22 ST QUENTIN AVENUE CLAREMONT

PROPOSED MIXED USE DEVELOPMENT

LANDSCAPE DA REPORT

AUGUST 2021

KURALAND PENNOCK ARCHITECTS emerge ASSOCIATES

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REVISION	DATE	ISSUE OR AMENDMENT	BY	REVIEWED
A	24/06/2021	DRAFT DA ISSUE	MM	SC
B	12/08/2021	DA ISSUE	MM	SC

1.0 Landscape Quality

1.1 Landscape Response

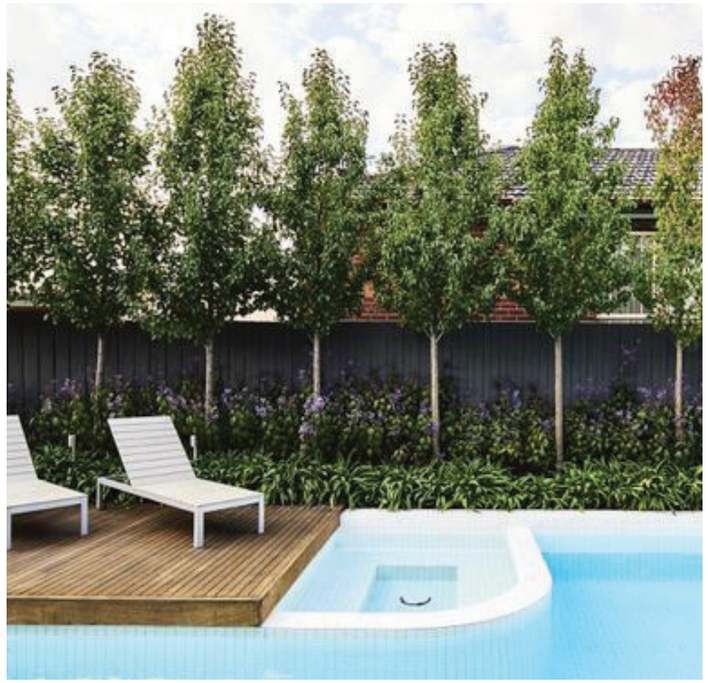
Emerge Associates have been engaged to prepare a landscape concept design for the site. Going beyond ensuring species selection, soil depths and maintenance of structure planting areas, Emerge Associates' proposal works with the architecture to create multiple functional, considered and beautiful landscapes.

