

ANGLICAN CARE RACF CAREY BAY

FEBRUARY 2020



Drawing Schedule

Name	Drawing Number	Revision
Cover Sheet	L000	D
Tree Management Plan	L001	A
Tree Management Schedule	L002	A
Landscape Masterplan	L101	C
Memory Unit Landscape Plan	L102	B
Northern Courtyard Landscape Plan	L103	C
Landscape Section & Precedent Images	L201	C
Indicative Plant Schedule	L301	A

Council Guidelines

- Lake Macquarie City Council
- Lake Macquarie City Council (LMCC) LEP 2014,
 - Lake Macquarie City Council (LMCC) DCP 2014;
 - Lake Macquarie City Council (LMCC) Landscape Design Guidelines

Site Description

The subject site is located at Lot 200, (DP731318) and the street address is 37 Laycock Street, Carey Bay NSW.

The existing Residential Aged Care Facility (RACF); owned by Anglican Care, occupies the NE portion of the site and is to be demolished as part of this proposal. The Independent Living Units (ILU) located in the SW portion of the site are to be retained as part of this proposal.

The existing topography of the site is relatively steep with a cross fall from the high point (RL 27.54) located in the Eastern corner of the site, to the approximate low point (RL 18.04), located in the northern corner of the site and has a fall of approximately 9.5 metres.

Local Context/Character

The existing vegetation character is predominantly mown grass and exotic garden beds. The existing trees at the entry to site will be removed to allow for the new road and carpark upgrades. Please refer to the Arboricultural report (by Arbor Ecological) for the assessment of all existing trees to be retained and removed.

The existing site is located in close proximity to Carey Bay Shopping Village, Catalina Bay and Carey Bay in Lake Macquarie.

Proposed Development:

The proposed development provides the opportunity to create an improved frontage to Laycock Street with a landscaped batter (Max 1:3) and a low retaining wall (Max 1m H.) to the north east corner of the site where grades are steeper. Proposed shrub planting in front of this retaining wall will assist in reducing the bulk and scale of the wall. Trees along this frontage have been strategically located to 'frame' views to nearby Lake Macquarie.

Along the NE boundary, existing trees have been retained to maintain this important ecological link corridor and to ensure the existing squirrel glider habitat is maintained. Nectar producing shrub planting have been implemented to the under storey canopy of this ecological corridor.

The development will include the following deep soil internal courtyards:

The Northern Courtyard will include garden beds and a raised planter with sensory plants and wheelchair accessibility. A suspended communal paved area (with OSD tank below) will include a shade structure, BBQ and alfresco furniture. This area is also a viewing platform with significant views to Lake Macquarie.

The Memory Unit Courtyard is located to the south and includes a serpentine path, shade structure, BBQ facilities, DDA compliant furniture, with passive exercise and memory equipment. The garden beds and raised planters are wheelchair accessible and encourage resident participation and engagement.

There is screen planting between the residents rooms and the common open space areas with a separate staff break out space, located adjacent to the staff rooms.

Additional shrub and tree planting is have been implemented along the western edge of the new driveway and at the base of the existing retaining wall to assist in screening and provide additional privacy for the adjacent ILU's. Circulation, connectivity and materials & finishes selection; particularly in the common open space areas of this development have been considered and will include the following:

Circulation

- Establish a path hierarchy for main pedestrian access, egress and maintenance paths,
- Segregation of pedestrian paths from vehicular roads and driveways,
- Implementation of 1:14 ramps (with handrails) 1:20 ramps (no handrails) to AS1428.1 Access & Mobility, and
- Main pedestrian circulation path widths to be a minimum 1500mm width to allow mobile & less mobile residents to easily pass each other.

Connectivity

- Regular rest stops with bench seats (including arm rests), and
- Implementation of intersection nodes where paths intersect, and which may include way-finding signage, congregation nodes and seating.

Materials & Finishes

- Pre-cast unit paving not to be implemented on any common open space & public domain paths as can potentially cause trip hazards,
- Use of exposed aggregate concrete paving to assist in reducing slip hazards,
- Use of broom finished concrete paving to assist in reducing slip hazards, and
- Use of colour oxide concrete paving with luminance reflective values (LRV) to assist in reducing concrete glare.

Planting Design Strategy

The planting design strategy for this development proposal is to include some of the following:

