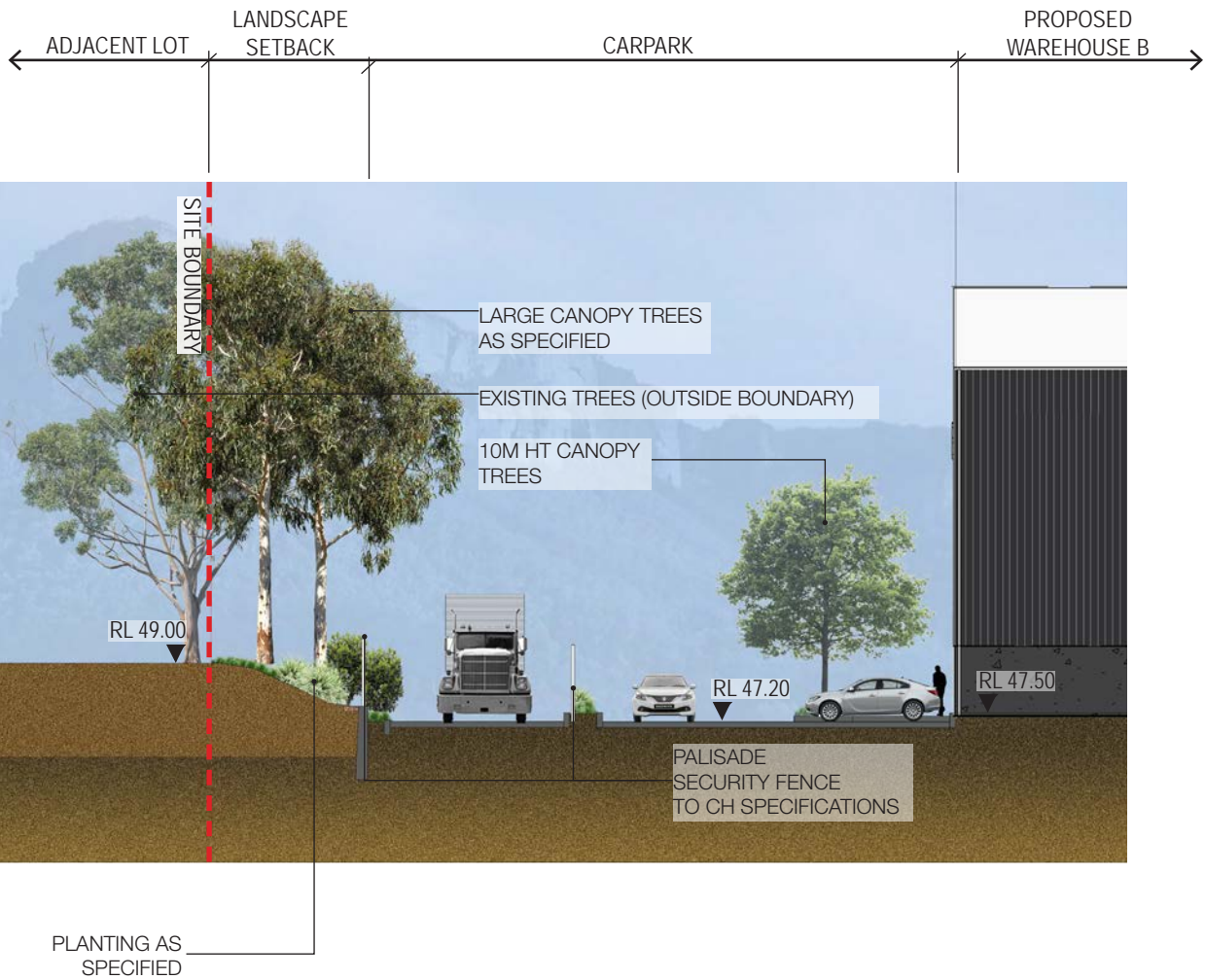
# LANDSCAPE SECTIONS 01



KEY PLAN



01 SECTION A-A  
Scale 1:250@A3