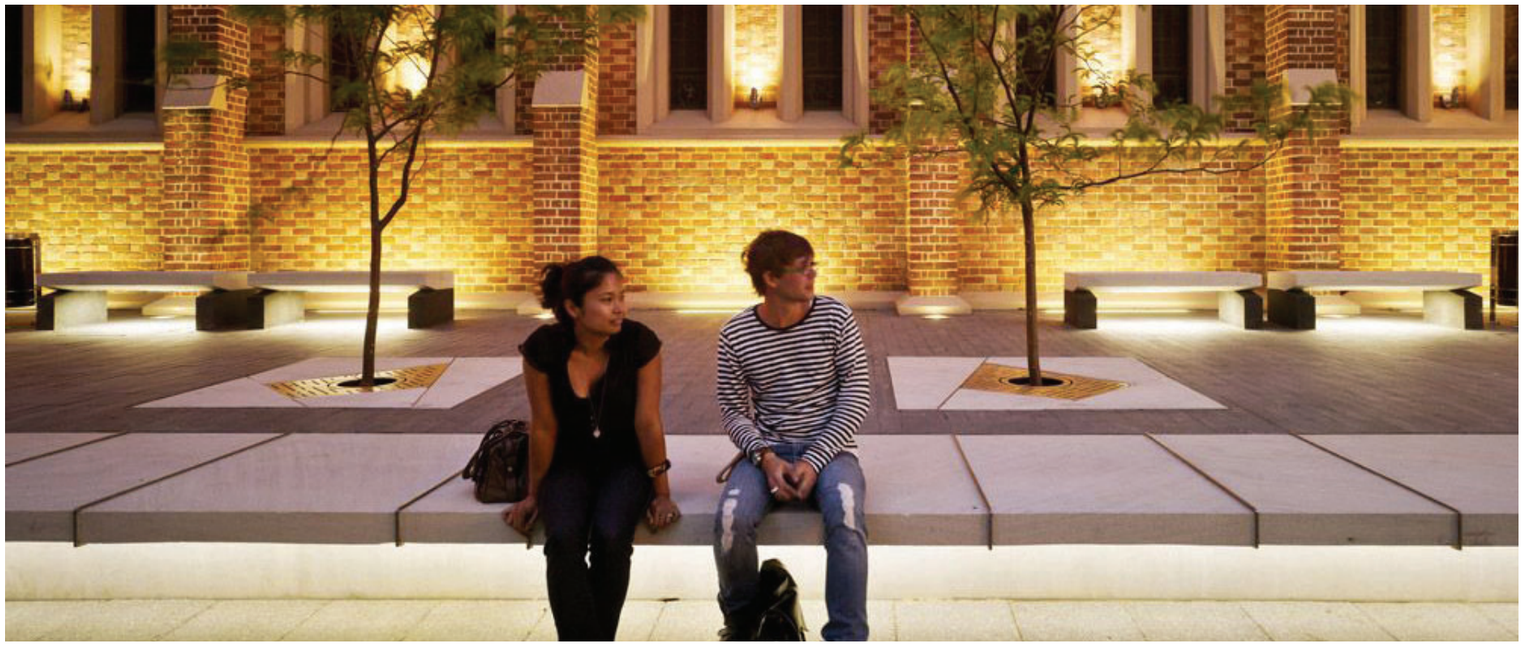
Generally

1. Proposal achieves **29.7%** of the site area as structured planting, which is **4.2x** more than required per DesignWA guidelines.
2. Proposal achieves an additional **386.7m²** of deep soil area as required within the DesignWA guidelines
3. The integration of landscape has been considered as part of the overall building strategy.
4. Landscaped areas can be easily maintained to ensure they remain in perpetuity.
5. Increased green infrastructure reduces urban heat island effect.

1.2 Overall Landscape Strategy Character

- Exemplary landscape design that compliments & celebrates the Existing Church as a landmark building whilst also responding to and enhancing the existing Claremont streetscape.
- Retain significant existing trees to streetscape to maintain & enhance existing streetscape. Existing trees to provide instant vertical scale to reduce impact of built form.
- Provide an integrated landscape design which provides a soft edge to the built form & provides spaces for people through seating.
- Reduce heat island effect of urban development through significant landscape provision & proposed tree planting.
- Provide an integrated landscape design which integrates with & enhances the Claremont Square.





1.3 Water Efficient Landscape Design

- Plant selections will be selected in consultation with Emerge Associates' in-house Botanist, with resilient & low maintenance plant species to be selected.
- The landscape design will also propose some feature exotic species which provide a contrast in flowering & texture, deciduous trees, and shad qualities. These species will also have a low water requirement.
- Proposed irrigation will be dripline irrigation installed under the mulch layer. The water supply will be mains water & part stormwater capture.
- Gravel mulch will be used for wind affected areas to ensure the mulch layer is retained in high wind environments which will provide an ongoing cover to reduce water evaporation.
- A majority of the proposed garden beds are in raised planters or containerised which will provide a controlled environment to monitor water usage & requirements. Planters will also aid in reducing water evaporation.
- Where achievable, the garden beds will be arranged according to water requirements, allowing the reticulation to the native planting to be controlled separately & water usage reduced following establishment until the garden beds are self-sufficient.

1.4 Wind Considerations

- Garden beds & tree plantings to be located at ground level to minimise the impact of uncomfortable winds throughout the ground space, thus creating a omfortable space for people.
- All trees to podium areas will be guyed with tension wired supports as required & specified by the tree suppliers.
- Gravel mulch will be used for wind affected areas to ensure the mulch layer is retained in high wind environments which will provide an ongoing cover to reduce water evaporation.

1.5 Plant Selection Vertical Gardens

- A resilient climbing plant species will be selected to grow to the to the external trellis structure. Planters will be installed to every floor, with a fixed trellis system installed off the building to ensure maintenance can be undertaken easily & safely.

1.6 Ground Plane & Podium Levels

- The ground floor will allow for mostly native plant species to provide a large green space to celebrate native Australian & West Australian landscapes, promote flowering which intern will assist in attracting birds, insects & local fauna.
- To the common areas on podium a use of evergreen & deciduous trees is proposed to maximise passive solar design to the spaces.

1.7 Existing Trees

Emerge Associates' Environmental Planning & Ecology team have been engaged to prepare an Arboricultural assessment of the existing trees on the site. This has included determining the permissible limits of the basement parking in relation to the existing significant Lemon Scented Gums on the Stirling Hwy frontage through calculation of the Tree Protection Zones (TPZ) and Structural Root Zones (SRZ). Of the fifteen (15) trees.

Identified on the site, the following applies:

1. All trees were noted as non-native species.
2. All trees were noted as in good health.
3. The three (3) Corymbia citriodora (Lemon Scented Gums) had the highest retention value based on their cultural significance, age, size and value to the streetscape.
4. The one (1) Callistemon viminalis (Bottlebrush) has a low retention value based on its age & size, the canopy screens a proportion of the eastern façade of the historic church and its location would see its TPZ and SRZ impacted significantly by the proposed development's basement excavations. This tree is proposed to be removed as part of the development.
5. The eight (8) Platanus x acerifolia (London Plane Trees) had the lowest retention value based on the their age & size—these trees are proposed to be removed as part of the development (these specimens will be offered up to tree transplant companies for re-use on other projects).
6. The three (3) Liquidamber have a medium retention value based on the their age & size—these trees are proposed to be retained as part of the development.