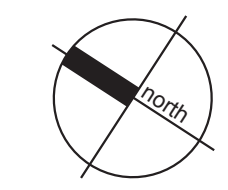
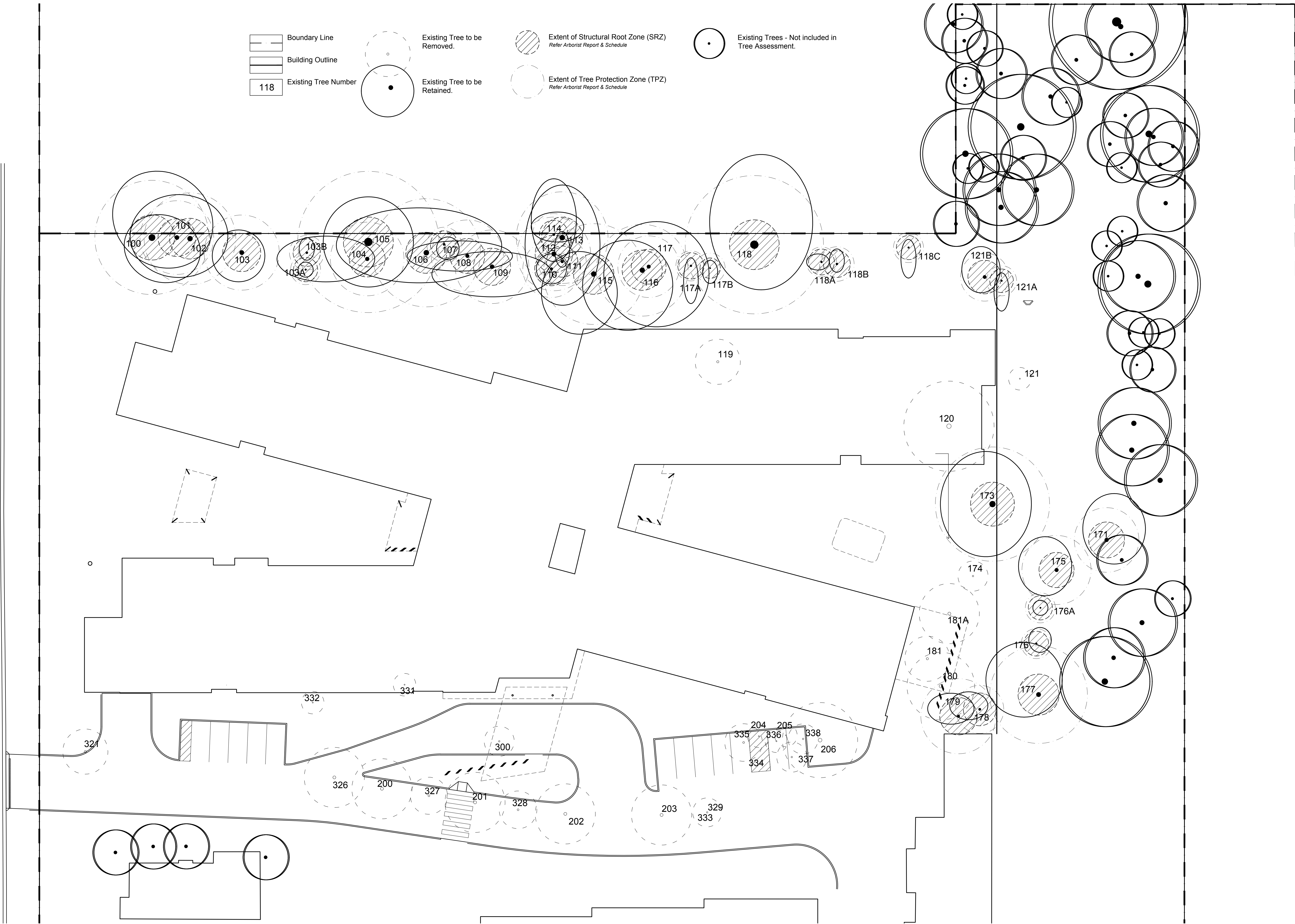
- Tree planting within appropriate deep soil zones to reduce bulk & scale of the development and increase canopy cover of local area
- Evergreen tree planting to provide shade & amenity
- Deciduous tree Planting for solar access & seasonal change, and
- A broad sensory planting palette to include a variety of colour, texture, aroma & form.

With the proposed landscape design for this development we would implement the following safety planting initiatives:
Avoid planting tree species that are prone to potential limb drop

- Avoid planting species close to paths and hard paved areas that are known for excessive flower and foliage drop that may cause slip hazards
- Avoid planting species that are known for invasive root structure that may damage paths and hard paved areas, which may cause trip hazards, and
- Avoid planting species that are known to be toxic or may cause respiratory, allergy and/or skin irritations.

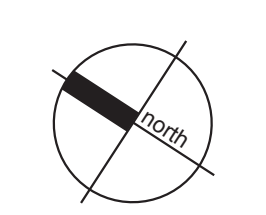
Shrub species, sizing & locations are to ensure that passive surveillance is maintained at building, carpark & driveway entries path and all plantings are to be layered to with smaller groundcovers and shrubs adjacent to paths and buildings in accordance with Crime Prevention Through Environmental Design (CPTED) principles.

All proposed plant species selection has been considered in terms of soil types, species hardiness and on-going watering maintenance requirements. A proposed OSD tank within the central courtyard to store rainwater for landscape irrigation and use of predominantly low water use species (both native & exotic) have been grouped in regard to watering requirements and to reduce reliance on the use of potable water.