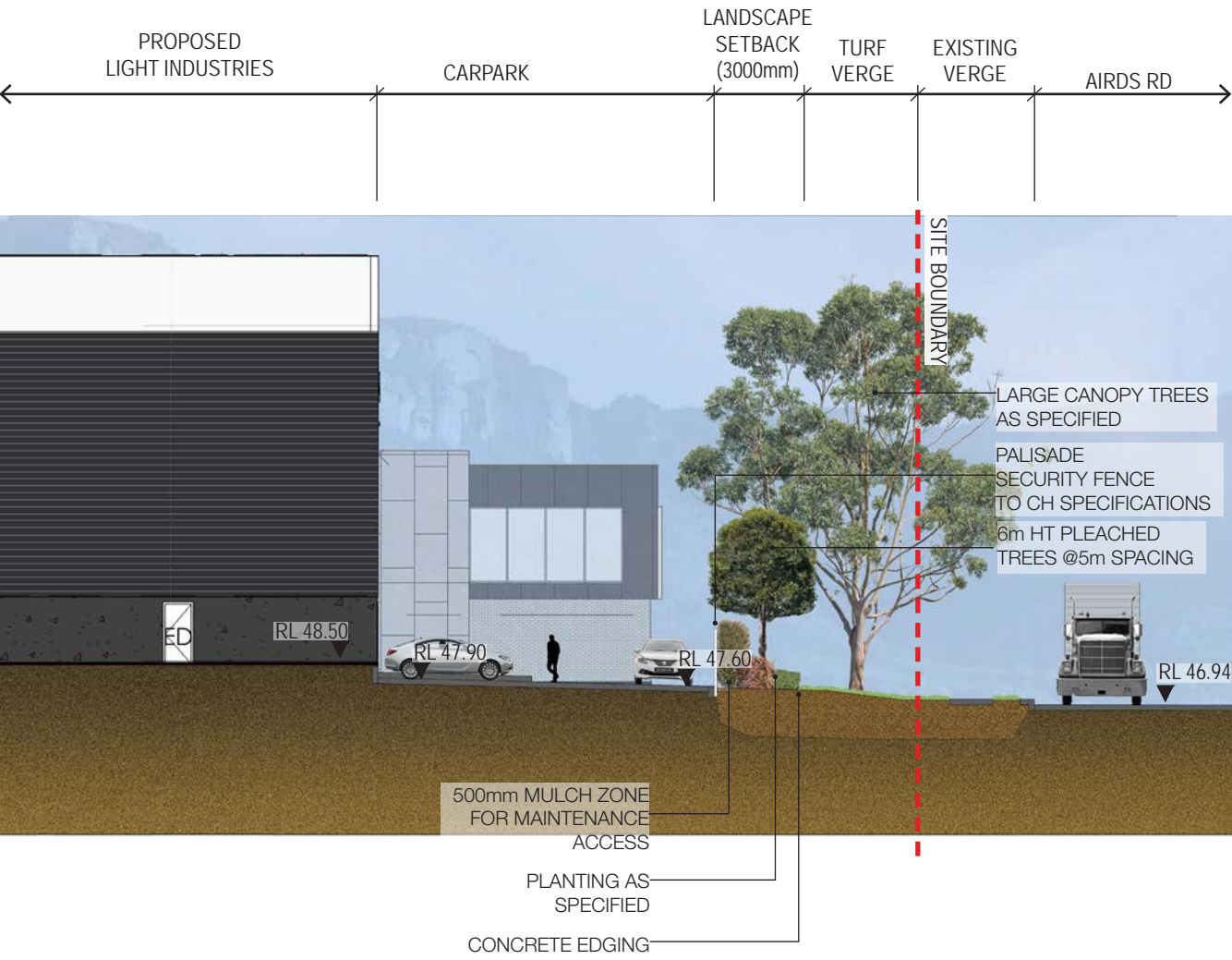
02 SECTION B-B  
Scale 1:250@A3



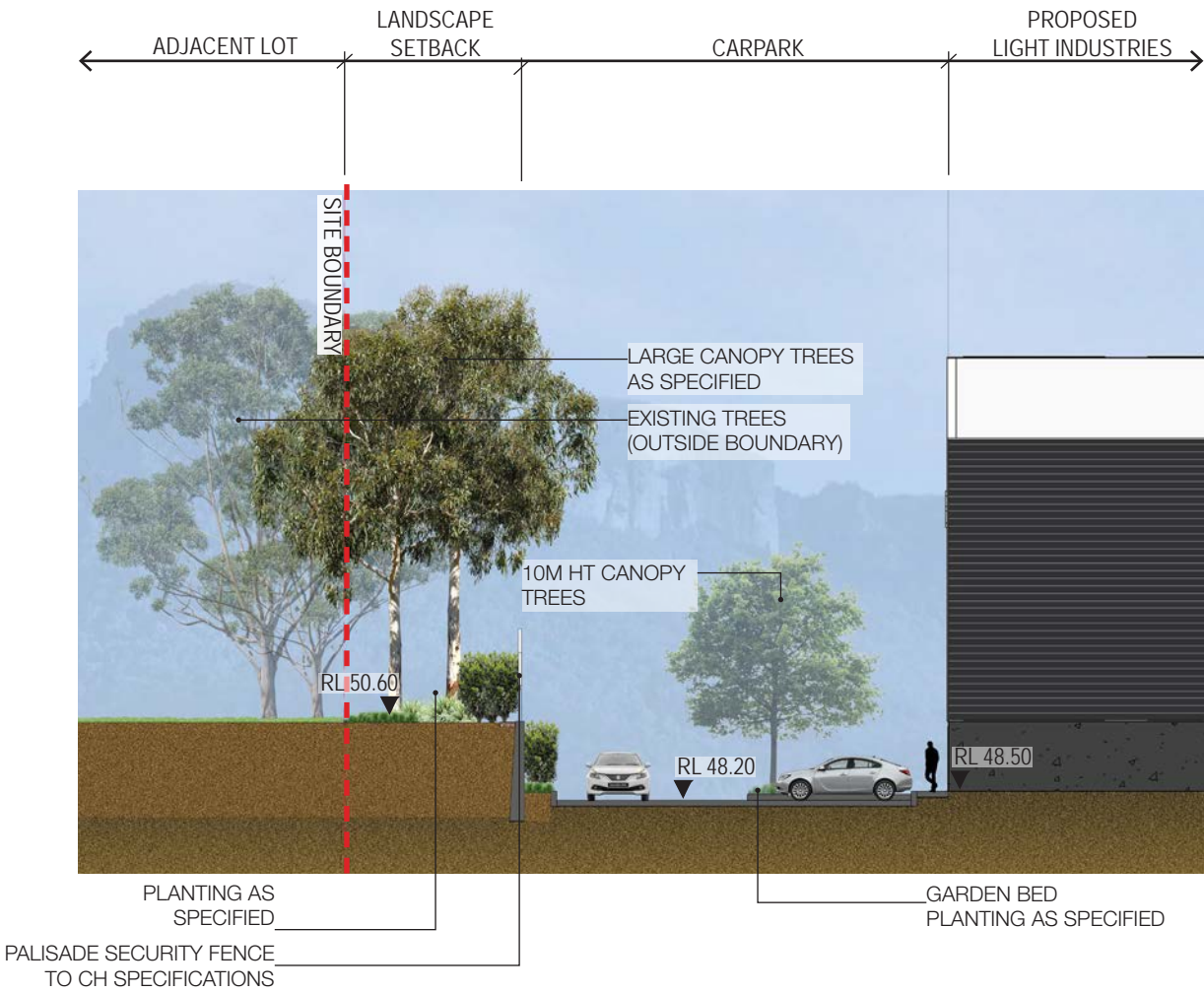