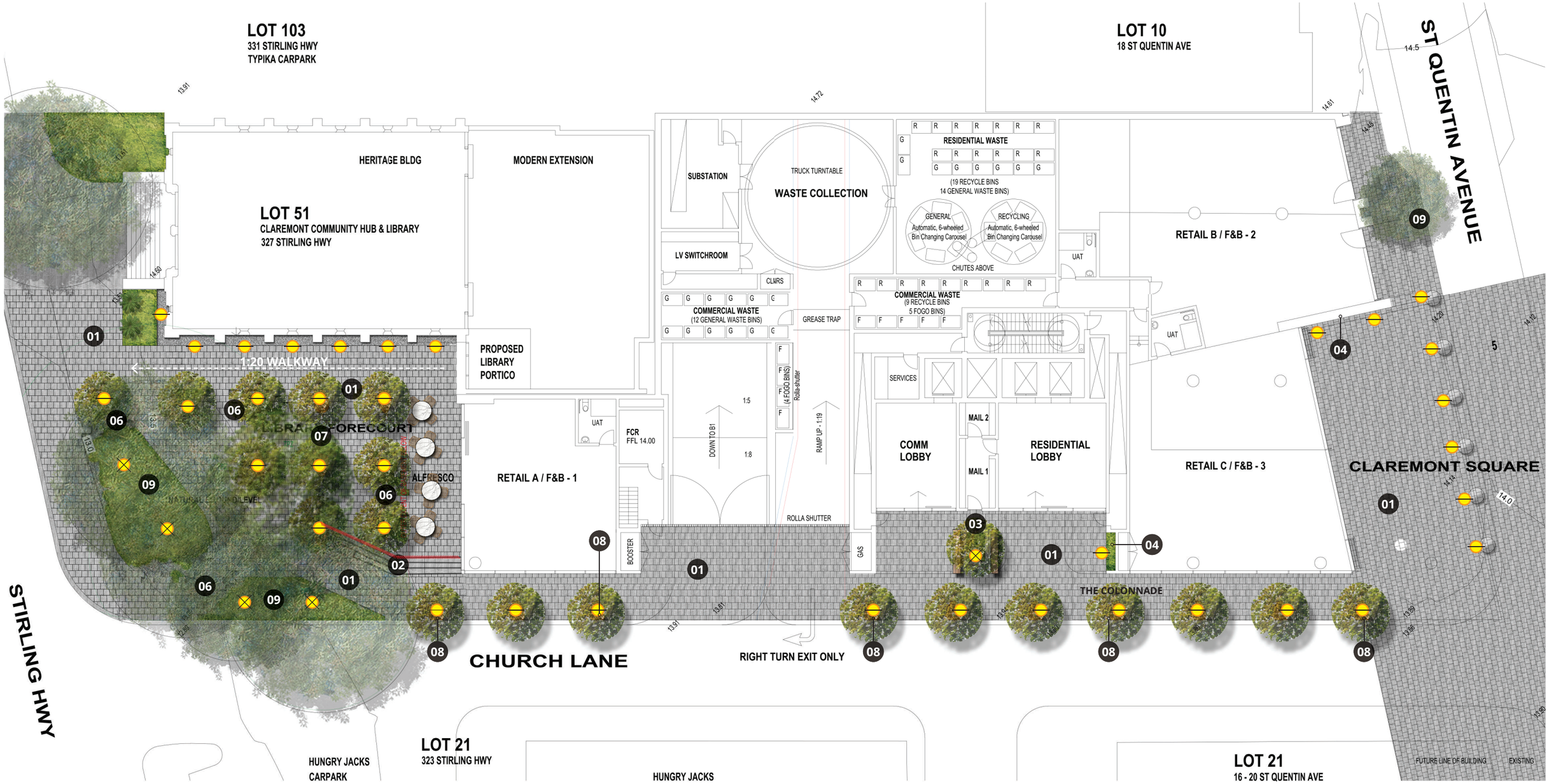
In addition to the above, whilst possible, the costs and logistics around tree relocation are complex and may prove to be prohibitive with the following summary outlining the activities that would need to occur:

- Root pruning of trees in situ and preparation for 12 months minimum prior to relocation;
- Excavation of root-ball. Excavator will be required to remove portions of Church Lane asphalt and median and St Quentins Ave pedestrian paving and road paving.
- Removal of trees with large crane, requiring road closures, powerline protection, traffic management, etc;
- Loading of trees onto low-loader semi-trailers and transport (preferably to locations nearby as it is not feasible to transport to distant locations due to prohibitive costs for traffic management, etc), including road closures, powerline protection, etc.
- Planting to new locations into pre-dug holes, guying for stability and maintaining thereafter for a twelve month period at a minimum.
- There is no guarantee that the trees will survive all stages of the process.