TREE MANAGEMENT SCHEDULE- CAREY BAY									
Tree #	Species (Botanical Name)	Common Name	Retain/ Remove	Canopy Spread(m) N,S,E,W	DGL (mm)	HGT (m)	TPZ (m)	SRZ (m)	Comments/ Condition
100	<i>Eucalyptus acmenoides</i>	White Mahogany	Retain	9458	800	18	7.6	3.01	Good/Potential damage to TPZ roots
101	<i>Corymbia maculata</i>	Spotted Gum	Retain	3637	520	14	4.9	2.51	Good/Potential damage to TPZ roots
102	<i>Corymbia maculata</i>	Spotted Gum	Retain	6558	620	20	6.1	2.71	Good/Potential damage to TPZ roots
103	<i>Melaleuca bracteata</i>	Revolution Green	Retain	3434	530	8	5	2.53	Good/Potential damage to TPZ roots
103A	<i>Corymbia maculata</i>	Spotted Gum	Retain	1111	180	5	2	1.61	Good/No Impacts Expected
103B	<i>Corymbia maculata</i>	Spotted Gum	Retain	2111	240	7	2.3	1.82	Good/No Impacts Expected
104	<i>Eucalyptus punctata</i>	Grey Gum	Remove	3 3 1 12	460	12	4.9	2.39	Fair/ Not Suitable to be Retained
105	<i>Corymbia maculata</i>	Spotted Gum	Retain	6666	1010	25	9.4	3.32	Good/No Impacts Expected
106	<i>Eucalyptus punctata</i>	Grey Gum	Retain	6 40 10 12	630	20	7.2	2.73	Good/No Impacts Expected
107	<i>Corymbia maculata</i>	Spotted Gum	Retain	1221	240	10	2.3	1.82	Good/No Impacts Expected
108	<i>Eucalyptus punctata</i>	Grey Gum	Retain	2268	430	20	4.8	2.32	Poor/Retain for Habitat
109	<i>Eucalyptus punctata</i>	Grey Gum	Retain	2488	500	20	4.9	2.47	Good/No Impacts Expected
110	<i>Eucalyptus paniculata</i>	Iron Bark	Retain	2222	390	20	3.8	2.23	Good/No Impacts Expected
111	<i>Eucalyptus paniculata</i>	Iron Bark	Retain	4111	330	12	3.2	2.08	Good/No Impacts Expected
112	<i>Eucalyptus punctata</i>	Grey Gum	Retain	10 1 3 3	510	18	4.9	2.49	Fair/No Impacts Expected
113	<i>Corymbia maculata</i>	Spotted Gum	Retain	7955	630	20	6.1	2.73	Fair/No Impacts Expected
114	<i>Alphitonia excels</i>	Red Ash	Retain	3143	270	12	2.8	1.91	Good/No Impacts Expected
115	<i>Eucalyptus punctata</i>	Grey Gum	Retain	3837	610	25	6.7	2.69	Good/No Impacts Expected
116	<i>Corymbia maculata</i>	Spotted Gum	Retain	4848	600	25	6.1	2.67	Good/No Impacts Expected
117	<i>Eucalyptus punctata</i>	Grey Gum	Retain	6881	430	12	4.1	2.32	Good/No Impacts Expected
117A	<i>Casuarina glauca</i>	Swamp Oak	Retain	1511	220	7	2	1.75	Good/No Impacts Expected
117B	<i>Acacia binervia</i>	Coast Myall	Retain	1211	120	5	2	1.36	Good/No Impacts Expected
118	<i>Eucalyptus punctata</i>	Grey Gum	Retain	12 6 8 6	1000	25	9.2	3.31	Good/No Impacts Expected
118A	<i>Eucalyptus spp.</i>	Eucalyptus Tree	Retain	1112	210	7	2	1.72	Good/No Impacts Expected
118B	<i>Eucalyptus spp.</i>	Eucalyptus Tree	Retain	2111	230	4	2.3	1.79	Good/No Impacts Expected
118C	<i>Eucalyptus spp.</i>	Eucalyptus Tree	Retain	1411	180	5	2	1.61	Good/No Impacts Expected
119	<i>Callistemon viminalis</i>	Weeping Bottlebrush	Remove	5555	538	10	5.3	2.55	Good/In Development Footprint
119A	<i>Sapium sebiferum</i>	Chinese Tallow Tree	Remove	3333	350	5	2.6	2.13	Good/In Development Footprint
120	<i>Eucalyptus botryoides</i>	Southern Mahogany	Remove	9679	560	18	6.6	2.59	Fair/In Development Footprint
121	<i>Melaleuca quinquenervia</i>	Broad Leaved PaperBark	Remove	1111	280	10	2.4	1.94	Good/No Impacts Expected