LANDSCAPE SECTIONS 02



KEY PLAN



01 SECTION C-C  
Scale 1:250@A3



02 SECTION D-D  
Scale 1:250@A3



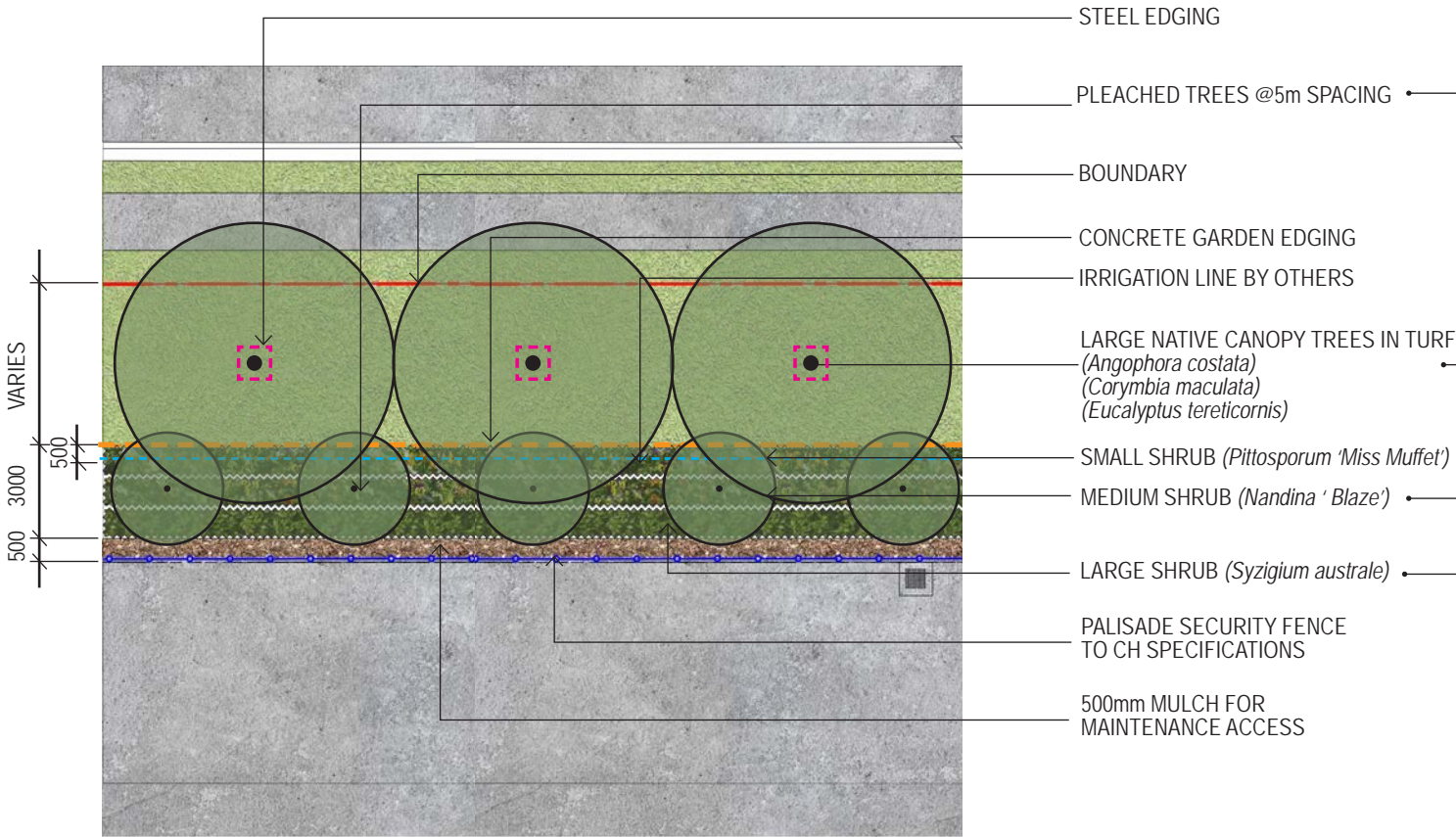
# DETAIL CONCEPT PLANTING PLAN



CULVERSTON ROAD SETBACK (COMPLETED 2023)