2.0 Landscape Design

2.1 Ground Floor

1. The proposed landscape creates a comfortable pedestrian environment to the building surrounds.
2. The creation of an attractive Library Forecourt to the southern side of the building provides al fresco opportunity and civic landscaping response, through a flexible space that can be curated or simply provide a passive contemplation opportunity.
3. Retention of the existing 3No. significant Corymbia citriodora (Lemon Scented Gums) along the Stirling Hwy frontage provide instant scale and amenity.
4. Retention of the existing 3No. Liquidamber along the St Quentins frontage & Church Lane.
5. No encroachment occurs into TPZ's of the retained trees will ensure the trees will remain protected.
6. Heritage façade of the Church has been considered through proposed tree plantings within the Library Forecourt that will provide for views onto the eastern façade under clear trunks and canopy uplifted trees.
7. Replacement of the London Plane trees along Church Lane due to the development footprint with new tree species creates a landscaped 'Colonnade' walkway along Church Lane, providing strong pedestrian connection from Stirling Hwy and the Library Forecourt to Claremont Square, Claremont Quarter and the currently under construction pedestrian underpass to the Perth–Fremantle line and Claremont Station.
8. Church Lane 'Colonnade' landscaping extends up the building, via planters with Trachelospermum jasminoides (Star Jasmine).
9. Landscaping via a proposed 'green seam' running the full height of the eastern façade.



LEGEND

01 FEATURE STONE PAVING
02 STONE CAPPED STAIRS TO PLAZA
03 RAISED PLANTER BED WITH TREE
04 STAINLESS STEEL TRELLIS & VINE PLANTING
05 ALFRESCO AREA TO RETAIL A/FB
06 CRUSHED GRAVEL/PLANTING WITHIN FEATURE GARDEN BEDS
07 TREES TO TRUE DEEP SOIL ZONE WITH CUSTOM TREE GRATE
08 SMALL TREES ON STRUCTURE WITH CUSTOM TREE GRATE
09 RETAINED EXISTING TREES

LIGHTING LEGEND

WALL WASH LIGHTING
STAIR LIGHTING
FEATURE PLANT UPLIGHTING
LARGE UP-LIGHTS TO TREES
IN-GROUND UPLIGHTING

DEEP SOIL ZONES	
LANDSCAPED AREA (<1M SOIL DEPTH)	5.3m2
DEEP SOIL AREA (TRUE)	160m2
DEEP SOIL AREA (ON STRUCTURE, >1M)	90m2
TREE SUMMARY	
SMALL TREES (4-8m HIGH)	11
MEDIUM TREES (8-12m HIGH)	10
LARGE TREES (>12m HIGH)	0