TREE MANAGEMENT SCHEDULE- CAREY BAY									
Tree #	Species (Botanical Name)	Common Name	Retain/ Remove	Canopy Spread(m) N,S,E,W	DGL (mm)	HGT (m)	TPZ (m)	SRZ (m)	Comments/ Condition
121A	<i>Casuarina glauca</i>	Swamp Oak	Retain	1411	170	4	2	1.57	Good/No Impacts Expected
121B	<i>Casuarina glauca</i>	Swamp Oak	Retain	4223	390	6	32	2.23	Good/No Impacts Expected
171	<i>Corymbia maculata</i>	Spotted Gum	Retain	6353	460	18	4.3	2.39	Good/No Impacts Expected
173	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Retain	7757	740	20	7.6	2.92	Fair/Potential damage to TPZ roots
174	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Remove	1111	300	8	3	2	Poor/ Not Suitable for Retention
175	<i>Eucalyptus punctata</i>	Grey Gum	Retain	4325	440	16	4.6	2.34	Good/No Impacts Expected
176	<i>Corymbia maculata</i>	Spotted Gum	Retain	2121	190	10	2	1.65	Good/No Impacts Expected
176A	<i>Corymbia maculata</i>	Spotted Gum	Retain	1111	140	10	2	1.61	Good/No Impacts Expected
177	<i>Eucalyptus robusta</i>	Swamp Oak	Retain	7337	540	18	6.5	2.73	Good/No Impacts Expected
178	<i>Melaleuca quinquenervia</i>	Broad Leaved PaperBark	Retain	2114	270	12	3.2	2.18	Good/No Impacts Expected
179	<i>Melaleuca quinquenervia</i>	Broad Leaved PaperBark	Retain	3124	310/290	12	5	2.49	Fair/No Impacts Expected
180	<i>Melaleuca quinquenervia</i>	Broad Leaved PaperBark	Remove	2224	850	16	8.6	3.09	Good/Potential damage to TPZ roots
181	<i>Melaleuca quinquenervia</i>	Broad Leaved PaperBark	Remove	4124	560	10	5.4	2.59	Good/In Development Footprint
181A	<i>Jacaranda mimosifolia</i>	Jacaranda	Remove	4143	230	5	2.6	1.79	Good/No Impacts Expected
200	<i>Liquidambar styraciflua</i>	Liquidamber	Remove	3223	410	8	3.8	2.28	Good/In Development Footprint
201	<i>Liquidambar styraciflua</i>	Liquidamber	Remove	4444	540	12	5	2.55	Good/In Development Footprint
202	<i>Liquidambar styraciflua</i>	Liquidamber	Remove	3333	400	10	3.6	2.25	Good/In Development Footprint
203	<i>Liquidambar styraciflua</i>	Liquidamber	Remove	3432	440	12	4.2	2.34	Good/In Development Footprint
204	<i>Syagrus romanzoffianum</i>	Cocos Palm	Remove	1111	330	10	2	2	Good/Potential damage to TPZ roots
205	<i>Syagrus romanzoffianum</i>	Cocos Palm	Remove	1111	320	12	2	2	Good/Potential damage to TPZ roots
206	<i>Liquidambar styraciflua</i>	Liquidamber	Remove	3553	440	8	4.3	2.34	Good/Potential damage to TPZ roots
321	<i>Syzygium spp.</i>	Lillypilly	Remove	3344	380	6	3.6	2.2	Good/In Development Footprint
326	<i>Harpephllum caffrum</i>	Kaffir Plum	Remove	4233	400	7	3.8	2.25	Good/In Development Footprint
327	<i>Harpephllum caffrum</i>	Kaffir Plum	Remove	1111	290	5	2.5	1.97	Good/In Development Footprint
328	<i>Harpephllum caffrum</i>	Kaffir Plum	Remove	2222	310		3.8	2.02	Good/In Development Footprint
329	<i>Harpephllum caffrum</i>	Kaffir Plum	Remove	2231	340	5	2.7	2.1	Good/In Development Footprint
330	<i>Callistemon viminalis</i>	Weeping Bottlebrush	Remove	2234	480	9	4.8	2.43	Good/In Development Footprint
331	<i>Hymenosporum flavum</i>	Native Frangipani	Remove	2222	180	6	2	1.61	Good/Potential damage to TPZ roots
332	<i>Hymenosporum flavum</i>	Native Frangipani	Remove	3122	250	6	2.1	1.84	Good/Potential damage to TPZ roots
334	<i>Melaleuca linariifolia</i>	Flax leafed Paper Bark	Remove	2214	300	5	6.9	2	Good/In Development Footprint
335	<i>Melaleuca bracteata</i>	Revolution Green	Remove	4334	370	7	3.6	2.18	Good/Potential damage to TPZ roots
336	<i>Callistemon viminalis</i>	Weeping Bottlebrush	Remove	2132	200	5	2	1.68	Good/In Development Footprint