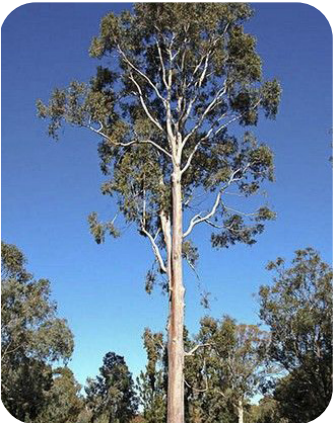
KEY PLAN



FIC FLA



ANG COS



COR MAC



EUC TER



SYZ AUS



NAN SP



PIT TOB

01 DETAIL PLANTING PLAN  
Scale 1:200@A3 / 1:100@A1



PLANT SCHEDULE

	CODE	BOTANICAL NAME	POT SIZE	DENSITY	QUANTITY	MATURE HT. (m)																		
★	TREES																							
	ANG COS	ANGOPHORA costata	75L	As Shown	23	20m	ANG COS	COR MAC	EUC TER	EUC SID	FIC FLA	CAR GLA	DIA CAE	BAU SPP										
	COR MAC	CORYMBIA maculata	75L	As Shown	13	20m																		
	EUC TER	EUCALYPTUS tereticornis	75L	As Shown	8	20m																		
	EUC SID	EUCALYPTUS sideroxylon	75L	As Shown	12	15m																		
FIC FLA	FICUS “Flash”	200L	As Shown	47	8m																			
★	MAG COL	MAGNOLIA ‘Cloodwyn Gloss’	200L	As Shown	17	6m	MAG COL	TRI LAU	EUC PUN	EUC CRE		CAR SPP	CLE ARI	DIC REP										
	TRI LAU	TRISTANIOPSIS laurina	100L	As Shown	22	6m																		
	EUC PUN	EUCALYPTUS punctata	100L	As Shown	3	15m																		
	EUC CRE	EUCALYPTUS crebra	100L	As Shown	4	15m																		
	SHRUBS																							
	PIT TOB	PITTOSPORUM tobira ‘Miss Muffet’	200mm	3/m²	651	-	PIT TOB	SYZ AUS	CAL WHI			DIA LON	HAR VIO	LOM FIL										
	SYZ AUS	SYZIGIUM australe ‘Southern Form’	300mm	2/m²	830	-																		
	CAL WHI	CALLISTEMON citrinus ‘White Anzac’	200mm	2/m²	157	-																		
	NAN SP	NANDINA ‘Blush’	200mm	2/m²	590	-																		
	WES FRU	WESTRINGIA fruticosa ‘Zena’	200mm	2/m²	92	-																		
	GROUNDCOVERS						PIT TOB	SYZ AUS	CAL WHI			LOM LON	PAN PAN	VIO HED										
		CAR GLA	CARPOBROTUS glaucesscens	150mm	4/m²	652									-									
		SEN SER	SENECIO serpens	150mm	4/m²	44									-									
		BAU SPP	BAUMEA spp.	140mm	5/m²	560									-									
		CAR SPP	CARREX spp.	140mm	5/m²	665									-									
		CLE ARI	CLEMATIS aristata	140mm	3/m²	399	-	WES FRU	CAL WHI	NAN SP														
		DIA CAE	DIANELLA caerulea ‘Little Jess’	140mm	5/m²	665	-																	
		DIA LON	DIANELLA longifolia	140mm	5/m²	560	-																	
		HAR VIO	HARDENBERGIA violacea	140mm	3/m²	336	-																	
		LOM FIL	LOMANDRA filiformis	140mm	5/m²	665	-																	
		LOM LON	LOMANDRA longifolia	140mm	5/m²	560	-																	
		PAN PAN	PANDOREA pandorana	140mm	3/m²	336	-																	
		VIO HED	VIOLA hederacea	140mm	3/m²	399	-																	
		THE AUS	THEMADA australis	140mm	3/m²	665	-																	
															THE AUS									
NOTE:																								
★ KOALA FEED TREE SPECIES.																								