CHURCH INTERFACE

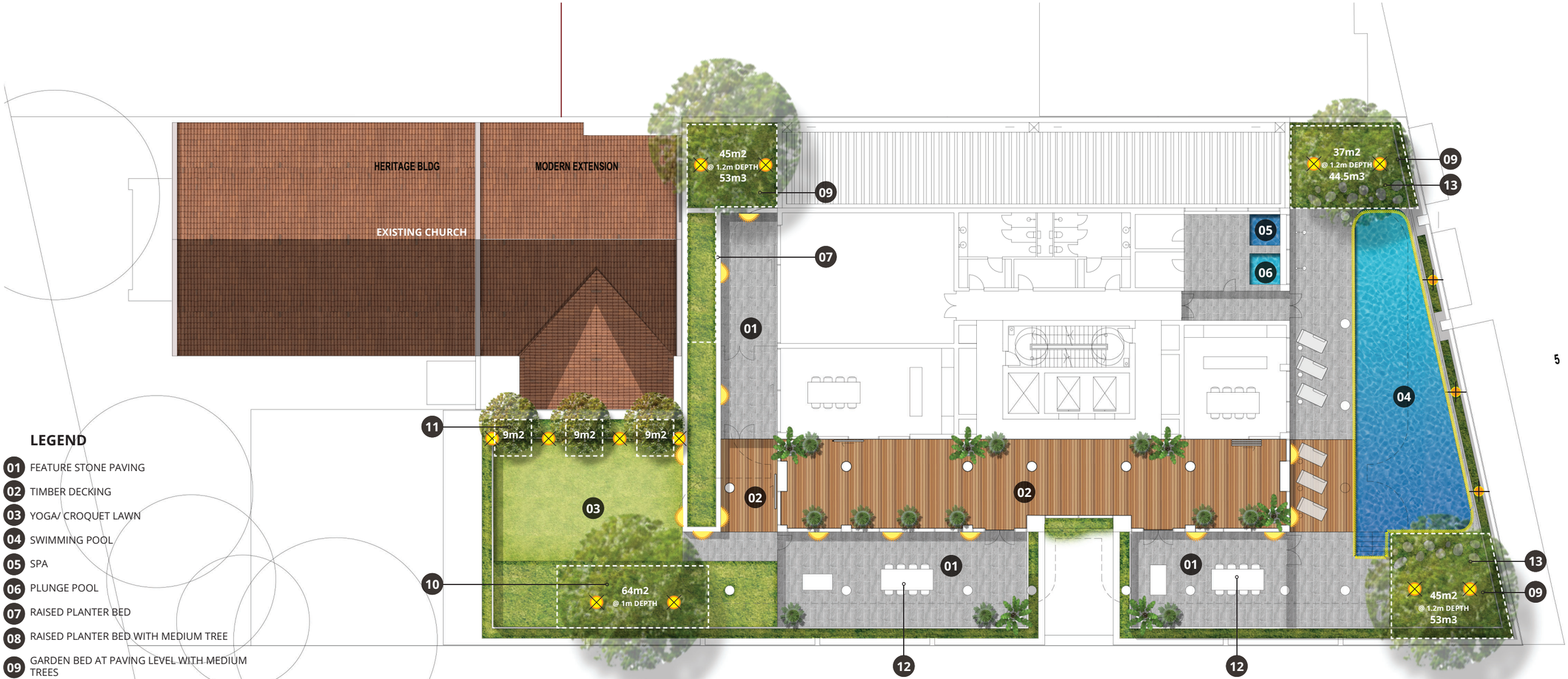

STAINLESS STEEL TRELLIS & VINES TO PLANTER BEDS


CORTEN STEEL TREE GRATES

SCALE 1 : 250 @ A3

2.2 Level Two

1. A key focal point of the complex is the provision of a large communal terrace space imagined as a series of “Garden Rooms”, designed to accommodate a range of leisure activities.
2. This expansive space is designed as a series of defined spaces for both intimate and large communal settings to be shared by all residents.
3. A combination of feature paving tiles, raised planters, timber decking to pool surrounds and spaces for dining/seating, together with plantings of hardy species and feature trees further enhances the overall landscape experience.
4. Seating, dining and lounging spaces are provided through a mixture of fixed and moveable furniture.
5. A considered landscape design to the podium terrace ensures usability in all seasons.
6. Feature planters across the level are to be used as a means to soften the edges and facade of the building and define a landscape character for the project.
7. Planting will include small shrubs and hanging plants that cascade over the edge and soften the side of the building, while there is potential to explore vertical growth supported by wires.
8. The provision of extensive deep root zone areas allows for planting of large ornamental trees and create a shady outdoor environment.
9. Landscaping within the podium terrace includes feature trees Delonix regia (Poinciana) of significant size, min pot size proposed 500L and Lagerstroemia indica x L. fauriei ‘Natchez’ (Crepe Myrtle) which will provide seasonal colour and interest, min pot size proposed 100L.



LEGEND

01 FEATURE STONE PAVING
02 TIMBER DECKING
03 YOGA/ CROQUET LAWN
04 SWIMMING POOL
05 SPA
06 PLUNGE POOL
07 RAISED PLANTER BED
08 RAISED PLANTER BED WITH MEDIUM TREE
09 GARDEN BED AT PAVING LEVEL WITH MEDIUM TREES
10 GARDEN BED AT PAVING LEVEL WITH LARGE TREES
11 SMALL TREES TO LAWN LEVEL (9m2 DEEP SOIL PER TREE)
12 ALFRESCO AREA WITH OUTDOOR KITCHEN & FLEXIBLE FURNITURE
13 FLAGSTONE STEPPERS TO GARDEN BED

LIGHTING LEGEND

WALL WASH LIGHTING
FEATURE PLANT UPLIGHTING
LARGE UP-LIGHTS TO TREES
FEATURE POOL STRIP LIGHTING

DEEP SOIL ZONES	
LANDSCAPED AREA (<1M SOIL DEPTH)	63m2
DEEP SOIL AREA (TRUE)	0m2
DEEP SOIL AREA (ON STRUCTURE, >1M)	238m2
TREE SUMMARY	
SMALL TREES (4-8m HIGH)	3
MEDIUM TREES (8-12m HIGH)	3
LARGE TREES (>12m HIGH)	1