LEGEND

Paving Type 1
Broom Finish Concrete

Paving Type 2
Common Terrace Paving

Paving Type 3
Courtyard Feature Paving

Paving Type 5
Wetpour Rubber Softfall

Feature Tree Type 1
Refer Plant Schedule

Feature Tree Type 2
Refer Plant Schedule

Deciduous Tree
Refer Plant Schedule

Tall Screen Shrubs
Refer Schedule

Accent Shrubs
Refer Schedule

Mass Shrub Planting (Hedges)
Refer Schedule

Shrubs (less 1m. H.)
Refer Schedule

Groundcover Planting
Refer Schedule

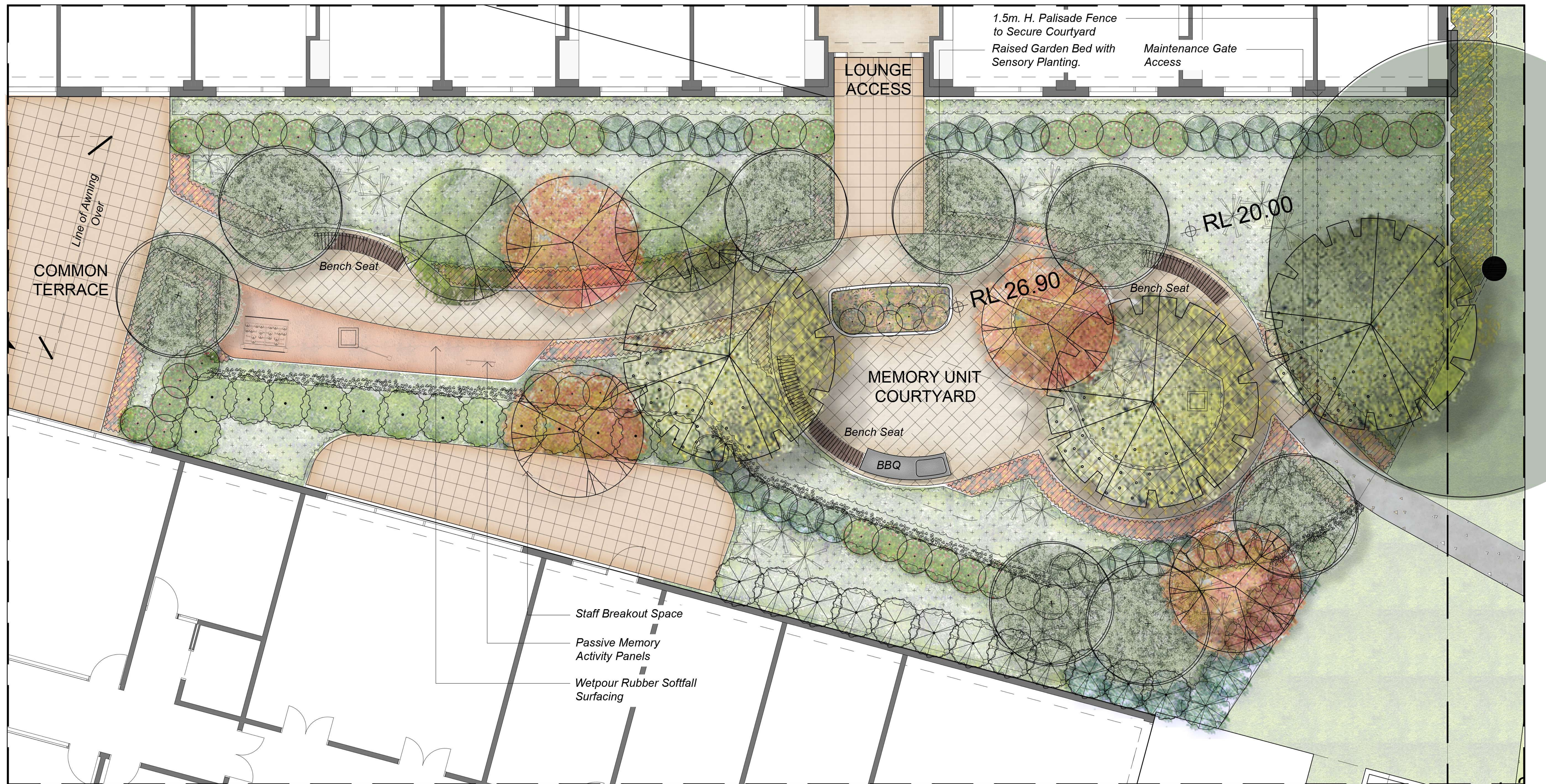
Low Border Planting
Refer Schedule

Climbers
Refer Schedule

Sensory Planting
Refer Schedule

1.5m H. Palisade Fence

Arc Bench Seat
DDA Compliant



Paving Type 1
Broom Finish Concrete

Paving Type 2
Common Terrace Paving

Paving Type 3
Courtyard Feature Paving

Paving Type 5
Wetpour Rubber Softfall

Feature Tree Type 1
Refer Plant Schedule

Feature Tree Type 2
Refer Plant Schedule

Deciduous Tree
Refer Plant Schedule

Tall Screen Shrubs
Refer Schedule

Accent Shrubs
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Mass Shrub Planting (Hedges)
Refer Schedule