# CHARTER HALL STANDARD SPECIFICATION + MAINTENANCE NOTES

- The Charter Hall and Sprout KOP Annexure G is to be the over-riding document in any instance.
- A high standard of mature landscaping is expected leading to the customer entry. A fully designed low maintenance landscape plan with no turf shall be provided after reviewing the most recent copy of the Charter Hall Kit of Parts, to then be sent to Charter Hall for review and approval.
  - The landscaping design consider ongoing maintenance, clear lines of sight and general tidiness. For example - preference to gravel beds in car park landscaping. All stone products are to be environmentally friendly ie no river rocks.
  - The D&C Contractor shall provide an automatic watering system, connected to the rain water tanks and mains water back up, for the site with all landscaping and irrigation as per the applicable landscape drawings but not less than one tap per major garden bed and one within 30m of minor beds for hose access The Landscape Architect is to review irrigation design to ensure it is a performance based specification and adequate.
  - Irrigation to be linked to the water re-use system.
  - The contractor is to allow for all turfing and landscaping in the nature strip as required by Council.
  - 12 months' full maintenance is required after PC including a 3 month plant warranty.
  - All new trees shall be staked and tied. Existing trees deemed to remain shall be protected during construction and documented with an arborist report.
  - A follow up arborist report shall be undertaken prior to the conclusion of the 12 month defects liability period.
  - Landscape beds are to be clear of builders rubble which is not to be disposed of throughout the site.
  - Soil inside of the landscape beds are to be raised to a level that allows for importation of topsoil. Costs to remove excess filling to allow suitable topsoil placement will be charged to the builder.

**SERVICES**  
Landscaping is to be completed to Authority requirements. Building & Estate Landscaping to be in line with the Charter Hall landscape specification and Assets Presentation Guidelines Annexure G  
Remove all weed and other debris from planter beds and areas to be landscaped. Remove rocks and branches larger than 75mm.  
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)

**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:**  
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.

- All plant material shall be obtained from an approved reputable nursery/supplier where plants are exposed and have been hardened-off in the open.
- Plants are to be healthy, well-grown specimens, free of pest, injury and diseases.
- Carry out the supply and installation of all planting as specified including preparation of tree holes, back filling, planting of trees, staking and tying and planting of garden beds as set out and scheduled on the Drawings.
- It is the Contractors responsibility to adequately protect and maintain vegetative material against any adverse or damaging climatic conditions before and during the planting procedure.
- Hardwood stakes, as per details are to be installed immediately after tree planting. Stakes are to be driven 600mm into the ground or deep enough to ensure that the stake will remain stable and vertical. Tie tree to stakes using 2 "figure eight" ties of canvas or approved equivalent.