FLAGSTONE STEPPERS TO PLANTER BEDS

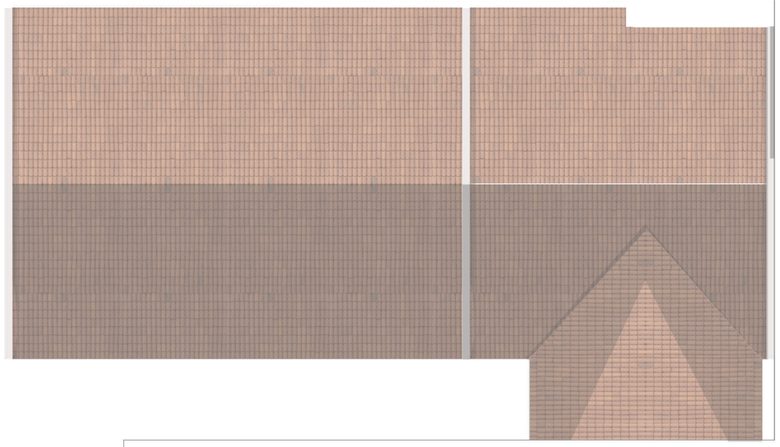

SMALL TREES TO PLANTER BEDS

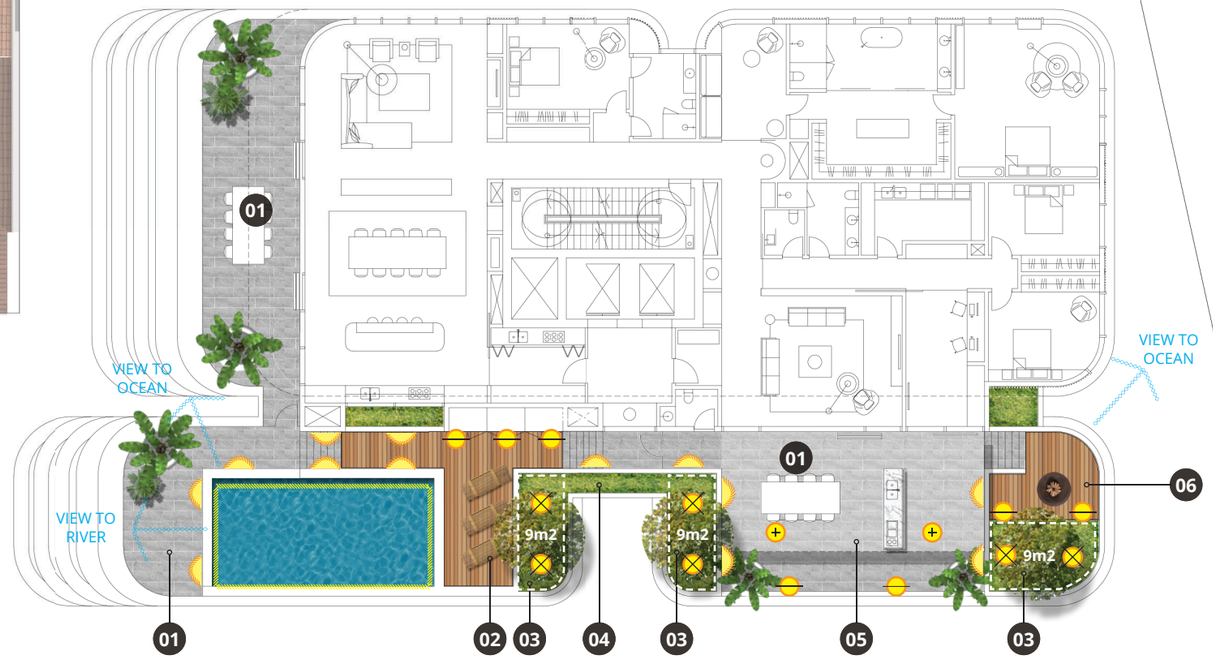

YOGA/ CROQUET LAWN


COPING TO POOL EDGE TO CREATE SHADOW EDGE

2.3 Level Sixteen

1. A private landscape area that befits the class and finish that the penthouse commands.
2. Considered landscape design to penthouse terrace ensures usability in all seasons.
3. Lightweight canopy structure is to be provided over the proposed external dining and BBQ area.
4. Landscape design reinforces view corridors to the Indian Ocean, Swan River and CBD.
5. Feature planters across the level are to be used as a means to soften the edges and facade of the building and define a landscape character for the project.
6. Planting will include small shrubs and hanging plants that cascade over the edge and soften the side of the building, while there is potential to explore vertical growth supported by wires.
7. Landscaping within the penthouse terrace includes feature trees Lagerstroemia indica x L. fauriei ‘Natchez’ (Crepe Myrtle) which will provide seasonal colour and interest, minimum pot size proposed 100L.
8. Planting selections have been chosen to reflect orientation, a wind exposed & partially shaded position, as well as to provide the intended aesthetic outcome.
9. A combination of feature paving tiles, raised planters, timber decking to pool surrounds, built timber seating and space for dining / seating, together with plantings of hardy species and feature trees further enhances the overall landscape experience.