Shrubs (less 1m. H.)
Refer Schedule

Groundcover Planting
Refer Schedule

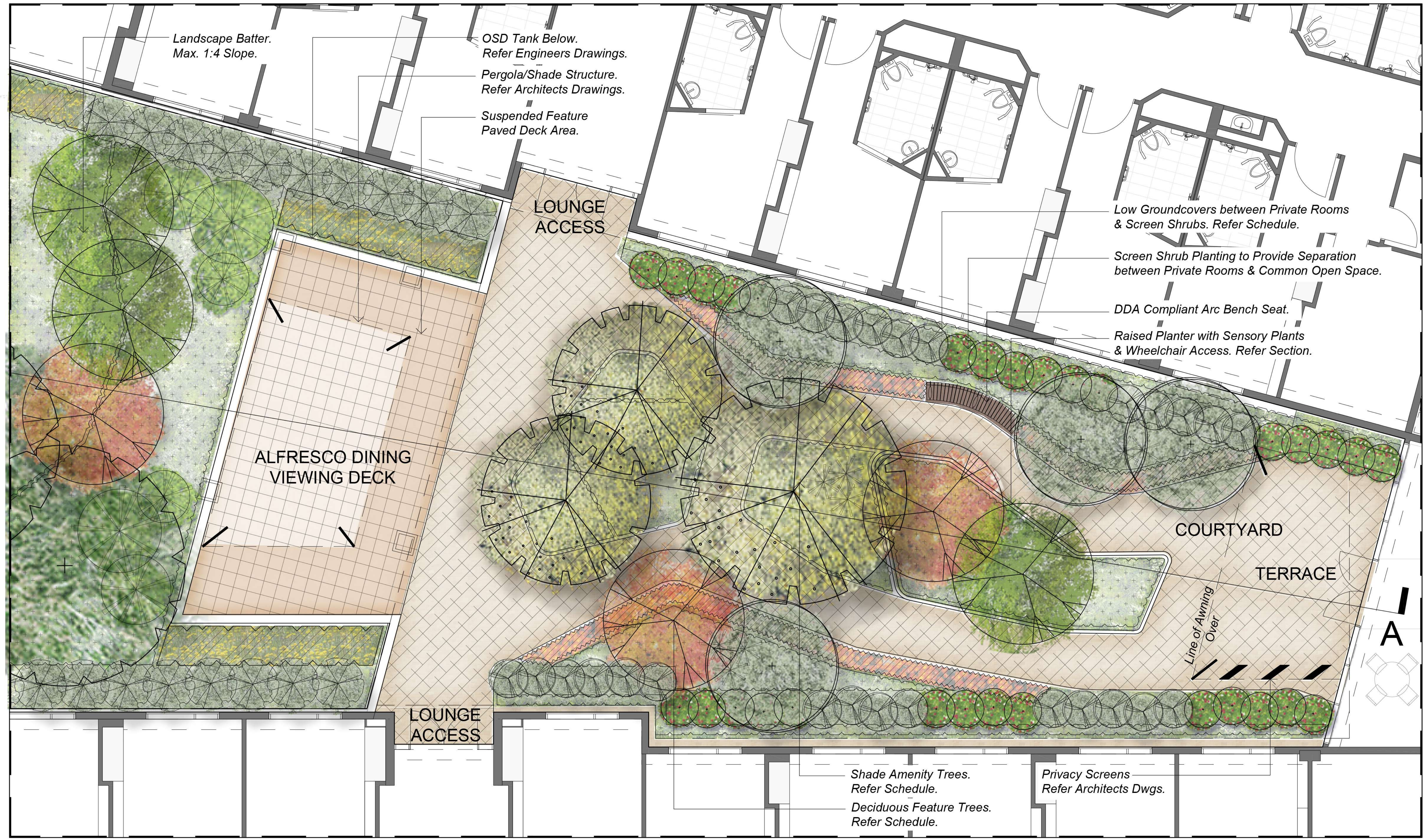
Low Border Planting
Refer Schedule

Climbers
Refer Schedule