**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.  
**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. 5-15 litre size plant 1x(1200x25x25mm)  
b. 35-75 litre size plant 2x(1500x38x38mm)

c. 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:** Kikuyu (Confirm with Council)

- All turf to be laid within 24hrs after delivery to site.
- Roll soil to achieve an even and firm but not compacted surface before laying of turf. Finish topsoil so as to be 15mm below adjoining pavement surfaces to allow for turf thickness. Stagger joins in each new row and make sure all joints are tightly butt jointed together. Immediately water turf after laying of turf. On gradients, turf to be laid diagonally across the slope, peg turf in areas with slopes greater than 1:3. Ensure pegs are removed after turf has established.
- Water turf a minimum once a day for the first 7 days of installation and every 2 days thereafter from day 8-21 of installation. Additional hand sprigging will be required to any areas that have failed or where coverage is noticeably inconsistent.
- Turfing is undertaken between the months of November and March, ensure grassing is watered daily (at a minimum) for the first two weeks subsequent to laying.

## 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. The maintenance period shall commence at practical completion and continue for a period of twenty six (26) weeks.

**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 not exceeding two (2) weeks 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.

**MAINTENANCE PERIOD:**  
The maintenance period for all landscaping is 12 months from Practical Completion and an establishment warranty period of 3 months from Practical Completion.  
During the maintenance period:  
· The Contractor is responsible for the satisfactory establishment of all soft works and parts thereof prior to the issuance of the Final Completion Certificate.  
· Establishment shall mean the care and maintenance of the contract area by accepted horticultural practices, as well as rectifying any defects that may become apparent in the Works under normal use within 14 days of the defect being noted.  
· Keep a log book recording when and what maintenance work has been done and what materials, including toxic materials, have been used. Make the log book available for inspection on request.  
During the warranty period:  
· The Landscape Contractor is responsible for all losses of plant material due to nursery stock failure or improper horticultural care during the landscape maintenance / plant establishment period. If plants die as a result of poor horticultural practice, they are to be replaced within 48 hours. If plants die or are removed for other reasons, such as theft or vandalism, the Contractor is to notify the Superintendent immediately and replace the effected planting within 48 hours.

## IRRIGATION (PERFORMANCE SPECIFICATION)

IRRIGATION OVERVIEW - Confirm with Project Manager at tender stage.

**EXTENT**  
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.

- An automatic irrigation system is to be installed to all turf and garden bed areas.
- The irrigation system shall be designed and installed by a licensed contractor to relevant Australian standards and Sydney water guidelines.
- 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 xreg 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.

**DEFECTS LIABILITY PERIOD**  
The irrigation system shall be subject to a 12 month defects and liability period.

## RELEVANT AUSTRALIAN STANDARDS

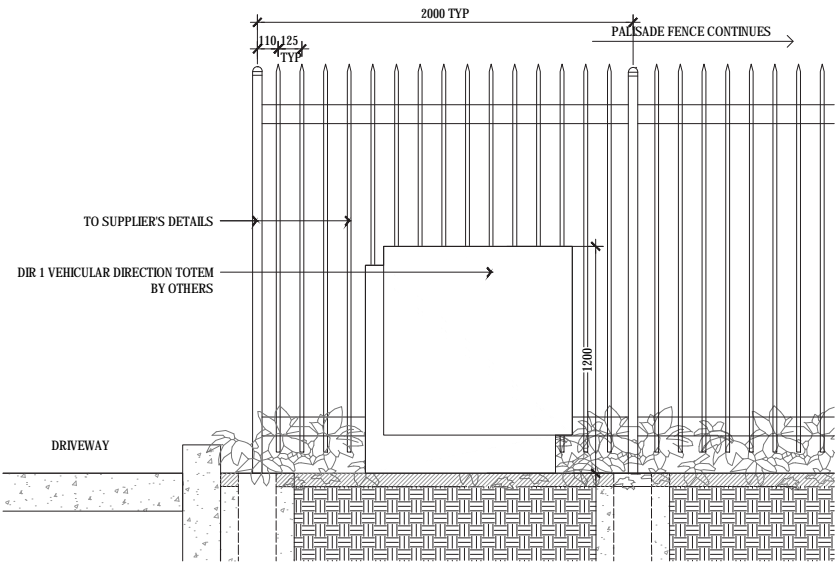
Soil: AS4419, AS3743, AS4454  
Mulch: AS4454  
Tree: AS2303  
Pruning: AS4373  
Tree Protection: AS4970  
Contractor to comply with the above Australian Standards