LEGEND

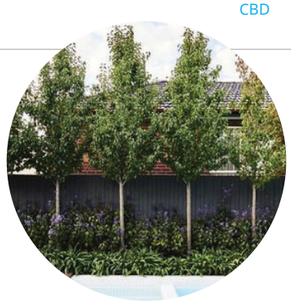
01 FEATURE STONE PAVING
02 TIMBER DECKING TO SWIMMING POOL
03 RAISED PLANTER BED - 1.2m HIGH WITH SMALL TREES (9m2 DEEP SOIL PER TREE)
04 RAISED PLANTER BED - 1.2m HIGH WITH STAINLESS STEEL TRELLIS & VINE PLANTING
05 ALFRESCO AREA WITH OUTDOOR KITCHEN & SHADE STRUCTURE
06 TIMBER VIEWING DECK WITH FIREPIT

LIGHTING LEGEND

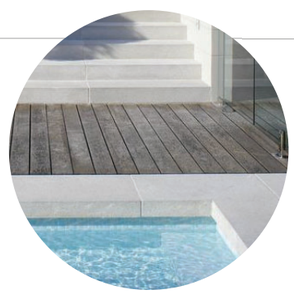
- WALL WASH LIGHTING
- BENCH STRIP LIGHTING
- FEATURE PLANT UPLIGHTING
- LARGE UP-LIGHTS TO TREES
- FEATURE POOL STRIP LIGHTING
- DOWNLIGHTING
- IN-GROUND UPLIGHTING

DEEP SOIL ZONES	
LANDSCAPED AREA (<1M SOIL DEPTH)	3.5m2
DEEP SOIL AREA (TRUE)	0m2
DEEP SOIL AREA (ON STRUCTURE, >1M)	37m2
TREE SUMMARY	
SMALL TREES (4-8m HIGH)	3
MEDIUM TREES (8-12m HIGH)	0
LARGE TREES (>12m HIGH)	0

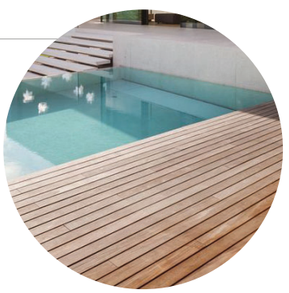
FIRE PIT TO DECK AREA



SMALL TREES TO RAISED PLANTER BEDS - 1.2m HIGH



COPING TO POOL EDGE TO CREATE SHADOW EDGE



POOL DECK

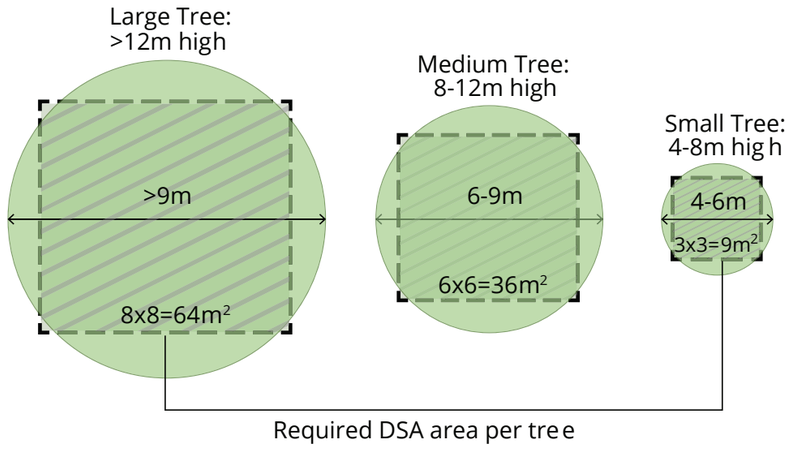
SCALE 1 : 250 @ A3

2.4 Deep Soil Zones

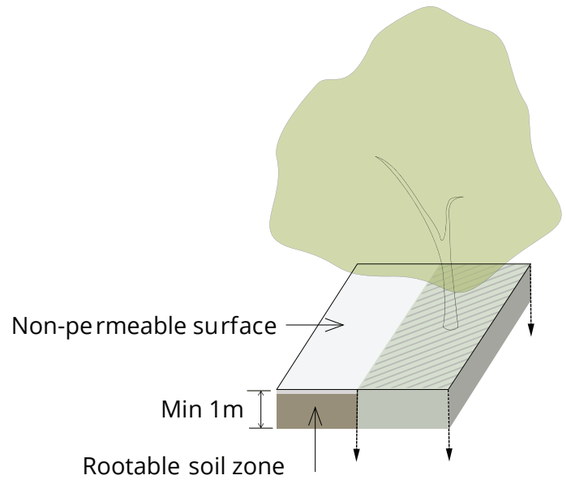
1. Proposal achieves **29.7%** of the site area as structured planting, which is **4.2x** more than required per DesignWA guidelines.
1. Proposal achieves an additional **386.7m²** of deep soil area as required within the DesignWA guidelines.
1. Proposal achieves **13 x medium trees**, which is **11 more** than required per DesignWA guidelines.