Sensory Planting
Refer Schedule

1.5m H. Palisade Fence

Arc Bench Seat
DDA Compliant



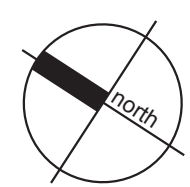
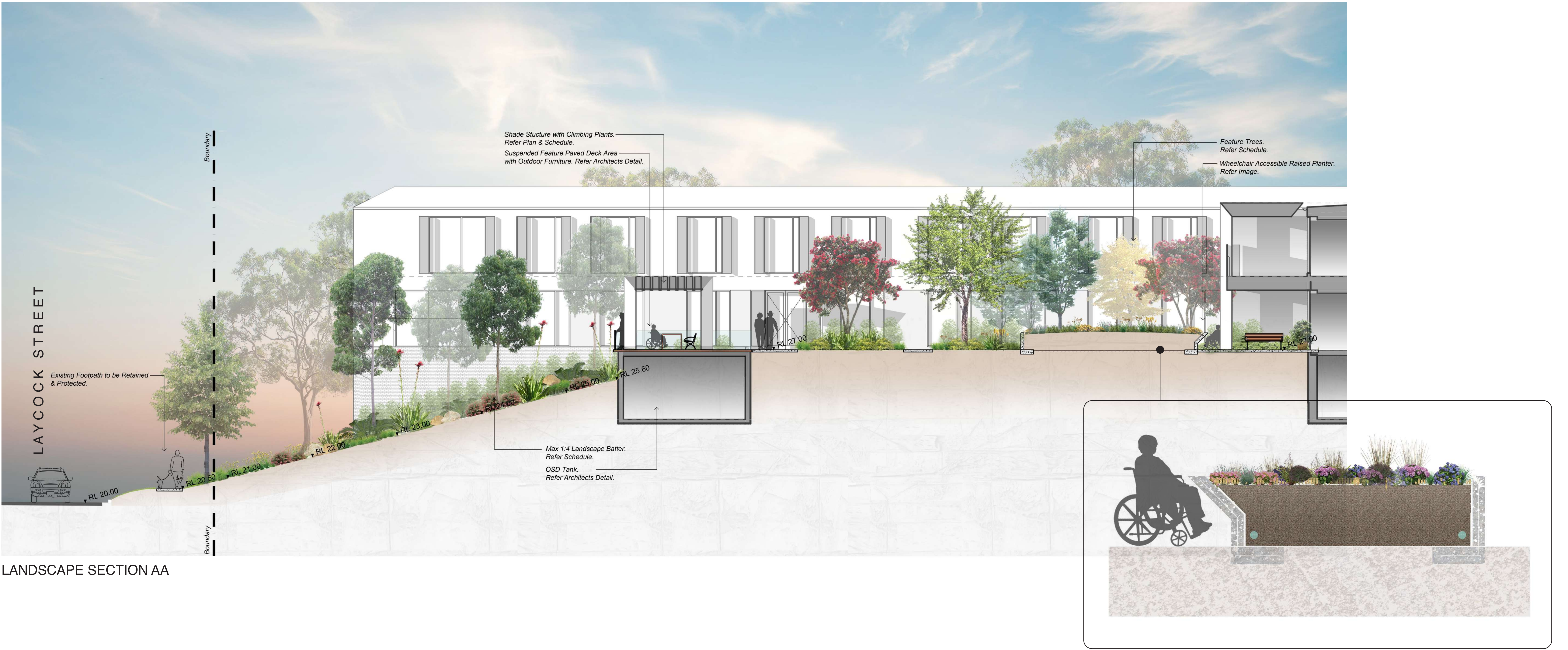