PROJECT	DRAWING TITLE	PROJECT NO.	PURPOSE	SCALE	REVISION	DATE	DRAWN	CHECKED	PAGE	CLIENT
PROPOSED WAREHOUSE DEVELOPMENT WAREHOUSE 1 + 2 149-155 AIRDS RD, MINTO NSW	CHARTER HALL STANDARD SPECIFICATION + MAINTENANCE NOTES	H8-22026	DA SUBMISSION	NTS	J	12.01.2024	DG	DV	L 13	

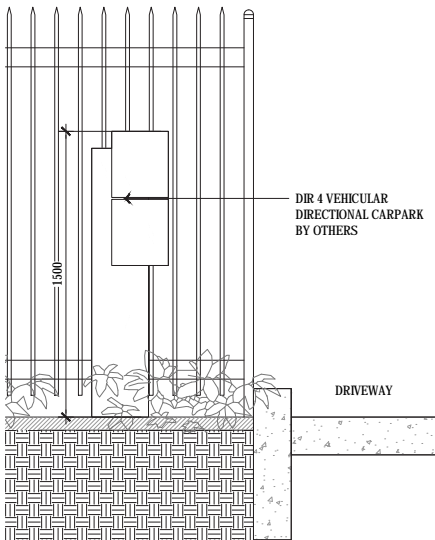




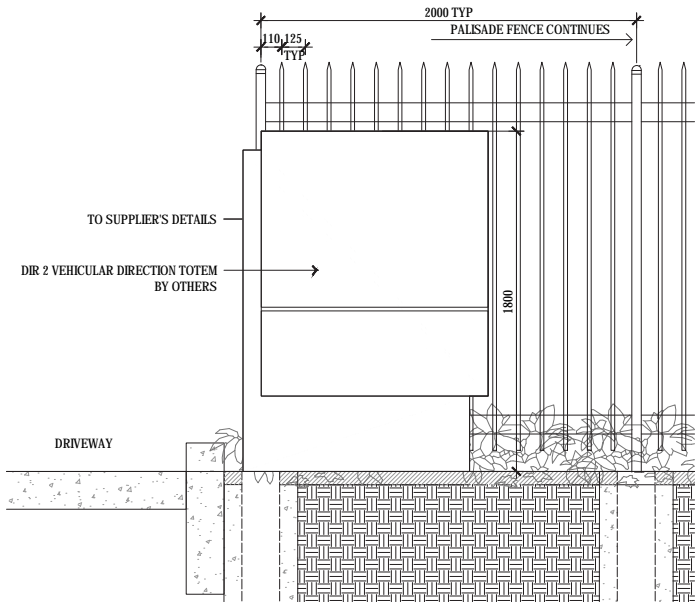
# CHARTER HALL STANDARD DETAILS



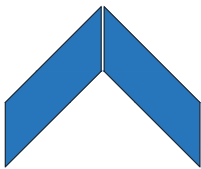
01 DIR 1 VEHICULAR DIRECTION TOTEM  
1:20 @ A1 / 1:40 @ A3



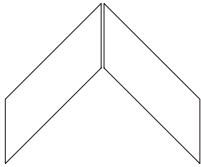
03 DIR 4 VEHICULAR DIRECTIONAL CARPARK  
1:20 @ A1 / 1:40 @ A3



02 DIR 2 VEHICULAR DIRECTION TOTEM  
1:20 @ A1 / 1:40 @ A3



04 ENT 1 TRUCK DRIVEWAY MARKER  
1:50 @ A1 / 1:100 @ A3



05 ENT 3 CAR DRIVEWAY MARKER  
1:50 @ A1 / 1:100 @ A3



# TYPICAL LANDSCAPE DETAILS