PROPOSED LANDSCAPE SUMMARY - GROUND FLOOR, LEVEL 2 & LEVEL 16 ONLY

Site Area	Minimum deep soil area required (10%)	Proposed deep soil area	Minimum requirement for trees	Proposed Trees
1,951m2	**195.1m2**	**596.8m2**	1 large tree and 1 medium tree for each additional 400m2 in excess of 1000m2 OR 1 large tree for each additional 900m2 in excess of 1000m2 and small trees to suit area	**1 Large Trees** **13 Medium Trees** **17 Small Trees**



Tree size definitions when mature for deep soil areas.



Rootable soil zone.

Tree size	Indicative canopy diameter at maturity	Nominal height at maturity	Required DSA per tree	Recommended minimum DSA width	Minimum DSA width where additional rootable soil zone (RSZ) width provided[1] (min 1m depth)	Indicative pot size at planting
Small	4-6m	4-8m	9m²	2m	1m (DSA) + 1m (RSZ)	100L
Medium	6-9m	8-12m	36m²	3m	2m (DSA) + 1m (RSZ)	200L
Large	›9m	›12m	64m²	6m	4.5m (DSA) + 1.5m (RSZ)	500L

[1] Rootable areas are for the purposes of determining minimum width only and do not have the effect of reducing the required DSA.

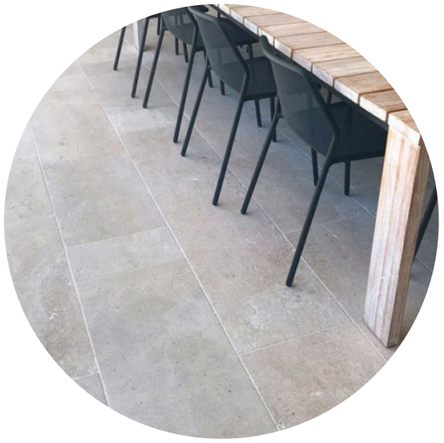
Site Area	Minimum deep soil area	Minimum requirement for trees [1]
Less than 700m²	10% **OR** 7% if existing tree(s) retained on site (% site area)	1 medium tree and small trees to suit area
700 – 1,000m²		2 medium trees **OR** 1 large tree and small trees to suit area
› 1,000m²		1 large tree and 1 medium tree for each additional 400m² in excess of 1000m² **OR** 1 large tree for each additional 900m² in excess of 1000m² and small trees to suit area

[1] Minimum requirement for trees includes retained or new trees
Refer Table 3.3b for tree sizes

3.0 Material Palette

Ground Floor Paving to Match Claremont Quater

Corten Steel Custom Tree Grates



Stone Paving - Eco Outdoor Chambone Sandstone

Spotted Gum Timber Decking

Sandstone Wall Cladding

Stone Pool Coping - Eco Outdoor Chambone Sandstone

Stainless Steel Trellis & Vines to Planter Beds

Sunken Fire Pit to Level 16 Deck Ara

4.0 Planting Palette

4.1 Ground Floor

TREES

Pyrus calleryana
'Bradford'

Bauhinia blakeana
'Hong Kong Orchid Tree'

Gleditsia triacanthos
'Shademaster'

FEATURE

Zamia furfuracea
'Cardboard Palm'

CREEPING GROUNDCOVERS & CLIMBERS

Ficus pumila
Creeping Fig

Eremophila 'Kalbarri
Carpet' "Emu Bush"

Myoporum parvifolium
'Creeping Boobialla'

Trachelospermum
jasminoides
Chinese Star Jasmine

SHRUBS & GROUNDCOVERS

Raphiolepis indica
'Oriental Pearl'

Lomandra 'Seascape'

Banksia ashbyi dwarf
'Ashby's Banksia'

Syzygium 'Tiny Trev'

Westringia fruticosa
'Coastal Rosemary'

4.2 Floor 2 & Floor 16

TREES

Delonix regia
'Royal Poinciana'

Ulmus parvifolia
'Chinese Elm'

Lagerstroemia indica x L. fauriei 'Natchez'

Lagerstroemia archeriana
'Sioux'

CREEPING GROUNDCOVERS & CLIMBERS

Ficus pumila
Creeping Fig

Cissus antarctica
"Kangaroo Vine"

Senecio mandraliscae
Blue Chalk Sticks

Trachelospermum jasminoides
Chinese Star Jasmine

Dichondra 'Silver Falls'

SHRUBS & GROUNDCOVERS

Raphiolepis indica
'Oriental Pearl'

Lomandra longifolia
'Tanika'

Alternanthera dentata
'Little Ruby'

Pittosporum
'Miss Muffet'

Strelitzia reginae
'Bird of Paradise'