Image	Botanical Name	Common Name	Mature Height (m.)	Mature Spread (m.)	Pot Size	Comments
Shade Amenity Trees						
01	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	15	5	75L	Stakes and ties
	<i>Eucalyptus captilletata</i>	Bastard Mahogany	14	6	75L	Squirrel Glider Habitat
	<i>Waterhousia 'Sweeper'</i>	Weeping Lilly Pilly	10	7	75L	Stakes and ties
	<i>Cupaniopsis anacardioides</i>	Tuckeroo	8	7	75L	Stakes and ties
	<i>Waterhousia floribunda 'Sweeper'</i>	Weeping Lilly Pilly	10	7	75L	Stakes and ties
Feature Tree 1						
02	<i>Alloxylon flammeum</i>	Tree Waratah	15	6-8	75L	Stakes and ties
	<i>Backhousia citriodora</i>	Lemon Myrtle	5-10	2-5	75L	Stakes and ties
	<i>Elaeocarpus obovatus</i>	Hard Quandong	12	5	75L	Squirrel Glider Habitat
	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	10	5	45L	Stakes and ties
Feature Tree 2						
03	<i>Corymbia ficifolia 'Orange Splendour'</i>	Dwarf Flowering Gum	6	4-6	45L	Stakes and ties
	<i>Leptospermum trinervium</i>	Paperbark Tea-Tree	2.5	2	300mm	Squirrel Glider Habitat
	<i>Persoonia levis</i>	Broad-leaved Geebung	5	5	25L	Squirrel Glider Habitat
	<i>Tristaniopsis 'Luscious'</i>	Luscious Water Gum	8	5	75L	Stakes and ties
Deciduous Trees						
04	<i>Acer x freemanii 'Jeffersred'</i>	Autumn Blaze	10	8	75L	Stakes and ties
	<i>Fraxinus angustifolia 'Raywood'</i>	Claret Ash	10	8	75L	Stakes and ties
	<i>Lagerstroemia indica x L. fauriei</i>	Crepe Myrtle	5	3-4	75L	Stakes and ties
	<i>Plumeria acutifolia 'Rubra'</i>	Frangipani	7	3-4	75L	Stakes and ties
	<i>Pyrus calleryana 'Capital'</i>	Capital Pear	10	3	75L	Stakes and ties
Tall Screen Shrubs > 1.5m						
05	<i>Banksia robur</i>	Swamp Banksia	2	2	300mm	
06	<i>Grevillea banksii 'Alba'</i>	White Banks Grevillea	2.5	2	500mm	Squirrel Glider Habitat
07	<i>Hakea bakeriana</i>	Hakea	2	1.5	300mm	Squirrel Glider Habitat
	<i>Leptospermum polygalifolium</i>	Tantoon	2	1.5	300mm	Squirrel Glider Habitat
	<i>Syzigium australe 'Pinnacle'</i>	Pinnacle Narrow Lilly Pilly	7.5	1.5	300mm	
Shrubs < 1.5m						
08	<i>Acacia terminalis</i>	Sunshine Wattle	1	1	200mm	Squirrel Glider Habitat
	<i>Banksia oblongifolia</i>	Fern-leaved Banksia	1	1	200mm	Squirrel Glider Habitat
	<i>Callistemon 'Better John'</i>	Better John Bottlebrush	1.2	0.9	200mm	
	<i>Grevillea lanigera</i>	Soft Leaved Grevillea	1	1	200mm	
Accent Shrubs						
09	<i>Beschorneria yuccoides</i>	Mexican Lily	1.5	1	200mm	
10	<i>Lambertia formosa</i>	Mountain Devil	1.5	1.5	300mm	Squirrel Glider Habitat
11	<i>Leucospermum cordifolium 'Scarlet Ribbon'</i>	Scarlet Ribbon	2	1.5	300mm	
Mass Shrub Planting						
12	<i>Raphiolepis indica 'Apple Blossom'</i>	Apple Blossom Hawthorn	1	1	200mm	
13	<i>Westringia fruticosa 'Zena'</i>	Westringia 'Zena'	1.2	1.2	200mm	
Mass Planted Groundcovers						
14	<i>Alternanthera dentata 'Little Ruby'</i>	Littly Ruby	0.5	0.5	140mm	
15	<i>Convolvulus cneorum</i>	Silver Bush	0.5	1	140mm	
16	<i>Dianella caerulea 'Little Jess'</i>	Little Jess Flax Lily	0.4	0.4	140mm	
	<i>Dichondra repens</i>	Kidney Weed	0.1	1.5	100mm	
17	<i>Liriope muscari 'Isabella'</i>	Isabella Fine Leaf Liriope	0.4	0.5	140mm	
18	<i>Myoporum parvifolium 'Yareena'</i>	Yareena Creeping Boobialla	0.1	1	140mm	
	<i>Neomarica gracilis</i>	Walking Iris	0.5	0.5	140mm	
19	<i>Poa labillardieri 'Kingsdale'</i>	Blue Tussock Grass	0.45	0.45	140mm	
	<i>Stachys byzantina</i>	Lambs Ears	0.5	0.5	140mm	
20	<i>Westringia 'Mundi'</i>	Westringia 'Mundi'	0.6	1.5	140mm	
Low Border Planting						
21	<i>Carex albula 'Frosted Curlys'</i>	New Zealand Hair Sedge	0.6	0.6	140mm	
	<i>Chrysocepalum apiculatum 'Desert Flame'</i>	Yellow Buttons	0.5	0.3	140mm	
22	<i>Lomandra confertifolia 'Wingarra'</i>	Lomandra Wingarra	0.4	0.6	140mm	
	<i>Viola hederacea</i>	Native Violet	0.1	0.3	140mm	
Cascading Planting						
23	<i>Casuarina glauca 'Cousin It'</i>	Cousin It	0.3	1	140mm	
	<i>Hardenbergia violacea 'Meema'</i>	Meema Snake Vine	0.5	2	140mm	
	<i>Rosmarinus officinalis 'Blue Lagoon'</i>	Blue Lagoon Rosemary	0.3	1	140mm	
Shade Tolerant Planting						
24	<i>Asplenium australasicum</i>	Birds Nest Fern	1	1	140mm	
	<i>Blechnum nudum</i>	Fishbone Water Fern	0.7	0.5	140mm	
	<i>Macrozamia communis</i>	Burrawang	1	1.5	140mm	
	<i>Philodendron 'Xanadu'</i>	Xanadu Dwarf Philodendron	0.8	0.8	140mm	
	<i>Pteris tremula</i>	Tender Brake	1	0.8	140mm	
Climbers						
25	<i>Cissus antarctica</i>	Kangaroo Vine	6		140mm	
	<i>Pandorea jasminoides</i>	Bower of Beauty	5		140mm	
	<i>Pyrostegia venusta</i>	Orange Trumpet Vine	10		140mm	
Flowering Perennials & Sensory Plants						
	<i>Aster sp.</i>	Daisy	0.4	0.3	140mm	
	<i>Impatiens balsamina</i>	Busy Lizzie	0.5	0.6	140mm	
	<i>Salvia officinalis Varieties</i>	Common Sage Varieties	0.3	0.3	140mm	
	<i>Lavender officinalis</i>	English Lavender	1.2	1	140mm	
	<i>Melissa officinalis</i>	Lemon Balm	0.6	0.6	140mm	
	<i>Pelargonium x domesticum</i>	Regal Geranium	1	1	140mm	
	<i>Stachys byzantina</i>	Lambs Ears	0.3	0.9	140mm	

